

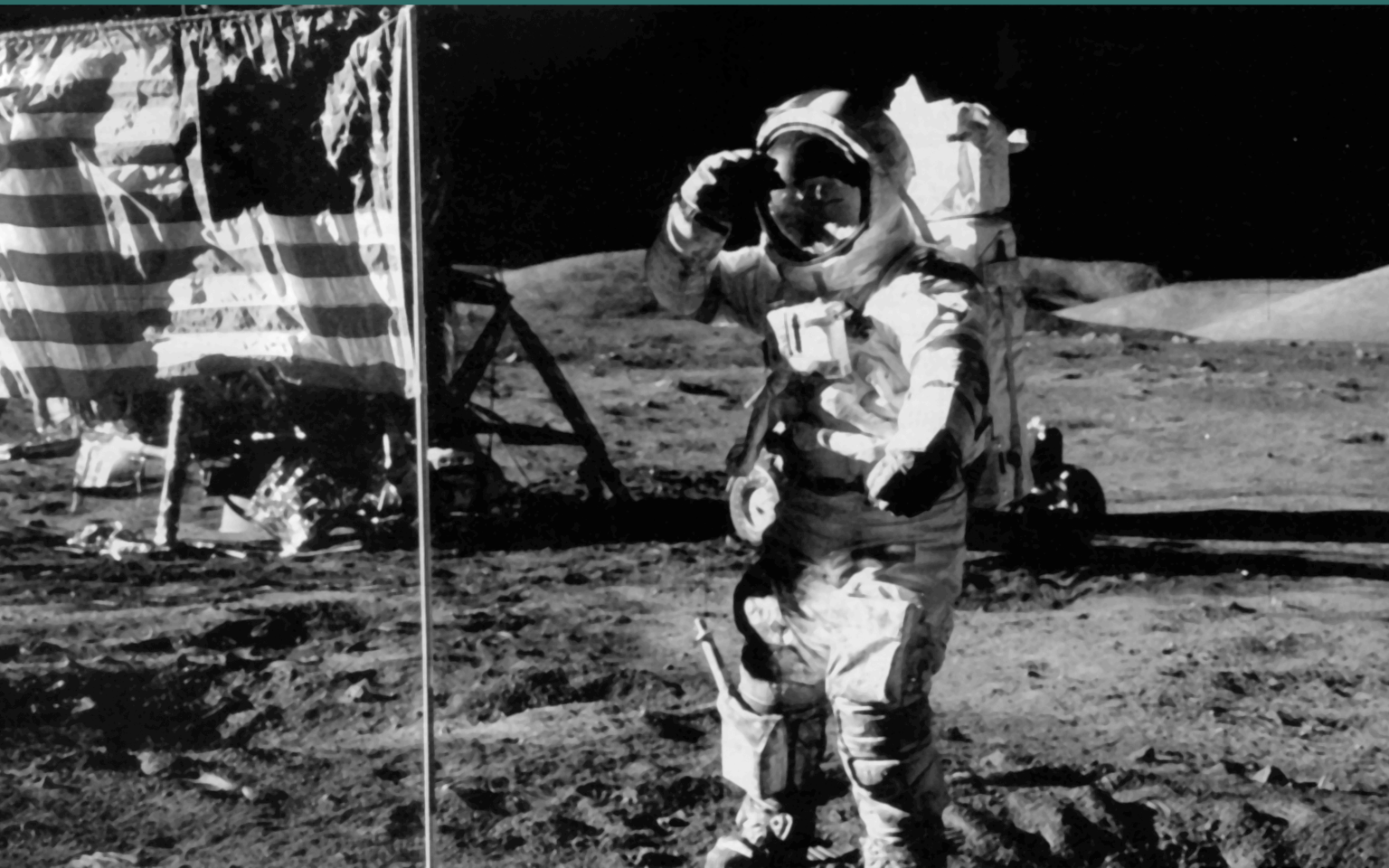
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LaRouche: What's Wrong With Congress
Is White House Scheming Nuclear Sneak Attack on Iran?
Cheney Uses Hard-Core Fascists for Illegal CIA Ops

**Isotope Economy: Like JFK's
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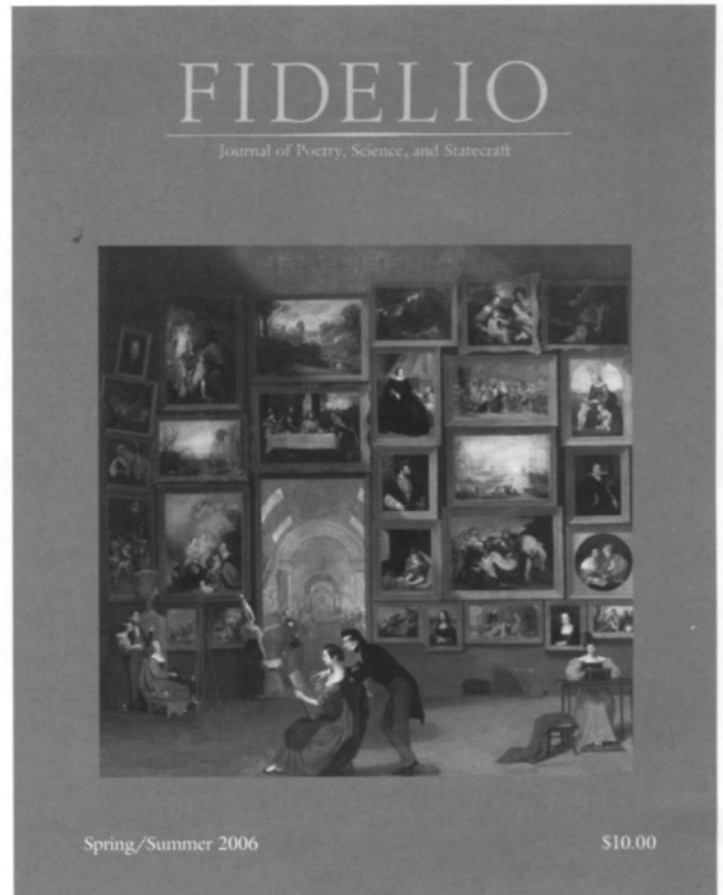
Of British Fools and 'Post' Reviewers

Lyndon H. LaRouche, Jr.

No strategy is worth much for long, unless it is rooted in, and controlled by a clear understanding of the actual, non-Hobbesian, non-Lockean nature of the human being. If we evoke a sense of the nature, reality, and efficiency of creative mental powers of the individual, as through the expression of scientific and technological progress as objectives in and of themselves, we unleash a force for good within the individual which society, must in time, find tempting even to the point of being irresistible.

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From the Associate Editor

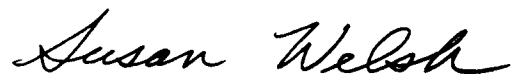
The owners of the Bush-Cheney Administration, made desperate by the imminent blowout of their global financial system, and also made euphoric by the collapse of Senate resistance to the “Torture Bill,” are going for broke. Our late-breaking *Strategic Overview* by Lyndon LaRouche presents a striking picture of the calamitous failure of the Congress to act, and what far-reaching changes in Americans’ way of thinking are urgently required.

Numerous sources have told *EIR* that a military attack against Iran—even with tactical nuclear weapons—is very likely to take place before the November mid-term elections (see *National*). If you thought the clash of civilizations between Islamic nations and the West was about as bad as it could get, think again. Iran is a nation of 69 million people (as against 27 million in Iraq); military experts *virtually without exception* agree that a bombing campaign against Iran would be a catastrophe.

So why would even a desperate and crazed U.S. administration even think of it? LaRouche addresses this issue, and what to do about it, in his correspondence with Iranian and other interlocutors (see *International*), in the aftermath of his Sept. 6 Berlin-Washington webcast. The dialogue will continue on Oct. 31, with another Berlin-Washington webcast, beginning at 10:00 a.m. Eastern Standard Time (at www.larouchepac.com).

With the international security situation thus on a trip-wire, we feature a discussion document for the next webcast, “The Isotope Economy,” by Dr. Jonathan Tennenbaum. Tennenbaum presents an exciting panorama of the scientific and technological breakthroughs that are being made, or are on the horizon—and the profound epistemological changes needed to realize them.

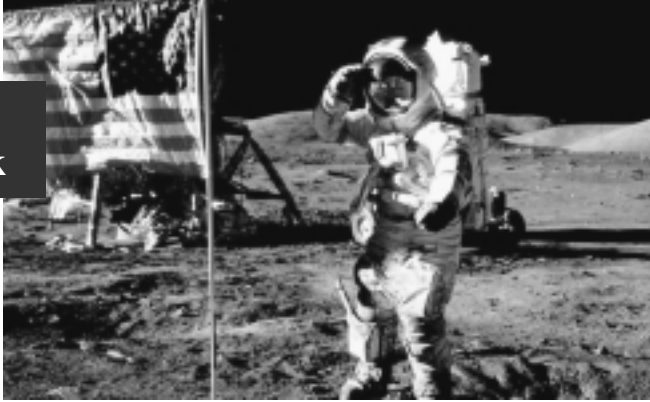
This not some “nice idea.” In introducing Tennenbaum’s piece, LaRouche underlines its strategic urgency: “In light of the fact that the world’s present monetary-financial and related institutions are already trapped within an accelerating process of disintegration, it is urgent that the relevant alternatives be placed squarely, now, in the center of discussion. This proposal is intended for prospective adoption as a policy-orientation. It is identified for this purpose as key to organizing a durable long-term replacement and recovery from the inevitable early disintegration of the present global system.”



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Gene Cernan, on
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By Dr. Jonathan Tennenbaum. "More than in any previous 'phase state' of man's physical economy," he writes, "the emergence of what I am calling the 'Isotope Economy' signifies a condition, in which social practice must necessarily be oriented to *true ideas*: to the discoverable, universal principles that govern change and development of the universe, and not primarily to objects of the senses. This means the end of empiricism and materialism.

"Such a revolution has profound political implications. Its realization is plainly incompatible with further toleration of an irrational, oligarchical organization of society, in which essential decisions, concerning the future of nations and the fate of the humanity as a whole, are subject to the whims of a tiny number of influential families, while the vast majority of humanity lives in ignorance and servitude."

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Dynamics: What's Wrong
with Congress**

By Lyndon H. LaRouche, Jr. "As our Democratic Senators and others go forth upon the hustings now, the blame or the credit for what happens to the U.S.A. during the weeks and months immediately ahead lies on their shoulders. We are at a turning-point in history, where the continuation of the follies which I have witnessed in the Democratic Party's leadership since mid-February of this year, can no longer be tolerated. The very existence of our nation, even of civilization, depends upon the actions taken during the present weeks."

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IN THIS MATTER OF DYNAMICS

What's Wrong with Congress

by Lyndon H. LaRouche, Jr.

September 30, 2006

During the recent weeks, the break in the U.S. economy which I had forecast as likely, had already struck the world system. This change was expressed as a phase-shift, sharply down, in not only the U.S. economy, but the world economy generally. The Amaranth case, but, more importantly, sharp downshifts in the already ongoing real-estate collapse, were only acknowledged markers of a broader pattern. At this moment, in the higher echelons of trans-Atlantic ruling circles, desperation tactics, going beyond the scope of early “plunge-protection team” operations, are in motion.

There are no signs of any action from relevant powers, inside or outside the U.S.A. itself, which could actually reverse, or even halt the collapse now in progress. All that is being attempted are efforts to delay the popular perception of the reality of the situation. It is this state of affairs which drives the U.S. side of the trans-Atlantic Anglo-Dutch Liberal financier interests to the state of desperation in which a massive U.S. aerial attack on Iran is an immediate prospect for a time as early as a short week or weeks before the U.S. mid-term election, during this present October.

More and more of the U.S. population has the smell of the foregoing situation in their nose. They do not see the particular danger, as much as they sense the ominous change in the political-economic weather. One thing which really scares a growing portion of the thinking part of the lower eighty percentile of family-income brackets, and others, right now, is the dread of the smell the population is getting from the U.S. Congress, the smell of the leadership of the Senate's Democratic fraction, in particular.

Such is the situation with which the disgusted electorate will confront those members of a failed U.S. Congress who

have now departed the fantasy-land playgrounds of Washington, D.C., for the reality of the electorate's anger welling up in the proverbial hustings.

The problem is, that most of the leading economists of the trans-Atlantic world, in particular, now faced with the breakdown of the global economic engine, not only lack any competent conception of how to actually repair that beast, but, did they have the competence which they lack so desperately, they would have no present wish to attempt the necessary forms of repairs.

In today's moment-to-moment reactions to the more immediate recent developments, as those in the U.S. Senate, for example, the essential pattern of developments—the cause of the relevant, disastrous behavior—is usually overlooked.

On this account, the Congress, the leading press, and the ordinary citizen, are each guilty of negligence, each in their own way. As in the self-inflicted doom of the Athens of Pericles, Sophistry, the substitution of the apparent popular expediency of “go along to get along” for the sanity of reason, has caused an effect which might be otherwise judged to have been the work-product of damnable treason.

We are victims of a reigning variety of politics which avoids taking into account any reasonable principle. This modern Sophist's immorality of policy and practice, is often expressed in the catch-phrase, “but, it's our tradition.”

So, in physical science, no astronomer but Carl F. Gauss would have discovered that the orbits of the asteroids Ceres and Pallas were products of what Johannes Kepler had defined as the necessarily existing orbit of a destroyed planet of our Solar System. So, the failure of Gauss's putative rivals in this matter illustrates the point, that the substitution of the



EIRNS/Stuart Lewis

The compulsive totalitarian George Shultz has been working, since May 2005, to disorient Democratic and other members of the Senate. Shultz was also instrumental in collapsing the Bretton Woods system in 1971, and in putting the fascist Augusto Pinochet into power in Chile in 1972.

intrinsically irrational, mechanical, percussive interplay of short-term impulses, for reason, is as deadly in statecraft generally, and also mere popular political opinion, as in producing the great blunders of practice in the domain of physical science.

On this account, politics, and the management of a modern national economy, must learn a lesson from Gauss.

Gauss, a student of both the leading historian of mathematics of the Eighteenth Century, Abraham Kästner and A. W. von Zimmerman, and a follower of both Johannes Kepler and Gottfried Leibniz, had already absorbed much of the essentials of the accumulated experience of that European physical science and its mathematics since the ancient Greeks of the circles of the Pythagoreans and Plato. For Gauss, the events of the Solar System had a long-reaching history of patterns of development. So, in the case of G. Piazzi's 41 days of observation of what Gauss discovered to be the asteroid Ceres, Gauss followed an historical-scientific approach to that meagre data of Piazzi's, an approach which was rooted in the precedent of Johannes Kepler's original discovery of the specifically harmonic principles of organization of the Solar System.

This approach of mine to the subject of the present world economic crisis, has a long history in European physical science, as from the work of Thales, the Pythagoreans, and Plato, to the modern experimental scientific method defined by Kepler's acknowledged predecessor Nicholas of Cusa. The same approach must be applied to important patterns of behavior in social processes, such as economic processes and their crises, as I do here. It is only from this standpoint that the apparent, stubborn stupidity of much of the recent behavior of leading elements within even the Democratic ranks of the Senate must be understood, and corrected.

How the Senate Bungled

During the first quarter of 2005, I had warned the Democratic leaders of the Senate, among others, that the U.S.A. was about to lose the heart of its strategic economic production potential, the machine-tool-design potential represented chiefly by our Ford, General Motors, and their closely associated partners. The validity of my warnings of Spring 2005, onward, is now demonstrated beyond reasonable doubt.

I emphasized, then, that this was an urgent issue of national security. I defined, then, the principled solution which must be taken as actions initiated, chiefly, in the Senate. I warned, then, that the time for Senate action was very short. The leadership of the Senate, including most of the Democratic fraction's leadership there, not only did not understand; during 2006 so far, most notably, they have, in the main, refused to understand.

A negligent Senate, in the main, pushed that now richly validated warning aside. Now, there are still automobile manufacturing firms inside the U.S.A., but they are no longer ours; they belong to foreigners, or, even mere predatory charlatans without either morals or any national loyalties of any kind. Now, while there are golden parachutes for the virtually useless men and women who have betrayed their nation from places of prominence in corporate life, yet the pensions, and the hopes of the firms, and of the employees of the firms they led, are merely cinders, in places where the jobs, the pensions, and the health-care of the employees and their families once stood. Those who assert that they defend our Mexico border so zealously, after having connived in betraying our nation's economy from the inside, as the negligence of the Senate leadership has done, have richly earned the contempt which history will heap on such miserable wretches as they have been—unless they consent to change their habits now.

So, largely through that complicity from within the Democratic leadership in the Senate, irreparable damage has been done already to not only the U.S. economy, but the welfare of actually millions of our citizens. The damage is done, but the lesson must be learned, lest our republic be destroyed by the same kind of negligence in oncoming developments more or less immediately at hand.

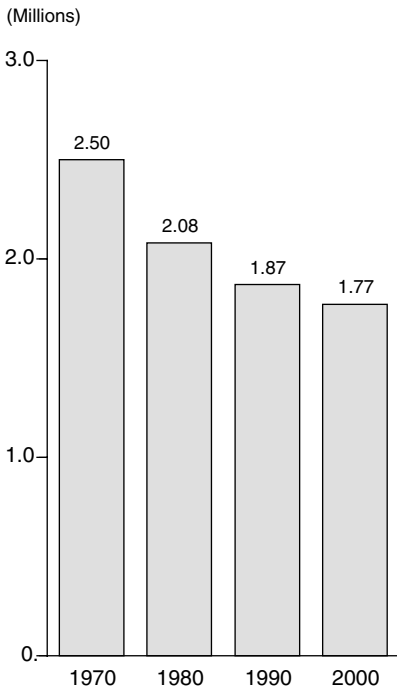
The failure in the ranks of the Senate was not spontaneous. By May 2005, a typical factor in disorienting the Democratic

FIGURE 1
Depopulation, Deindustrialization, Poverty in 10 Michigan Cities



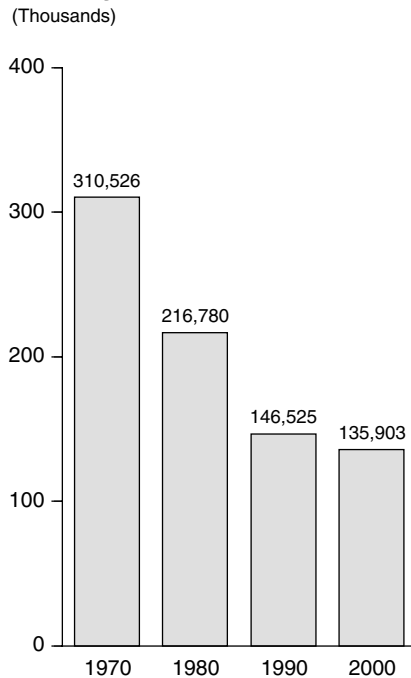
Source: *EIR*.

FIGURE 2
10 Leading Michigan Cities: Population Falls by 29%



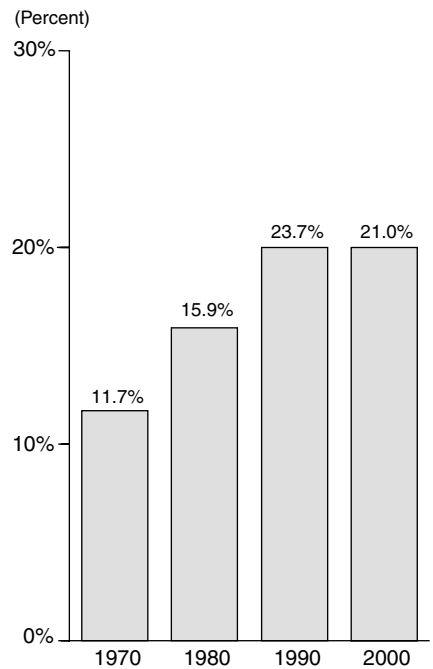
Source: Dept. of Housing and Urban Development, *EIR*.

FIGURE 3
10 Michigan Cities: Manufacturing Workforce Falls by 56%



Source: Dept. of Housing and Urban Development, *EIR*.

FIGURE 4
10 Michigan Cities: Poverty Rate



Source: Dept. of Housing and Urban Development, *EIR*.



Henry Kissinger (left) with Chilean President Gen. Augusto Pinochet. As President Nixon's National Security Advisor and then Secretary of State, Kissinger brought the fascist Pinochet to power, under the banner of "fighting communism."

and other members of the Senate was the same frankly fascist Felix Rohatyn,¹ who, together with Henry Kissinger, George P. Shultz, and the network associated with John Train, and others, had banded together to install effects such as the Nazi-laced dictatorship of Augusto Pinochet in Chile. The wretched Felix Rohatyn is on the undeniable record as playing a key, leading role in that Pinochet operation of George P. Shultz, et al. Imagine that prominent Democratic members of the Senate, apart from William F. Buckley, Jr.'s choice, Senator Joe Lieberman, could associate themselves with a notorious backer of fascist regimes such as Shultz crony Rohatyn.²

Later, as of mid-February of the present year, the Democratic Party's leadership in the Senate had suddenly collapsed, a collapse expressed in the setting of the vote on the nomination of a hard-core follower of the same legal doctrine of the Nazi Carl Schmitt who had designed the legal doctrine on which Hitler was put into power in February 1933! Since then, it has been mainly a down-hill run. Some Democratic and other Senators, even a majority of Democratic members of the Senate, and others, too, are, clearly, intending to stand up

1. "Frankly fascist" is no stretch. George P. Shultz-connected Rohatyn is not only an heir of the French Synarchist circles of Lazard Frères and Banque Worms involved in bringing the Nazis to power in France; his economic practices and his Nazi-SS-like privatization-of-the-military policies are frankly, and wittingly in the Synarchist tradition. He, like Shultz, is a representative of a species of financial predator called by some experts, "the economic hitmen."

2. Compulsive totalitarian Shultz and "Middlebury Monster" Rohatyn were not only accomplices in the installation of the Pinochet tyranny in Chile; they are common conspirators, like professed international fascist Michael Ledeen, in the Shultz-crafted George W. Bush, Jr. regime's efforts to replace the constitutional military institutions of the U.S.A. by private armies controlled by enterprises such as Bechtel and Halliburton.

for principle, but, to the present date, what had been the 2005 leadership of the Senate fraction has collapsed for the moment. This collapse has now accelerated at precisely the time that the lower eighty percentile among the citizens of the U.S.A. is in a rising state of disgust and revolt, against what they are viewing, more and more, as the current, top-down leadership of the Democratic Party, in the nation generally, as in the backing for the Republican California Governor Arnold Schwarzenegger who is the clownish stooge of the same George P. Shultz.

On the hopeful side, the situation of the Democratic Party today, parallels the time, in 1932, when Franklin Delano Roosevelt ran for President, against the leadership machinery of the Democratic Party. Now, the Senate Democrats are rushing to meet their waiting, largely very angry constituents, back among the proverbial hustings. Hopefully, as in 1932-1933, the Democratic Party will turn, once again, before it is too late, against its own trend of the past months' decline.

A Geometry Lesson

The predominant forms of the recent failures of the Democratic Party's leadership in the Senate, can not be competently understood without seeing this phenomenon as part of a global pattern. As we review the situation within regions and particular nations, we encounter significantly different types of local patterns; but, the array of these local patterns also forms a subsuming general pattern. In other words, the global situation which is reflected in one way inside the Democratic Party today, either echoes or differs in particular ways from that in other parts of the world, but what appear at first glance to be quite different places on the global map, are actually reflections of a common, subsuming pattern around the planet as a whole.

Around the planet, for example, people challenge me: "When is the collapse coming?" My response is: "Hey, you jerk, what's wrong with you; the collapse is already fully under way!" Those misguided, poor fools are simply exhibiting the fearful fact that they wish to be respected as rational beings without incurring the pain of actually earning that distinction. Those poor fellows are actually, modern Sophists echoing the same type of fatal moral failure as ancient, self-doomed Athens under the leadership of Pericles. Just as the Age of Pericles was often praised as "a Golden Age," so, we have a kindred "Golden Generation" of high-and-mighty, but self-doomed fools in our Baby Boomer generation of today.

Take the comparable case of Europe's so-called "Seven Years War."

France under the leadership of the Cardinal Mazarin who had led in crafting the 1648 Peace of Westphalia, had emerged, under the economic and scientific leadership of Jean-Baptiste Colbert, as the leading center of economic and scientific progress for all European civilization. But, then came the foolish King Louis XIV with his treacherous *Fronde* partners, followed by the ensuing reign of France by the lech-



The Democratic Party's leadership in the Senate had collapsed by mid-February 2006, as expressed in their failure to block the appointment of Samuel Alito (left) to the Supreme Court. Alito is a hard-core follower of the legal doctrine of Nazi "Crown Jurist" Carl Schmitt (right), on the basis of which Hitler was put into power.

erous fools of Deer Park. The Anglo-Dutch Liberal faction of the heirs of Venice's Paolo Sarpi, came to dominate continental Europe through its creation and control of the financier power associated with the British East India Company.

In the middle of the Eighteenth Century, the forces of Anglo-Dutch Liberalism expressed by the British East India Company, lured continental Europe into what became known as "The Seven Years War," a war which aligned most of continental Europe against Prussia's Frederick the Great, the most capably creative military commander in the tradition of Graf Wilhelm Schaumburg-Lippe of that time. As the peace came in the February 1763 Peace of Paris, the British East India Company of Lord Shelburne had established a private empire crafted according to what became known as the design, as portrayed by Shelburne's Swiss-baked lackey, and associate of Jacques Necker's circles, Gibbon, for a permanent British Empire to succeed the fallen imperial Rome of the Caesars and their Byzantine successors.

Despite the success of the U.S.A. in becoming a constitutional republic, the London-steered, Martinist freemasonic cult, had orchestrated the events leading into the July 14, 1789 siege of the Bastille, events which established the Anglo-Dutch Liberal financier interests centered in Britain as the hegemon of Europe and the world's oceans combined.³

3. The storming of the Bastille was armed and conducted by the Duke of Orleans, "Philippe Egalité," on behalf of the candidacy of the Duke's crony, the Jacques Necker who had largely bankrupted France on behalf of Britain's Lord Shelburne and Jeremy Bentham. The stated purpose of the siege of the Bastille at that time, was the imposition of Necker as poor foolish King

Behind the mask, the new Anglo-Dutch Liberals were the old Venetian financier-oligarchy as reorganized under the direction of the Venice New Party's Paolo Sarpi. This domination of the world, increasingly, by the Anglo-Dutch Liberal form of modern financier imperialism, was interrupted, only briefly, by the effects of the few decades of the fixed-exchange-rate, Bretton Woods monetary system launched under President Franklin Roosevelt. At other times, the U.S.A., even when sovereign in its internal affairs, was gripped by an alien, global system of Anglo-Dutch Liberal imperialism of a character as intrinsically, intentionally hateful to our Federal Constitution as the implicitly treasonous U.S. Bush-Cheney Administration of today.

Today, the 2001-2006 U.S. Bush Administration, with its resident, "Nero-like" lunatic in the Oval Office, has brought our nation near to the termination of its existence as a sovereign nation-state republic.

An Anglo-Dutch Liberalism crafted according to Paolo Sarpi's revision of the system of medieval imperialism, an imperialism conducted by Venice in concert with the Norman chivalry. This form of quasi-medieval imperialism called "globalization," threatens the planet as a whole with a new dark age akin to that into which medieval Europe collapsed during its Fourteenth Century.

The relevant generation of Baby-Boomer-aged financial predators of today are probably as stupid as they are evil. Wretches as incompetent in economics, as those of such a type, might conquer the world, but only by bringing down the catastrophe they create upon their own heads, too.

Under that Anglo-Dutch Liberalism's influence, our republic is near to the threatened end of its existence. Is this treason? Or, is it something worse than mere treason? What must we say then of those Senators and others who have condoned the measures, step by step, which have led us into such folly over the course of 2001-2006 to date? Can we say, "Forgive them, for they know not what they do"?

If such ignorant behavior as theirs is a crime, in its effects, let us, then, pinpoint the systemic root of the culpability. To that end we must look at politics with the eyes of science.

Louis XVI's Prime Minister! Bentham ran the British Foreign Office's secret committee which operated in concert with the Martinist Freemasonry of Count Joseph de Maistre et al. This secret committee ran the French Revolution of July 14, 1789 and beyond, from London, and, through related channels, including a key role by de Maistre, in the rise of Napoleon Bonaparte to the model of power later imitated in the person of Adolf Hitler.

Euclid, Cycles, and History

Here and now, as in any earlier great crisis in the history of civilization, the importance of science for politics, is what has been frequently overlooked. We must take note of a type of negligent oversight for which certain past nations and their governments and their peoples have paid the price of a calamity as severe as a dark age in history, or a catastrophe which narrowly escapes such a fate. For once, Senators are not permitted to escape the consequences for our nation of their doing what pleases them, or seems to profit them, rather than what is needed of them.

The problem to be addressed now, on that account, is the same Sophistry which was responsible for the plunge of Pericles' Athens into the doom which was the Peloponnesian War. The form in which that same sophistry persisted as a cancer-like disease of both science and statecraft still today, was what became known, about a half-century after Plato's death, as a pestilence otherwise known as Euclidean geometry, a view of geometry expressed as the fraudulent, Cartesian substitute for physical science which underlies all of the important corruption permeating the systemic features of statecraft and science of globally extended European civilization still today.

The moral crisis of modern science and statecraft which that Cartesian echo of the hoaxster Euclid engendered, is the formal expression of the source of the rot at the base of the process of collapse which the U.S. economy and others have experienced since President Richard Nixon's folly of August 1971, and Nixon lackey George Shultz's crime of 1972 (as not really distinct from Shultz's crime, in collaboration with Rohatyn, Kissinger, and others, in putting Pinochet into power in Chile).

The notable fact about the launching of the fraud called Euclidean geometry, is that a competent physical science had not only existed at that time, but that all of the essential contributions of ancient Greece to modern experimental physical science, including that of Kepler, launched by Nicholas of Cusa's *De Docta Ignorantia*, had been based on the Greek adoption of an Egyptian development of, not mere astronomy, but actually *astrophysics*. This is the science, which had been taken up by leading Greek thinkers such as Thales, Heraclitus, the Pythagoreans, Socrates, and Plato. Every important theorem reflected in the Sophist hoaxster Euclid's legacy, was a Sophist perversion of an actual discovery made earlier by the circles typified by the Pythagoreans and the circles of Socrates and Plato. It is not the mere motion of the astronomical objects, but the universal physical principles which generate and control that seemingly anomalous, but lawful motion, which are the basis for all competent physical science, and, implicitly, therefore, economics, too.

The distinction of competent science in the Pythagorean and Platonic tradition, from the Sophistry which is typified by Euclid and Descartes, was identified by Gottfried Leibniz as the principle of *dynamis* which modern science inherited

from the tradition of the work of the Pythagoreans and Plato. Leibniz pointed to the reason for the fraudulent error pervading all of the method of Descartes, by contrasting the intrinsic incompetence of the mathematically mechanistic-statistical method, otherwise typical of nearly all of today's professional economists, with the *dynamic* method which Leibniz traced specifically to the Pythagoreans and Plato.

That is the same *dynamic* method which Albert Einstein defended against the intrinsic incompetence of the Sophistry of modernists, such as the respective followers of Ernst Mach and Bertrand Russell such as the hoaxster Professor Norbert Wiener and the virtually autistic fanatic John "It" von Neumann. What we must defend against those latter wretches and their like, is also the same principle of *dynamics* met, explicitly, in the Biogeochemistry of Academician V.I. Vernadsky's definitions of the Biosphere and Noosphere, and Albert Einstein's insistence that modern science is a view of the universe based on the landmarks of Kepler and Riemann, a universe which is finite, but self-bounded.⁴ There is no competent scientific method in existence, past or present, which is not rooted exclusively, as if axiomatically, in what Leibniz defined for physical science as anti-Cartesian *dynamics*.

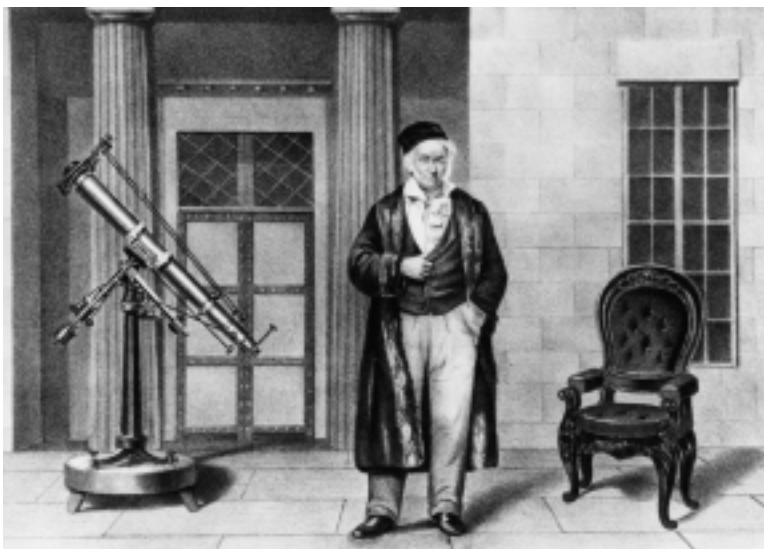
The opposition to the dynamics of the Pythagoreans, Plato, Cusa, Kepler, Leibniz, and Riemann, is, strictly speaking the outgrowth of Sophistry known as Gnosticism. Modern Gnosticism, except when encountered as the fruit of weird, right-wing religious cults typified by the Washington, D.C. area's Buchmanite offshoot, the Fellowship, and other followers of the severely mentally disturbed President George W. Bush, Jr., is typified by the world-view expressed by such Sophists as Euclid and Descartes.⁵ The root of Cartesianism as a formal, Gnostic doctrine of mathematics is Euclid.

The method of Egyptian-Pythagorean *Sphaerics*, on which all competent varieties of modern physical science, including economics, are premised, is consideration of the relevant physical evidence, that the universe is not limited to the primacy of simply circular or spherical action; but, that there are astrophysical phenomena which typify the evidence that the universe is run by a higher state of Being whose efficient presence can be expressed as paradoxes which appear *regularly* within the bounds of an assumed spherical domain.

In the Classical Greek standpoint of Pythagoras, Plato, et al., these regular paradoxes which disturb, and yet efficiently subsume the apparently spherical domain, are what are to be recognized as expressing the principle which the Pythagore-

4. Cf. Lyndon H. LaRouche, Jr. "Vernadsky & Dirichlet's Principle," *EIR*, June 3, 2005.

5. Examples of Cartesianism's influence are the work of the irrationalists John Locke, Bernard Mandeville, David Hume, François Quesnay, A. Turgot, Adam Smith, and Lord Shelburne's foreign operations controller Jeremy Bentham. See below, for the relevant systemic connections between Cartesian Sophistry and Anglo-Dutch Liberal ideology generally.



Courtesy AIP Niels Bohr Library

The politics and management of a modern national economy must learn a lesson from Carl F. Gauss (1777-1855), who repudiated Cartesianism in favor of the scientific method of Johannes Kepler and Gottfried Leibniz.

ans and Plato's dialogues define as *dynamis*.

Thus, in contrast to the hoax known as Euclidean geometry, there are no self-evident definitions, axioms, and postulates of mere sense-perceptual experience. Indeed, if we strip away that hoax upon which the arbitrarily assumed, essential principles of Euclidean and Cartesian geometries are premised, all of the important theorems identified within Euclidean geometry are willfully fraudulent reifications of original discoveries made almost entirely by the Pythagoreans and their Platonic successors in a time more or less long before the existence of Euclid.

This historical fact has been well known to European science since Nicholas of Cusa's *De Docta Ignorantia*. It was the basis for the founding of modern astrophysics and mathematical physics generally, in the concrete work of Johannes Kepler, in the discovery of a principle of quickest time by Fermat, the uniquely original development of the calculus by Leibniz, and the fulfillment of another challenge posed by Kepler, by Carl F. Gauss and others, in that treatment of the apparent mysteries of elliptical functions which led into the culminating achievements of Bernhard Riemann in the tensor domain of physical hypergeometries. All competent modern physical science since Cusa and Kepler through Einstein, and also all competent European science earlier, have been expressed in the form of anti-Euclidean (anti-statistical-mechanics), *dynamic* forms of physical geometries.

The relevant arguments on the subjects just summarized thus, have been made in an extended form in other locations. They have been just summarized here as a necessary prelude to the treatment of the psychological catastrophe at the root of the U.S. Senate's recent and continuing failure on the subject of both economics and statecraft more generally.

Euclidean geometry, and its modern offshoot, Cartesian statistical-mechanistic argument, falsely assumes a virtually flat universe extended without limit. In such a pathologically mistaken, statistical-mechanical view of the universe, we are brought to a delusion associated with the frankly pro-satanic, Anglo-Dutch Liberal mysticism of Bernard Mandeville and his present-day followers of the Mont Pelerin Society and related, so-called "neo-conservative" ideological associations.⁶ The assumption of Mandeville, as by Lord Shelburne's lackey, the anti-American plagiarist of François Quesnay and A. Turgot, Adam Smith, is that the world is run by what might be fairly described as "little green men from under the floorboards of reality," creatures which cast the dice whose effects make some men rich and powerful, and others poor and despised. For the Anglo-Dutch Liberal philosophers in the wake of the implicitly pro-Satanic founder of modern liberalism, Paolo Sarpi, the universe itself is a kind of gambling casino, a flat-land run, from

beneath, by predators from under the floorboards, on the account of the reigning establishment.

This view of reality is congruent with the flat universe implicit in the definitions and axioms of the Cartesian system. That view is what is otherwise identified in mathematics as the statistical-mechanistic view of the universe as a whole. In this view, statistical projections of that time are the accepted method of forecasting the outcome of present developments.

In the real universe, which no neo-Euclidean Cartesian has ever returned from under the floorboards of his universal gambling-house to describe as to principle, forecasting is based on the same method of cycles which was employed by Johannes Kepler to discover and define both the universal physical principle of gravitation, but also the harmonic structural ordering of the Solar System as a whole. As Gauss did in discovering that the object now named Ceres was an asteroid of the type foretold by Kepler, it was the study of the principles of regular cycles which deviate from a perfectly spherical regularity, which not only expressed efficiently universal physical principles contrary to a simply spherical universe, but which enable us to foresee the consequences of the cyclical patterns implicit in those apparent anomalies known as experimentally demonstrated universal physical principles.

All of my own, relatively unique successes in long-range economic forecasting have been premised on recognition of the fact that all statistical-mechanistic forecasting is intrinsically, professionally, scientifically incompetent. The ability to forecast depends upon ending reliance on statistical meth-

6. Bernard Mandeville, *The Fable of the Bees, or Private Vices, Public Benefits* (1734). Reprint edition, London, 1934.

ods of monetary-financial accounting, and locating the meaning of the developments reflected by monetary-financial patterns in an underlying, real set of causal relations which are physical, rather than monetary-financial in actually efficient content.

The needed method for competent long-range forecasting, is that based on the discovery of physical cycles which are akin in form to the cycles which were first introduced, as concepts, by Johannes Kepler's uniquely original discovery of both the principle of universal gravitation and the harmonic ordering of the Solar System which has been spun into existence by what had been earlier a solitary, fast-spinning Sun.

Man Is Not an Animal

There is, however, a fundamental distinction between predictable patterns in human social behavior and in the behavior of any other living, or non-living set of phenomena. The difference is, that the individual human being has the specific quality absent from both animals and digital computers, the quality of generating a discovery of universal principles, as witnessed in the work of the Pythagoreans, Plato, and the modern followers of Nicholas of Cusa.

The problem of society, still today, is that the concept of the modern sovereign nation-state, the concept of the so-called commonwealth form of state introduced under France's Louis XI and England's Henry VII, is the first form of state in which the majority of human beings are not regarded as virtually merely the human cattle, which the satanic figure of the Olympian Zeus described by Aeschylus' *Prometheus Bound* prohibited from knowing the use of the universal physical principles by the use of fire. Mankind is by nature, as the *Genesis* 1 defines man and woman, a creature made in the likeness of the Creator of the universe. Man is therefore required to be Promethean, whereas all the evil forms of society, such as ancient Lycurgan Sparta and its associated, Pythian, Delphi Apollo cult, had been premised on the treatment of the masses of human beings, by a reigning oligarchical class, as merely cattle forbidden, as by Zeus, from the use of discovered universal physical principles.

That oligarchical model was chosen as the basis for the development of the society of Imperial Rome, of that Rome's successor Byzantium, and of the medieval alliance of Venetian financier-oligarchy with both the bestial, anti-Islam, anti-Semitic Norman chivalry and the frankly Satanic wave of religious warfare unleashed by the truly Satanic, anti-Semitic grandfather of the Adolf Hitler regime, Grand Inquisitor Tomás de Torquemada, who unleashed the religious warfare of 1492-1648 throughout modern Europe.

Our U.S.A. was a creation of a movement, in Europe, in the commonwealth tradition of Nicholas of Cusa's *Concordantia Catholica* and *De Docta Ignorantia*. Our American culture as typified in origins by the pre-1688-89 Massachusetts Bay Colony, served as the opportunity to express these principles of the commonwealth form of society in a newly

explored continent, at a distance from a Europe dominated by both the Habsburg and Anglo-Dutch Liberal modes of oligarchical elite rule. Our republic was founded as the best of modern nations on that account, a republic intended to inspire "Old Europe" and other parts of the world to enjoy that freedom which can not exist where the reign of oligarchical elites is tolerated.

The establishment of our republic was forced upon us by the kind of tyranny which came to power within Europe, as among our own native American Tory "families" of today, with the February 1763 Peace of Paris, which established the British East India Company as an emerging Anglo-Dutch Liberal form of world empire in imitation of the medieval Venetian financier-oligarchical tradition. Despite all of the corruption which our own domestic oligarchical "families" have imposed upon us, it was possible for President Franklin Roosevelt to turn the cyclical tide of history with his accession to the Presidency. But, it was also possible for a scoundrel such as Harry Truman to become the instrument used to begin to destroy everything which our founders had accomplished, and which President Franklin Roosevelt had done to play the crucial part in saving the planet from the Nazi world empire which would have been a global reality, but for President Roosevelt's turning of the tide of history in his time.

We are in a comparable danger to that of the early 1930s, again today. The descent to immediate threat of the end of the existence of our republic, and of civilization generally, completes a cycle of history which began with the tragic insertion of Harry S Truman as President. We are therefore at a point, at which the only worthy task of any patriot of our republic, is to launch a new cycle in history, one which may differ from what Franklin Roosevelt accomplished, but which represents the same kind of commitment to the future benefit of all mankind.

The central task posed to us thus, at this moment of our republic's existential crisis, is to launch the needed new cycle. This task is centered on physical-economic objectives of the type I presented in my 2005 proposals for saving the U.S. economy from what the intended oligarchical destruction of our auto-centered machine-tool economy represented.

As our Democratic Senators and others go forth upon the hustings now, the blame or the credit for what happens to the U.S.A. during the weeks and months immediately ahead lies on their shoulders. We are at a turning-point in history, where the continuation of the follies which I have witnessed in the Democratic Party's leadership since mid-February of this year, can no longer be tolerated. The very existence of our nation, even of civilization, depends upon the actions taken during the present weeks. However the voters may judge the candidates' and parties' performance, the manner in which future history will judge those actors and their parties is already predetermined by the combined threat of new Bush-League wars and economic catastrophe facing us in the weeks ahead.

TO READ IN PREPARATION

Like JFK's Manned Moon Landing!

by Lyndon H. LaRouche, Jr.

September 27, 2006

The publication of Dr. Jonathan Tennenbaum's "The Isotope Economy," in this Vol. 33, No. 40 edition of the *Executive Intelligence Review*, is intended to assist governments of Eurasia and others in their preparations for the discussions to occur in oncoming Washington-Berlin international webcast of October 31. Although many statesmen and other relevant



Apollo Project Archive

The launch of Apollo 16, April 16, 1972, headed for the Moon. The challenge of manned exploration of the Solar System still lies before us, along with the urgent need to develop an "Isotope Economy" here on Earth.

influentials may not be specialists in the relevant areas of nuclear physics, the policy outlined by Dr. Tennenbaum is one which must be put on the international agenda for immediate adoption and action.

In light of the fact that the world's present monetary-financial and related institutions are already trapped within an accelerating process of disintegration, it is urgent that the relevant alternatives be placed squarely, now, in the center of discussion. This proposal is intended for prospective adoption as a policy-orientation. It is identified for this purpose as key to organizing a durable long-term replacement and recovery from the inevitable early disintegration of the present global system.

The issue here, as I have emphasized in early written and oral presentations which I have made to sundry official and other audiences, is that the accelerating rate at which mankind is exhausting mineral and related resources of our planet's Biosphere, demands that we turn to new dimensions of approaches to using and replenishing the relevant deposits, such as potable water and other minerals in the planet's Biosphere. The effort to regulate the use of what is assumed to be a fixed stock of essential so-called "natural" resources is a false, and now dangerous doctrine. Instead of viewing the relevant resources of the planet as if they were a fixed totality, we must now assume responsibility of man's creating the new resources which will be more than adequate to sustain a growing world population at a constantly improved standard of physical per-capita output, and personal consumption.

As Dr. Tennenbaum outlines the case, the categories of technologies which would be sufficient to meet the latter re-

quirement for the foreseeable future of mankind, are already known. The point is, that we must incorporate that option into the transformed quality of scientific and related practice which must be marshalled to replace the hopelessly bankrupt practices of mankind's recent decades.

The publication of Dr. Tennenbaum's report in this edition of *EIR* is intended to serve as timely advice to the nations whose notables will be participating in the October 31, 2006 Berlin-Washington LaRouche PAC webcast.

The Isotope Economy

by Dr. Jonathan Tennenbaum

Prologue

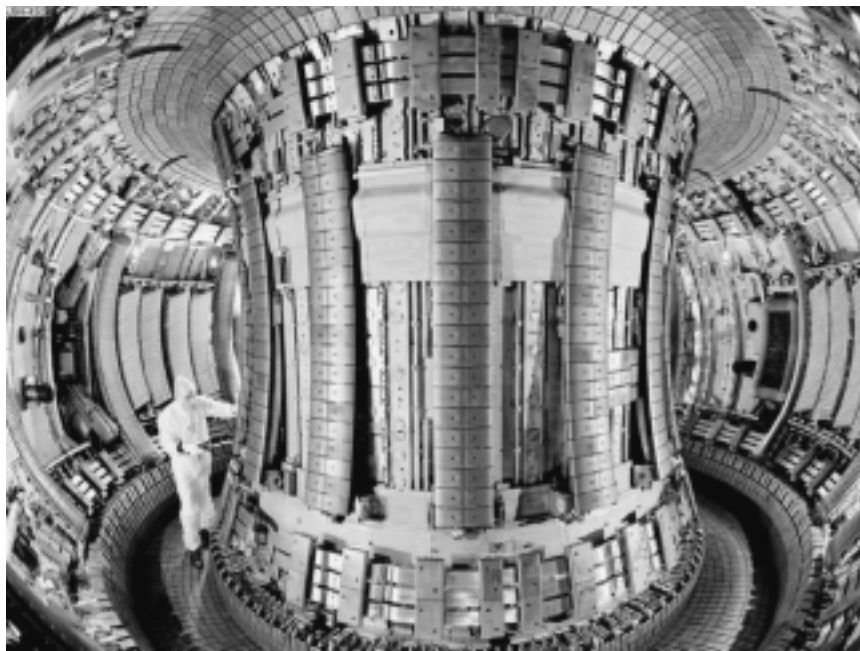
The subject of this essay is a crucial component of the economic mobilization which must be launched in the immediate future, if the world is to be saved from a physical and socio-political collapse of a severity comparable only, on a global scale, to what occurred in Europe in the period leading to the outbreak of the "Black Death" of the 14th Century. The essential problem, addressed here, is how to overcome the effects of the savage destruction of in-depth industrial and scientific-technological capabilities, and of the educational level, skills, and cognitive powers of the labor force, which has occurred in the major industrial nations of both the East and West under recent decades' policies of globalization, deregulation, privatization, "shock therapy," and "the postindustrial society." Any serious program of economic mobilization and reconstruction, must take account of the fact, that the largest single, organically interconnected repository of highest-level scientific research, technological and advanced-technology manpower and industrial capability on this planet, is located in and around the nuclear energy sectors of the United States, Russia, Ukraine, Japan, Germany, France, India, China, South Africa, Argentina, Brazil, and some others; and in areas of astrophysics, space technology, geology, and biomedicine, most closely linked to research and applications of nuclear physics. By the very nature of nuclear science, its roots and history,

and the needs of the world over the coming 50 years, a mobilization of the world's nuclear sector, as a vanguard and locomotive for a generalized economic mobilization of the world's leading nations, must take a specific form. After discussions with Lyndon LaRouche, with S. Subbotin of the Kurchatov Institute, and F. Gareev at the Joint Institute for Nuclear Research in Dubna, I have chosen to call it the "Isotope Economy."

* * *

Approximately a century ago, it was experimentally demonstrated, that the naturally occurring chemical elements, whose harmonic ordering Dmitri Mendeleev embodied in his periodic system, were not homogenous bodies, but rather mixtures of distinct species of atoms—isotopes—having nearly identical chemical behavior, but profoundly different physical properties.¹ The investigation of this "new dimensionality" of the periodic system, and of the processes of transformation of atoms, underlying it, led eventually to the discovery of fusion, fission, and other nuclear reactions, the realization of the first nuclear fission chain reaction, and the first atomic weapons, during World War II. The creation of

1. **Editor's note:** Due to the urgency of publishing this article in time for it to circulate internationally as a discussion piece before the Oct. 31 webcast, and demands upon the author's schedule, footnotes and diagrams have had to be omitted. The full article will be available as soon as possible on our website, www.larouchepub.com, and other venues.



EFDA-JET

A full-scale Isotope Economy will require the development of controlled thermonuclear fusion power. Here, the Joint European Torus (JET), an experimental reactor which produced over 16 megawatts of power in 1997. Significant progress continues to be made in various parallel fusion efforts.

those devices depended upon the separation of the pure isotope U-235 from naturally occurring uranium, and upon the artificial generation, in nuclear reactors, of the first several kilograms of plutonium-239: a species of atoms hitherto virtually absent from the Earth's natural environment.

Today, 60-odd years after the first man-made nuclear chain-reaction, large-scale production of power from nuclear fission reactions has become a reality in 30 countries. Approximately 3,000 different isotopes are known, most of them artificially generated, and more than 200 are presently in commercial use. Modern medical care, and countless other vital activities of modern society, would be unthinkable without the daily use of a hundred-odd radioactive isotopes, produced in nuclear reactors and particle accelerators. Meanwhile, the creation of nuclear weapons profoundly changed the face of history, shaping the entire era of the "Cold War" and creating a situation, where the launching of large-scale warfare, in the form known up to the World War II, were practically tantamount to an act of suicide. Certainly, very few even among nominally highly educated persons today, are fully conscious of the extent to which our present-day world has been shaped by the implications of what initially appeared as "infinitesimal" nuances in the behavior of chemical elements.

And yet, the implications of what was set in motion by the discovery of radioactivity and the isotopes, growing out Mendeleev's "Keplerian" understanding of the periodic system, go far, far beyond anything the world has seen up to now.

As Vladimir Vernadsky and others recognized already a century ago, the discovery of new dynamic principles, transcending the chemistry of the periodic system and closely bound up with the origins of our Solar System and the elements themselves, meant unleashing a fundamental revolution in all aspects of man's relationship to nature. Science had delivered into man's hands a new power: the power to generate a "fire" millions of times more concentrated than the chemical combustion processes, which had been a chief basis of human civilized existence since the legendary gift of Prometheus; a new power sufficient to send a large ship 20 times around the Earth on 55 kilograms of fuel; sufficient, in principle, to support a thriving human population many times larger than that existing today; but also a power to create, on Earth, physical conditions found otherwise only in stars and centers of galaxies; a power that opens the way, in the not-too-distant future, for the expansion of human activity throughout the inner regions of the Solar System, and eventually beyond.

Man's beginning mastery of the power to transmute chemical elements, and to create new states of matter, not previously existing on the Earth and perhaps not even in the universe as a whole, demonstrates once more, that we are living in the universe of Plato, not of Aristotle. This is a universe in which *processes are primary*; in which "nothing is permanent, but change itself," and in which, in dealing with such things as atoms and so-called elementary particles, we must constantly speak, not of a "this" but of a "thus" (as Plato wrote in the *Timaeus*—see below). More than in any previous

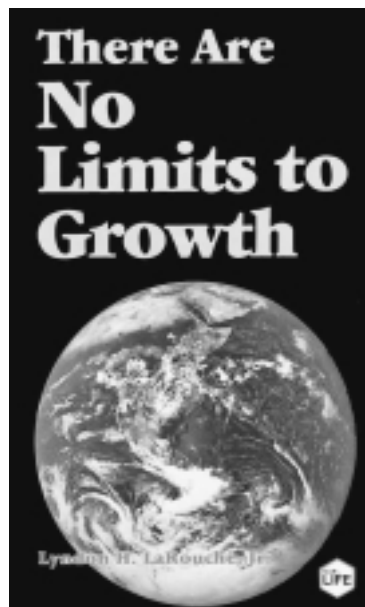
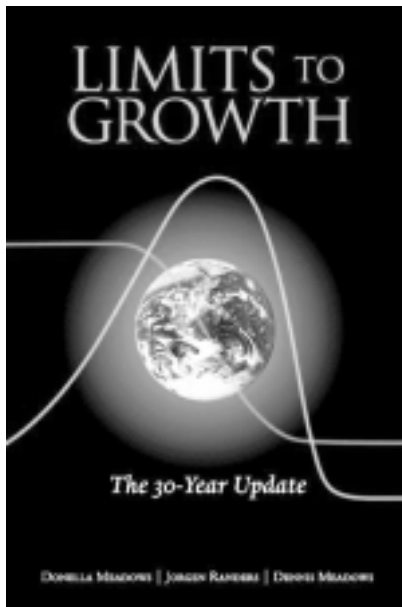
"phase state" of man's physical economy, the emergence of what I am calling the "Isotope Economy" signifies a condition, in which social practice must necessarily be oriented to *true ideas*: to the discoverable, universal principles that govern change and development of the universe, and not primarily to objects of the senses. This means the end of empiricism and materialism.

Such a revolution has profound political implications. Its realization is plainly incompatible with further toleration of an irrational, oligarchical organization of society, in which essential decisions, concerning the future of nations and the fate of the humanity as a whole, are subject to the whims of a tiny number of influential families, while the vast majority of humanity lives in ignorance and servitude. The revolution, proclaimed by Vernadsky as the coming of the Noösphere, and which he saw as inseparable from a coming era of nuclear power, means a society living the Promethean self-conception of man; it means a society whose activity would revolve around the principle of creative scientific discovery, like the planets around our Sun. It means a highly educated population, capable of deliberative self-government, and organized on the basis of a scientific understanding of the dynamic relationship between the sovereign creative individual, the sovereign nation, and the interests of humanity as a whole. In a word, the image of society that Leibniz and the "American Prometheus" Benjamin Franklin had in mind, in the original design for a republic in the New World. This view of mankind's future inspired the enormous optimism that people all over the world attached to nuclear energy—"the atom in the service of man"—in East and West, North and South.

The Olympians' War Against Progress

The response to this challenge, from the oligarchical would-be "Gods of Olympus," was explicit and savage. From the mid-1960s on, an all-out psychological and political war was unleashed against the institutions of industrial society and against the very notion of scientific and technological progress. The assault, focussing on the United States, Britain, and western continental Europe, was loudly proclaimed in advance by Bertrand Russell and his circles, and executed by leading Anglo-American financial institutions and intelligence agencies close to the British monarchy and to oligarchical circles on the European continent. It lay at the origin of the orchestrated spread of rock-drug-sex youth "counterculture," the New Left movement, the 1968 student revolution, the malthusian propaganda of the Club of Rome's *Limits to Growth* and the "Green" environmentalist movement worldwide.

These forces chose *nuclear power*, the clearest embodiment of scientific and technological progress and the single most crucial technology for world development in the post-war period, as a main focus of their assault. Parallel with the buildup of the anti-nuclear scare campaign, institutional measures were enacted to stop the spread and development of nuclear energy worldwide: The Administration of Jimmy



Since the mid-1960s, there has been an all-out assault against the very notion of scientific and technological progress. The Club of Rome's 1972 book *Limits to Growth* (shown, left, in a new edition), was highly influential in this regard. The LaRouche movement immediately countered it with a pamphlet widely circulated on college campuses, and later with a 1983 book (right) by Lyndon H. LaRouche, Jr.

Carter initiated a 180-degree reversal of President Eisenhower's wise "Atoms for Peace" policy. It attempted to impose a virtual moratorium on nuclear exports to developing countries under the pretext of "Nonproliferation," worked to dismantle the in-depth nuclear research capabilities of the United States itself, and to delay or halt, if possible, the realization of controlled fusion as a power source of the future. The ambitious nuclear power programs of developing countries such as Brazil, Argentina, Mexico, and others, and the kinds of North-South cooperation exemplified by the long-term German-Brazilian nuclear agreement, were crushed by the opposition of the Carter Administration and its successors. Amidst the mass-media-orchestrated anti-nuclear hysteria of the 1980s, the nuclear program of Germany, once world leader in export and technology-transfer of nuclear technology, was shut down, along with the smaller, but qualitatively significant programs of Sweden, Italy, and a number of other nations. With the collapse of the Soviet Union and the subsequent, savage looting and destruction of the scientific-technological and industrial capacities of that nation, the single largest nuclear sector in the world outside the United States nearly went out of existence, only to be partly revived in the most recent period.

All of this destruction, and more, was already promised to the world by Bertrand Russell in his vehemently anti-science tracts during the 1940s and 1950s. Russell went so far, in 1949, as to propose

dropping nuclear bombs on the Soviet Union, in case the Soviets refused to submit to a world government having an absolute monopoly on nuclear technology. Russell's essential argument—that the existence of truly sovereign nations was "too dangerous" to be tolerated in an age of nuclear weapons—remains the basis for the use of so-called "nonproliferation" as a pretext for denying the right of all nations and peoples to full and unhindered use of the fruits of scientific and technological progress. It remains the basis for a de facto regime of "technological apartheid," directed above all against the majority of humanity living in the so-called Third World.

But the oligarchical attempts to snuff out the nuclear revolution began long before the discovery of fission in 1934-38. They revealed themselves in the orchestrated, anti-Semitism-tinged persecution of Polish Catholic-born Marie Curie in France, in the bitter opposition to Max Planck's discovery at the turn of the century, and in the mafiaso-like, bullying behavior of Niels Bohr and others toward Schrödinger and Einstein at the 1927 Solvay Conference. Bohr et al. explicitly *for-*

bade any kind of thinking which conflicted with the chosen occult-empiricist doctrine of "complementarity" and supposed intrinsically statistical-indeterminate character of microphysical processes.

In opposition to Einstein, Schrödinger, and others, who sought to conceptualize the *higher principle* underlying the apparently *discontinuous character* of quantum phenomena, Bohr, Max Born, Wolfgang Pauli et al. arbitrarily asserted that reality on the microphysical scale is *intrinsically* beyond the conceptual powers of the human mind! This explicit, sav-



Masked terrorists assault a nuclear plant in Germany in 1986. The anti-nuclear hysteria succeeded in shutting down Germany's nuclear program; Germany was once the world's leader in the export of nuclear technology.



Russell: Library of Congress

The Atomic Bomb and the Prevention of War

Bertrand Russell

ANENT PREVENTION

Mr. Russell in transmitting this memorandum wrote an interesting note indicating that it had been refused by five American periodicals of wide circulation. (It has appeared in the English journal *POLEMIC*.) In offering it to the Bulletin...which he reads "with interest and attention"—Mr. Russell trusted us to act it if necessary without disturbing his views.

We publish the article in full in the belief that Mr. Russell's astute and dispassionate observations on American audiences and that the Bulletin reader is sufficiently discerning to profit from articles which he does not necessarily endorse.

THE IMPACT OF ATOMIC WAR

The atomic bomb has not a problem to be solved which must be solved if any tolerable existence is to be possible for the human race. The problem is that of abolishing large-scale war, not at some distant future date, but quickly, before there has been time for another vast conflict to break out.

If the next great war were to occur...

ington, Chinese of population... and Congress... diabolic alchemy... of the... States, including... important is... bomb will be... be a matter of... government... survivors will... price, while... they would re... find a blow. If... it bombs has... ed, probably... these will be... will be drawn... slow... would... further... manufacture of atomic bombs... impossible. If one side succeeds first in this... war, it may consider that it has won a... victory, but it will be a "victory" far... more disastrous to the "victor" than any... defeat known to history.

THE COST OF "PREPAREDNESS"

...the crews of its battleships, and its... infantry regiments must each severely be... composed of men of many different... nations; there must be no possibility of... the development of national feeling in any... larger than a company. Every member... of the international armed force should... be carefully trained in loyalty to the in-

...very clear that there is only... which great wars can be... prevented, and that is the estab-... as an international government... supply of serious armed force... an one that really governs... able facade like the League... or a protectionism than like... Nations under its present con-... international government... be able to preserve peace... the only atomic bombs, the only... producing them, the only air... battleships, and, generally... necessary to make it invosti-... Its atomic staff, its air squadrons... the crews of its battleships, and its... infantry regiments must each severely be... composed of men of many different... nations; there must be no possibility of... the development of national feeling in any... larger than a company. Every member... of the international armed force should... be carefully trained in loyalty to the in-

Bertrand Russell's infamous call for nuclear war against the Soviet Union was published in *The Bulletin of the Atomic Scientists*, Oct. 1, 1946. If war were to take place soon, before Russia gains nuclear weapons, he wrote, America would surely win, "and American victory would no doubt lead to a world government under the hegemony of the United States—a result which, for my part, I should welcome with enthusiasm." As for a UN agreement to establish one world government, "If Russia acquiesced willingly, all would be well. If not, it would be necessary to bring pressure to bear, even to the extent of risking war, for in that case it is pretty certain that Russia would agree. If Russia does not agree to join in forming an international government, there will be war sooner or later; it is therefore wise to use any degree of pressure that may be necessary."

age attack on the principle of scientific creativity, backed up by the growing oligarchical takeover of the financing of scientific research, especially in the wake of World War I, served the obvious underlying purpose, to break what remained of the Promethean spirit of physical science, reawakened during the Renaissance, and to enslave science to the oligarchical agenda. Insofar as the fruits of scientific research were needed, for military and other "practical" purposes, scientists would be allowed to work; but they must not be allowed to think in a truly creative way. This repeated the tactic that had once deployed Laplace et al. to crush the circles of Monge and Carnot, and convert the Promethean École Polytechnique into a tool of Napoleon's imperial drive.

In the sequel, theoretical nuclear physics was elaborated, in the hands of a "kindergarten" of admittedly very brilliant and capable young scientists, into what it still largely remains today: a Ptolemaic mixture of mutually contradictory models, mathematical formalisms, and calculational procedures, that can be extremely useful and even indispensable in certain specific domains of application—such as building bombs!—but embody no intelligible conception of the universe. It is not surprising, that in the stormy developments leading to the discovery of nuclear fission, so-called "theory" lagged far behind the experimental work, which was the real "driver" of development. The discovery of fission was itself held back for four years, because this process was regarded by the theo-

rists as "impossible." The subsequent rapid development of nuclear physics and technology, from the wartime bomb projects, up to and including the realization of civilian nuclear power and the vast complex of medical and other applications of isotopes, was driven forward largely by people who were trained in the tradition of physical chemistry, geochemistry, and related industrially oriented fields of natural science. These people, exemplified by William Harkins, the Noddacks, or Vernadsky, often despised the mathematical sophistry of theoreticians who had been elevated to the stature of "high priests of science."

But the state of nuclear physics today, is no less a product of the enormous external pressures imposed on science and on many of the most brilliant scientists in the context of the wartime atom bomb projects and the ensuing Cold War. The subservience to military aims, of some of the most revolutionary areas of fundamental research in the physical sciences, and the imposition of strict regimes of secrecy, both in the West and East, preventing the free exchange of

scientific ideas and experimental results, were virtually unprecedented in the millennia-long history of science. These circumstances had a devastating effect upon the intellectual integrity of many among the most brilliant scientists, and upon the organic development of science as a whole. Although the military relevance of advanced scientific areas such as nuclear physics, caused enormous resources to be devoted to their pursuit, the managed environment within which many scientists worked, became a powerful barrier to fundamental scientific progress.

This was no mere incidental side-effect. Under the strategic policies promoted initially by Russell, Leo Szilard, and others, which later became known as the "balance of nuclear terror" and "Mutually Assured Destruction (MAD)," the suppression of fundamental breakthroughs became more and more a deliberate feature of the management of scientific research. The essential argument of the Russell faction was, that once the United States and Soviet Union possessed sufficient numbers of nuclear warheads and delivery systems to inflict catastrophic damage on the other side, even after having suffered a first strike, a certain "stability" in the form of mutual deterrence had been achieved, which should not be disturbed at any cost. Accordingly, both sides should agree, not to pursue certain directions of research and development that might overturn the rules of the game. This had as a necessary consequence, however, that the very possibility of funda-



Chemist William Draper Harkins was one of those trained in industrially oriented fields of natural science, who despised the mathematical sophistry of the science establishment.

mental scientific revolutions, would be seen, increasingly, as a potential threat to the strategic balance, and the thereby to national security!

Chaining Prometheus

This view, that Prometheus had to be chained down in the interests of preserving strategic stability, was institutionalized in certain understandings reached between the U.S. and Soviet governments, through Bertrand Russell's Pugwash Conferences and other "back channels," going back to the post-1957 Khrushchov period, and later exemplified by the ABM Treaty negotiated under Henry Kissinger. Superpower competition was thereby supposed to be limited to a narrow range of "permitted" directions—with a certain amount of cheating on both sides, of course—while at the same time the two sides cooperated to prevent any third country from developing "dangerous" scientific and technological capabilities. The active suppression of fundamental scientific breakthroughs, through bureaucratic and other means, applied not only to nuclear physics and areas directly connected with nuclear weapons, their delivery systems, and possible means of defense against them, but also to revolutionary areas in biophysics (bioelectromagnetism) and many other fields of science.

These U.S.-Soviet government understandings shaped world events for the entire period up to the collapse of the Soviet Union. Their effects even reached into school classrooms. They cleared the way, for example, for the 1960s liberal educational reforms in the United States and other NATO countries, which degraded the role of "hard physical science" in general education, in favor of the so-called social sciences, and for the subsequent assault upon the concept of scientific and technological progress. With the founding of the International Institute for Applied Systems Analysis (IIASA) as a joint project of top elements of the Anglo-American establishment and the Soviet *nomenklatura*, the oligarchi-

cal conception underlying the long-standing "condominium" arrangements between the two sides came out into the open: to manage the world by methods intrinsically opposed to the Promethean impulse of science. Many on the Soviet side failed to realize that the elimination of the Soviet Union, and especially of its advanced scientific-technological potentialities, was high on the list of priorities.

The only substantial attempt to break the world free from these policies, was Lyndon LaRouche's fight to cause a fundamental change in strategic relations between the two nuclear superpowers, centered on a jointly agreed commitment for both to develop and deploy antiballistic-missile defense systems based on "new physical principles" (sometimes called directed-energy or beam weapons). This would have eliminated the doctrine of "Mutually Assured Destruction" and thereby the whole game of Bertrand Russell and Szilard, and at the same time permitted both nations to move into a "science-driver" mode of economy, in which the revolutionary civilian spinoffs of research into "new physical principles" would pay back investment into defense systems many times over.

Unfortunately, Soviet General Secretary Yuri Andropov refused the proposal, which LaRouche had communicated and explored in "back-channel" discussions with the knowledge of the Reagan Administration. Six years later, the Soviet Union collapsed, as LaRouche had warned it would, if his proposal were rejected. The policy of destroying the U.S.-S.R.'s in-depth scientific-industrial capability went into full gear. But with the end of the Cold War, the need to continue large-scale state investments into advanced science and technology in the United States and Western Europe, from an oligarchical standpoint, no longer existed. Nor was there any "need" to maintain an all-around industrial base. The floodgates were opened for savage deindustrialization and "outsourcing" of production to "cheap labor" nations, accompanied by the rise of a gigantic speculative bubble in the financial system. To most of the youth growing up in the formerly industrialized nations, true scientific and technological progress is at best a distant, secondhand memory.

We have come to the end of the cycle. The destruction of large parts of the total scientific-technological potentials of mankind, the loss of much of its best-qualified labor force, and the stupefaction of the population in formerly industrialized countries, if not reversed soon, would doom the world economy to inevitable physical collapse. There is no way that the nations of the developing world, including China and India with their oceans of poor people, could generate the technologies they need for their long-term survival, without a revival of the kinds of scientific and industrial capabilities in the United States, the former Soviet Union, and Europe, that were typified by the first decades of development of nuclear energy. The world is faced with a simple choice: either to launch an economic mobilization, rejoining the track of development of the "nuclear age," which Vernadsky and others had foreseen, or to fall back into a murderous dark age. Prometheus

must be set free! Human civilization cannot survive without scientific revolutions.

A Nuclear Revival

Presently, the world is witnessing the beginning stages of a revival of nuclear power, which encompasses not only major developing countries such as China, India, South Africa, Argentina, and Brazil, but also Russia and even advanced-sector Western nations such as the United States, which had virtually abandoned their once-ambitious nuclear energy programs, for foolish ideological reasons, some 30 years ago. If the world does not descend into a dark age of chaos and war, a period of large-scale construction of nuclear power plants is pre-programmed, if only by the sheer scale and rapidity of expansion of demand for electrical and other forms of power, and the need to renew large sections of the existing power-production capacity, which are coming to the end of their service lives.

However, the world we are living in now is not the same as it was at the point that nuclear power development was aborted, three decades ago. Even an all-out commitment to a nuclear power plant construction program now could not possibly compensate for the severe damage the world economy, and human civilization generally, has suffered as a consequence of the sabotage of nuclear power development, and the virtual war against industrial culture of which nuclear technology was a crucial vanguard element. Much of the science and engineering capabilities, that once existed the United States, Germany, Russia, Italy, Sweden, and other countries is simply no longer there. It must be built up once again in a process that will require a generation or more.

In the meantime, huge challenges facing mankind, which the early architects of nuclear energy development had recognized 50 years ago on the horizon of the future, stand today at our doorstep: the need to produce large quantities of fresh water by desalination or other artificial means; the need to replace the burning of petroleum products by a combination of electric power and synthetic, hydrogen-based fuels; the need to apply much larger power densities to the extraction, processing, and recycling of basic materials, and more.

To meet all these requirements, a revolutionary *new phase* in the development of nuclear energy must be launched now. I christen it, the "Isotope Economy."

What Is the Isotope Economy?

The immediate context for the emergence of the Isotope Economy is the now-beginning transition-process of the global physical economy, from the present, still-dominant role of fossil fuels, to nuclear power as the chief basis for the world's power production systems, both with respect to the generation of electricity, as well as, increasingly, industrial process heat and the production of hydrogen-based synthetic fuels to cover a growing percentage of total consumption of chemical fuels. This first stage of this process relies on nuclear fission reactors, with increasing emphasis on high-tempera-

ture reactors (gas-cooled as well as liquid-metal-cooled, slow- and fast-neutron systems), and an integrated fuel cycle, with comprehensive reprocessing and recycling of fissionable materials, and employing thorium as well as uranium and plutonium. The necessary inventory of fission reactors encompasses a large spectrum of different reactor designs, including small-sized, series-produced modular units, as well as standard large units; reactors optimized variously for use as electricity generators, as industrial heat sources, for desalination, for production of hydrogen and other synthetic fuels; for breeding of fission fuel and transmutation of nuclear waste products, for ship propulsion, etc. Reactors requiring little or no supervision and running for very long periods without refueling—the so-called "nuclear batteries"—may play a significant role in outlying and developing regions of the world.

This transition to nuclear energy as the basis for the world's power systems, necessitates a massive build-up of industrial capacities for isotope-separation and for the reprocessing of nuclear materials, with emphasis on use of revolutionary laser- and plasma-based technologies. The latter build-up, in turn, provides an immediate jumping-off-point for the emergence of the Isotope Economy.

The "Isotope Economy" is characterized by the combination of four main features:

Firstly, the Isotope Economy means incorporating the entire open-ended array of individual species of atoms known as "isotopes," of which today 3,000 are known, into the economy as fully differentiated instruments of human activity. Thereby, the familiar system of the 92-odd elements of Mendeleev's Periodic Table, will be superseded, in broad economic practice, by an incomparably more complex and multifaceted System of Isotopes. At first, these developments will concentrate on a subset of 1,000 or so relatively longer-lived isotopes known today; later, however, this number will grow, as means are devised for extending the lifetimes of even very short-lived isotopes, modifying or even suppressing the radioactivity of unstable nuclei and rendering them economically usable, by "binding" them in suitable physical geometries.

At the same time, the Isotope Economy will systematically *expand* the array of isotopes, beyond those known today, deep into the range of superheavy (transuranic) new elements and "exotic" isotopes of existing elements. Each of those species constitutes a singular condition of the universe: Each possesses a bundle of unique characteristics and anomalies, relative to the others, enriching the spectrum of degrees of freedom in the development of the mankind and the universe.

Secondly, the mode of economic utilization of isotopes themselves will change radically, extending far beyond presently dominant uses as sources of ionizing radiation, as tracers, and as tools of specialized scientific research, to focus on much larger-scale applications of the *exquisitely fine "tuning" of subatomic processes*, both in respect to the inorganic domain, and in respect to the specific role of isotopes in the domain of living processes. Of immediate significance, in the first phases of the Isotope Economy, are the differences in

mass and above all in the magnetic properties of the nuclei of isotopes, which interact with each other and the electron structures in their environment, by processes referred to today as “hyperfine interactions” and “nuclear magnetic resonance.” This development can be usefully compared to the introduction of the principle of well-tempering into vocal polyphony in music, whereby small shifts in intonation cause new “cross voices” to emerge between and among the voices, resulting in a vastly increased power in the communication of ideas.

By exploiting to the fullest extent the implications of the ambiguity, which arose in chemistry with the discovery of different isotopes of one and the same element, mankind opens up a “higher cardinality” of potentialities, incomparably greater than the mere numerical increase in the exploitable atomic species, mentioned above, would suggest. If, for example, we are synthesizing an organic molecule having four carbon atoms in non-symmetrical positions, then by choosing for each “carbon” either of the two stable isotopes of carbon, C-12 or C-13, we obtain 16 different molecules, having the same chemical structure, but different “fine-tuned” magnetic and other properties. If we include the long-lived isotope C-14, the number grows to 81. If, in addition, there are 5 hydrogen atoms in the molecule, then by choosing between ordinary hydrogen and the stable isotope deuterium, up to 2,592 different molecules result!

“Isotopically engineered materials,” synthesized from pure isotopes or selected combinations of them and possessing novel “collective” physical properties, will begin to supplant the more primitive types of materials, employed today in human activity. Some of these are already under development today. In addition to their special thermal, magnetic, electrical, and mechanical characteristics, these materials will play an essential role in the realization of new forms of nuclear energy and in generation and application of coherent, ultra-short-wavelength radiation, such as the gamma-ray laser.

At the same time, mankind stands on the threshold of revolutionary developments in biology and medicine, connected with understanding *how the fundamental distinction between living and nonliving processes*, demonstrated most forcefully by Louis Pasteur and Vernadsky, *expresses itself on the subatomic level*. While we cannot today predict the exact forms this revolution will take, we know already that it will have much to do with the specific role of isotopes in living processes, and will lead to a qualitative and quantitative transformation in the uses of isotopes, not only in biology and medicine, but also in agriculture and the management of the biosphere as a whole. It is, for example, quite conceivable, that, by altering and controlling the isotopic composition of plant, animal, and human nutrition in certain ways, mankind could obtain a variety of beneficial effects; and that in the not-too-distant future, very large amounts of isotopically enriched substances will be produced for that purpose.

Thirdly, the Isotope Economy will employ artificial transmutation on a large scale, to generate various species of atoms

as raw materials for industrial production. This means, to begin with, utilizing nuclear fission reactors, coupled with reprocessing of all fission products, more and more as *atom-generators and transmutation machines*, rather than simply sources of heat and electricity. By their very nature, fission reactions of heavy nuclei produce a wide spectrum of lighter isotopes, as well as a flux of neutrons which can induce further transmutations in surrounding material. A next step will be to add the potentialities of nuclear fusion, to create a combined “fission-fusion economy” mimicking the astrophysical generation of elements in certain respects.

The large neutron fluxes generated by fusion (deuterium-tritium) reactions, permit much faster rates of “breeding” of fuels for fission reactors, and of transmutation generally. Production of neutrons through accelerator-driven spallation, provides a third method for large-scale atom-generation, probably starting with facilities for the transmutation of high-level nuclear “waste.”

In the foreseeable future, more sophisticated methods will begin to emerge, based on the coherent control of nuclear processes by precisely tuned electromagnetic radiation and related means. Man will progressively develop the capacity to synthesize macroscopic amounts of atoms of any desired species, increasingly at will; and to do this on such a scale as to substantially supplement, and in some case even surpass, the quantities and qualities of raw materials available from “natural sources.” Parallel with the artificial generation of elements, applications of high-temperature plasmas to the processing of ores, waste, and other materials—the so-called “fusion torch”—will vastly increase the range of economically exploitable natural resources, and permit a virtually 100% recycling of used materials in the economy.

Fourthly, the Isotope Economy is intrinsically “astrophysical” in nature and in cultural orientation. Its maintenance and development will depend upon extensive, ongoing astrophysical investigations, that cannot be carried out from only the Earth and near-Earth region, but require an expansion of human activity throughout the inner region of the Solar System. To master subatomic processes for the Isotope Economy on the Earth, we must learn how those processes operate on the galactic scales of space-time, and we must come to know, much better than present-day earthly speculations permit, the pre-history of our own Solar System and the origin of the elements we find in them today. These requirements translate into the need to build up large networks of space-based astronomical observatories in Solar orbits, able to carry out interferometric and related measurements of our galactic and extra-galactic environment on a length-scale of the orbit of Mars; plus a greatly expanded program of exploration of the Solar System itself.

All of this cannot be accomplished without establishing a large-scale logistical/production infrastructure in space, with emphasis on the Moon and Mars, capable of sustaining a large scientific-technical labor force living and working for long periods away from Earth, on a relatively self-sufficient basis.

Conversely, it is precisely the “quantum jump” in overall productivity, inherent in the technological developments of the Isotope Economy, which make feasible routine travel throughout the inner Solar System and the establishment of permanent manned colonies on Mars. Fusion propulsion systems, for example, can cut the journey times between near-Earth orbit and Mars down from many months, as are required with present chemical propulsion systems, to a couple of weeks or less.

The Isotope Economy in the Process of Becoming

To readers not familiar with recent developments in nuclear-related technology, our characterization of the Isotope Economy might seem to be a very distant prospect, even smacking of “science fiction.” In reality, the Isotope Economy is already in the *process of becoming*, and many of its features already exist, in more or less developed form, in laboratories and advanced production facilities around the world.

Isotope separation. The technology of isotope separation, greatly hindered in its progress by efforts to monopolize its military applications, has undergone revolutionary developments over the last 20 years. Initial breakthroughs in laser and plasma-based methods (AVLIS, SILEX, plasma centrifuge, ion cyclotron resonance, etc.), promise enormous advantages relative to conventional methods. At the same time, conventional methods (centrifugation, diffusion processes, electromagnetic separation, gaseous and thermal diffusion) have been further refined and their range of industrial applications extended to an ever larger number of isotopes. Also, the end of the Cold War freed up for civilian use large capacities for isotope separation, formerly employed in the military sectors of the United States and the former Soviet Union. This, in turn, has greatly expanded the range of isotopes generally available, and reduced their cost, spurring the search for new applications in all fields.

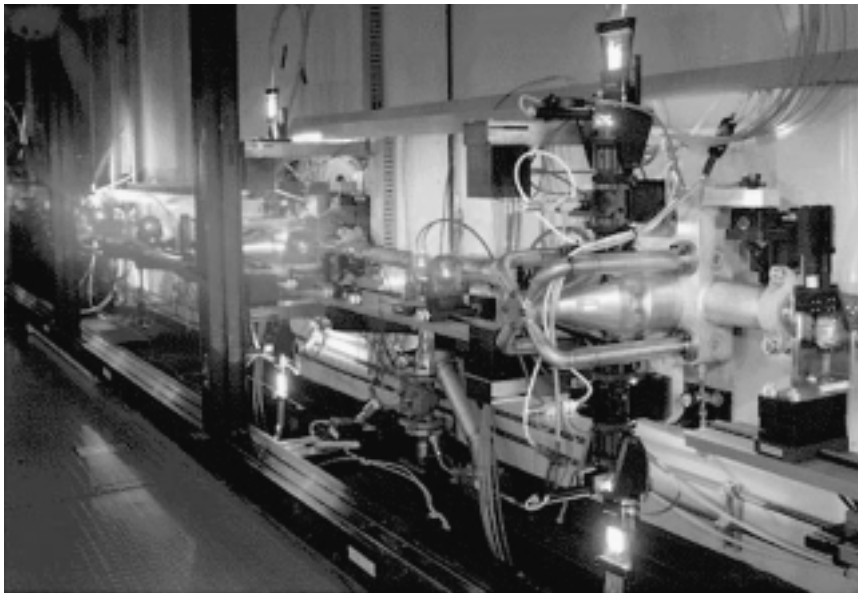
Qualitative transformation in the uses of isotopes. The demand and production of isotopes are presently growing at an exponential rate, led particularly by the medical uses of radioisotopes. At present, in the United States alone, more than 10 million diagnostic procedures are carried out each year using radioisotopes. At the same time, a *qualitative jump* is occurring in the *range* of applications of pure and enriched isotopes in the economy, as exemplified by the greatly expanded role of stable isotopes, and the beginning emergence of a new industrial sector producing “isotopically engineered materials” for the fabrication of semiconductor devices and specialized mechanical components such as cutting tools in metalworking machines. But this is just the beginning of a vast development, comparable in relative economic importance to the explosive development of the chemical industry in the hundred years beginning in the middle of the 19th Century.

Isotopically tuned materials. In this process, the preeminent role of *radioactivity* in most present-day uses of isotopes, is gradually being supplemented by other characteristics, connected with the *exquisitely fine “tuning”* of nuclear interactions and with the *collective properties* of materials, crafted from specifically chosen combinations of isotopes. The differentiation between isotopes of one and the same element is thus becoming more and more important in applications that have nothing directly to do with radioactivity or even, apparently, with so-called “nuclear properties” of the isotope. When embedded in crystal lattices or other molecular structures, the nuclei of different isotopes, having differing masses, oscillate at different frequencies.

For these reasons, among others, materials made using only a single, carefully separated isotope of a given element have a different and more coherent internal “tuning,” than materials made with a mixture of isotopes; they display significantly different behavior. At present, for example, laboratories worldwide are researching the possibility of overcoming existing limitations on the power-densities, and therefore the computing power, of semiconductor chips, by utilizing a pure isotope of silicon. “Isotopically pure” structures of silicon, as well as of carbon and a number of other elements, have been found to possess a significantly higher thermal conductivity than the corresponding “natural” materials. A higher thermal conductivity accelerates the potential rate of heat-removal from semiconductor chips, permitting them to operate at a higher power without overheating. A similar effect has been demonstrated in “isotopically pure” diamonds, opening up the possibility of increasing the productivity of various machining operations. It has been established that diamonds made of pure carbon-13, are significantly harder than diamonds composed of the naturally occurring mixture of isotopes.

Hyperfine interactions and magnetic isotope effects. The applications just mentioned, however, make use of effects of differences of *mass* between isotopes, while not yet taking into account what is really a much more essential differentiating characteristic: their *magnetic properties*, which are crucial to the phenomenon of *nuclear magnetic resonance*. As I shall point out in the following section, a new field of chemistry and biology has opened up in recent years, in connection with the experimental demonstration that so-called “hyperfine interactions,” involving nuclei, play a fundamental role in all living cells. Isotope-dependent nuclear magnetic effects will become ever more important, also, in determining the behavior of man-made nonliving materials, including most probably new types of “room-temperature superconductors.”

Fission reactors as atom factories. Meanwhile, the economic importance of the isotopes generated by nuclear fission reactors and accelerators, in many ways *already* exceeds that of the electrical power produced by those same reactors! In the foreseeable future, fission reactors, instead of being seen chiefly as electric power sources, generating isotopes as a



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The Atomic Vapor Laser Isotope Separation (AVLIS) technology was developed in the 1970s, and a full-scale pilot plant was built at Lawrence Livermore National Laboratory, which successfully demonstrated uranium enrichment and other potential isotope uses in the 1990s. But the AVLIS was shut down in a stunning example of “shareholder values.” The U.S. Energy Policy Act of 1992 “privatized” uranium enrichment, transferring the technology to a private company, USEC, which decided in 1999 to halt the AVLIS project because the investment returns were projected to pose too much risk to shareholders. The pilot plant was dismantled. Here, a dye laser in the AVLIS project.

by-product, will operate more and more as *atom-producers*, generating electricity as a by-product. Fission reactions have the peculiarity, that starting from a single heavy isotope (U-235, Pu-239, or Th-232), they generate an extensive spectrum of different isotopes, encompassing nearly all the elements of the Periodic Table. It is already today possible, by “tuning” the neutron spectrum and fuel composition in a reactor, to influence the distribution of fission products to a significant extent.

Nuclear waste as a valuable “ore” for the extraction of precious metals. Already today, in addition to large amounts of useful radioisotopes and recyclable fission fuels, nuclear fission reactors have generated large amounts of industrially important precious metals, such as palladium, rhodium, and ruthenium. The extraction of these metals from so-called “nuclear waste,” for economic use as catalysts, in special alloys, and corrosion-resistant materials, has already been proven feasible. The amounts of these metals, synthesized every year as reaction products in the world’s presently operating nuclear power reactors, if they were to be extracted from the spent fuel during reprocessing, would already amount to significant percentages of the total yearly amounts extracted from the Earth by mining. Noting that the relative concentrations of many rare metals contained in the spent fuel of nuclear breeder reactors, is tens of thousands to millions of times higher than their average content in the Earth’s crust, Japanese researchers recently declared such spent fuel to be

one of the most valuable “ores” known today.

Complete reprocessing. The full exploitation of fission’s potential as an atom-producer, will begin with the “closing” of the nuclear fuel cycle, by the complete chemical reprocessing of spent fuel, separation of useful isotopes, recycling of fissionable materials, and transmutation of undesired species through bombardment with accelerator-generated neutrons, or in specially designed “nuclear waste-burning” reactors. All of this has been worked out in detail by nuclear laboratories around the world, and the essential technological base already exists.

Large-scale transmutation by particle accelerators. The technology of high-current particle accelerators has advanced to the point, that the transmutation of macroscopic amounts of isotopes by irradiation with neutrons from an accelerator-driven neutron source is already a technological possibility. Numerous laboratories around the world are presently working on designs for Accelerator Driven Transmutation Sys-

tems (ADS), as a means to deal with the problem of long-lived radioactive isotopes from “nuclear waste.” A single ADS system with a beam power of 20 megawatts, could transmute the long-lived isotopes from 10 standard nuclear power plants into short-lived and stable isotopes, producing 800 megawatts of thermal power at the same time. Similar technology could be used for other transmutation applications, as well as for driving “sub-critical” nuclear reactors of various types.

The advent of nuclear fusion. The next step toward a full-scale Isotope Economy will be to combine the potentials of fusion—which in many respects are complementary to those of fission—with fission processes and accelerator-based transmutation, while at the same time phasing in new methods of controlled transmutation, now under experimental development (see below). Over the last ten years, nuclear fusion technology has progressed steadily, on multiple fronts. In 1997, the experimental fusion reactor JET (Joint European Torus) in Culham, England, produced over 16 megawatts of power through fusion reactions, sustained over several seconds, at temperatures of 100 million degrees C. The International Thermonuclear Experimental Reactor (ITER), now under construction in Cadarache, France, will produce 500 megawatts of fusion power, in pulses of over six minutes, with the next step being a prototype power station. Parallel with the standard tokamak design, there has been significant progress across the board in fusion experiments, including



iter.org

The International Thermonuclear Experimental Reactor (ITER) is now under construction in Cadarache, France. It will be the next step toward a prototype power station, producing 500 megawatts of fusion power.

fast liner, plasma focus, “inertial confinement” by lasers, ion beams, and others.

The “brute force” approach to fusion: not the best, but approaching success. Contrary to often-repeated myths, the possibility of generating large amounts of power by fusion reactions has long since been demonstrated—namely, in the explosion of the first hydrogen bomb, over a half century ago. The hydrogen bomb, however, requires a smaller, fission chain-reaction detonator (a small atomic bomb) in order to bring a mixture of hydrogen isotopes to the necessary high densities and temperatures, for large quantities of fusion reactions to occur. The essential difficulty of tapping fusion as a power source for civilian purposes, lies in the challenge of generating large amounts of fusion reactions in an efficient, controlled way, without using an atomic bomb as a trigger. Over the last 30 years, progress in controlled nuclear fusion has been greatly retarded by lack of political will, orientation toward a merely engineering or “applied science” approach, rather than going for fundamental discoveries; restriction of pursuit of experimental hypotheses to a few chosen directions; the stifling atmosphere of bureaucratically managed “Big Science,” etc. Nevertheless, the accumulation of hard, “brute force” applied physics and engineering work, has brought a first-generation fusion power reactor into technological reach.

At present, work is beginning on the construction of a giant fusion test reactor, the ITER. The core of the ITER reactor is a toroidal chamber, filled at the start with extremely thin gas, which an electrical discharge, induced by huge transformer coils surrounding the chamber, transforms into the

initial plasma. The plasma is subsequently heated by microwaves and neutral particle beams to a temperature the equivalent of over 100 million degrees C, and additional deuterium-tritium fuel mixture is injected. The reactor employs a combination of currents generated inside the plasma, and magnetic fields imposed from the outside, creating a kind of “magnetic bottle” holding the plasma suspended in the chamber’s central region, and keeping it insulated from the chamber’s walls by a high vacuum. When in operation, this reactor is projected to be able to generate a gross power output of 500 megawatts from fusion reactions between nuclei of the hydrogen isotopes deuterium and tritium, at temperatures in excess of 100 million degrees C, during periods of approximately six and a half minutes at a time. (The device will be able to pro-

duce a pulse about once every 30 minutes.) Due to this pulsed mode of operation and the high power consumption of its magnetic and plasma heating systems, ITER cannot be regarded as a full prototype of a future fusion power plant; nevertheless, it is expected to finally establish the practical feasibility of such a power plant, while at the same time bringing a large number of technologies, required for a future power reactor, to a relatively high degree of perfection.

The fusion-fission hybrid. The distribution of atomic species found in the Solar System today, bears strong evidence to the effect, that the isotopes we find around us today were generated by a combination of fission and fusion processes. So also, the coming Isotope Economy will base itself on a synergy of these complementary nuclear processes. The first, near-term embodiments of this principle are known as the “fusion hybrid” or “fusion-fission hybrid” reactors.

The hybrid technology takes advantage of the fact, that “fission reactions are neutron-poor, but energy-rich, while fusion reactions are neutron-rich, but energetically poor.” Although each fission reaction of uranium releases about three neutrons on average, in fission reactors the bulk of those neutrons are immediately consumed again, partly to maintain the fission chain-reaction process, and partly by absorption in the complex mixture of isotopes present in a fission reactor core, plus losses to the outside. For this reason, nuclear fission reactors operate with a relatively strict neutron balance. In a fusion reactor, however, neutrons produced from the fusion of deuterium and tritium, are not needed to maintain the process, nor does the fusion plasma contain large amounts of neutron-absorbing substances; hence, these neutrons are

available to do useful work elsewhere. On the other hand, D-T fusion releases ten times less energy per reaction, than the fission of a U-235 nucleus.

Accordingly, the principle of the “hybrids,” is to *use fusion reactions to produce neutrons, and fission reactions to produce power*. The synergy works as follows: We utilize the neutron flux, generated by a fusion plasma 1) to breed nuclear fuel for fission reactors, from U-238 or thorium; 2) to transmute radioactive products from fission reactors; or 3) to drive a fission reactor operating in a sub-critical mode. These applications do not require that the fusion reactor itself produce an excess of power. The overall power benefit comes from the fission side of the equation, so to speak: in the “burning” of fission fuel, produced by the hybrid, in separate fission reactors; in the fission reactions occurring in an appended “sub-critical” blanket; or, in the case of transmutation of waste, from the release of energy stored in the radioactive fission products.

Dropping the requirement of “energy breakeven” greatly reduces the demands on the fusion reactor, putting them within the reach of the type of design and parameters that were already demonstrated by the European JET reactor in Culham, and will be greatly improved in the ITER reactor being constructed in France. These reactors, while still operating far below the breakeven levels for power generation, have already achieved parameters that are sufficient, in principle, for the construction of hybrid systems for the production (breeding) of nuclear fission fuels, for large-scale transmutation of nuclear waste, and for power production using neutrons, generated in fusion reactions, to drive a “sub-critical” nuclear fission reactor.

The fusion torch and plasma mass separation. The level of technological mastery of energy-dense plasmas, achieved in the course of fusion reactor development so far, also makes it possible to, in principle, realize “first approximations” of the so-called *fusion torch* (or *high-temperature plasma torch*) concept invented by the American fusion scientists Bernard Eastlund and William Gough. Utilizing magnetically confined plasmas fusion torches, either alone or in combination with the so-called plasma centrifuge, we will ultimately be able to process and separate any material—low-grade ores, waste, sea water, or anything else—into its component atomic species, obtaining pure isotopes from an arbitrary feedstock. In the limit, this technology will permit a nearly 100% effective recycling of materials, and expand the exploitable range of natural resources by many orders of magnitude.

Thanks to the fact that plasmas can have almost unlimited power densities, and at the same time be readily manipulated by applied currents, magnetic fields, and microwaves, plasmas have become an ever more important working medium for the processing of materials. Today’s industrial applications include plasma steel-making, plasma chemistry, plasma surface treatments, plasma ion deposition, and many others.

But in the future, the most important large-scale use of energy-dense plasmas, apart from fusion power generation, will almost certainly be the “fusion torch.”

The original inventors, Eastlund and Gough, realized that fusion plasmas, with their high temperatures and power densities, constitute a kind of “universal solvent”: Any known material, injected into such a plasma, is instantly dissociated into electrons and ions of the component atoms. Once that dissociation has taken place, the different component species of ions, making up the resulting mixed plasma, can be separated by a variety of methods, either in the original region, or by drawing the mixed plasma off into a separation chamber.

The most familiar method of isotope separation is by centrifugal action, as exemplified by the classical gas centrifuges used today for enrichment of uranium isotopes, on the basis of their slightly different masses. Plasmas can in principle sustain rotation at orders-of-magnitude higher speeds than can mechanical devices. Experimental plasma centrifuges for isotope separation are already in operation today. In practice, future plasma mass separation devices may employ combinations of electric, magnetic, and electromagnetic fields, as well as induced waves and high-speed rotational motion in the plasma itself, to accomplish the desired results. Also, a variety of different devices may be operated in a cascade, as is already done today.

Most likely, in large-scale practice, dissociation and element separation/isotope separation operations will not be carried out directly in a fusion reaction plasma, but either in plasma diverted from a fusion reactor into auxiliary chambers, or in a freshly created plasma, powered by an outside source.

First applications of the “fusion torch” principle are presently being studied in the United States as a possible method of dealing with the huge accumulation of radioactive materials, left over from 50 years of nuclear weapons production at Hanford and other locations. The first torch plasmas will be externally powered.

Laser-controlled nuclear transmutation. The last five years’ breakthroughs in the construction of powerful ultrashort-pulse lasers (femtosecond lasers) and of lasers operating in the X-ray range, now make it possible to trigger nuclear transmutation processes directly with lasers. So-called “tabletop femtosecond lasers,” compact devices which are now available commercially and are becoming standard equipment at major physics departments and laboratories, use novel methods of “pulse compression” and amplification to produce extremely short light pulses—of the order of 10^{-13} to 10^{-15} seconds in length. Some of these lasers can now reach power densities of up to 10^{19} watts per square centimeter, sufficient to trigger nuclear reactions, on a routine basis, through the action of gamma-rays generated in a material irradiated by the laser. Also, the electromagnetic fields generated by these lasers can be used to accelerate charged particles to energies sufficient to trigger nuclear reactions. Thereby, small labora-



The nuclear “waste” storage facility at Yucca Mountain, Nevada. Though the subject of enormous hysteria, the products generated by nuclear fission include large amounts of precious metals. Japanese researchers consider such spent fuel to be one of the most valuable “ores” known today. The fusion torch technology will make it possible to deal with such radioactive materials.

tories can today carry out experimental work which in the past required gigantic cyclotrons and other particle-accelerator machines.

The “tabletop lasers” are replicating, with much simpler means, results obtained earlier by giant lasers such as the VULCAN laser at Rutherford Appleton Laboratory in England and the Petawatt laser at Lawrence Livermore Laboratory in California. In 1999, for example, Livermore induced the fission of nuclei of U-238 by laser pulses. Soon, a laboratory at the Friedrich Schiller University in Jena did the same thing with a tabletop laser. Other experiments on VULCAN demonstrated the use of laser pulses to transmute long-lived radioactive isotopes, such as iodine-129 (half-life 15 million years), into short-lived isotopes (in this case, I-128 with a half-life of only 25 minutes). Such methods, once perfected, may provide an effective means to “deactivate” radioactive waste produced in nuclear fission power plants, transforming it into stable, non-radioactive elements.

Laboratories around the world are today striving to develop laser sources of ever shorter wavelengths, moving ever further in the direction of “harder” X-rays. Every decrease in the wavelength expands the range and efficiency of nuclear processes that can be generated directly (photonuclear reactions). The realization of gamma-ray lasers, not yet within immediate reach, would revolutionize the experimental methods of nuclear physics.

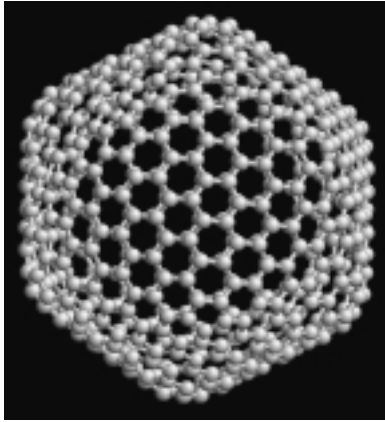
Changing the “constants” of radioactivity. The teaching and practice of nuclear physics continue to be encumbered by prejudices and misconceptions that were introduced very early into the field. Among the most crippling is the preconceived idea, that the processes “inside” the atomic nucleus

constitute a categorically separate world, governed by mysterious entities called “strong forces,” and basically not interacting with their surroundings except through violent, “high-energy” events, considered to be essentially statistical in character. The term “atom smasher,” used to denote high-energy particle accelerators in the early days, reflects a simplistic, Rambo-like quality of conception which persists, despite massive evidence of the exquisitely “fine” tuning of nuclear processes. The prejudice remains, even among professionals today, that such processes as radioactive decay of nuclei are practically beyond human control, except by subjecting the nuclei to gigantic forces, or bombarding them with particles from high-energy accelerators or nuclear reactors. The rate of radioactive decay of a nucleus, is still wrongly regarded as a kind of natural constant, rather than a function of the physical geometry, within which that nucleus is embedded.

This dogmatic attitude among professionals led to the silly misconception, adopted as a “fact” of public policy for decades, that the long-lived isotopes contained in “nuclear waste,” could only be dealt with by storing them underground for tens or hundreds of thousands of years! This notion continues to dominate public discussions today, even though the professional world has long since acknowledged the option of large-scale transmutation through particle accelerators or in fusion devices, as mentioned above. These methods will work, but they represent a primitive, “brute force” method, to be replaced by much more intelligent approaches, as soon as they become available.

In the meantime, overwhelming experimental evidence has accumulated for the existence of finely tuned, “low-energy” nuclear processes, very different from those upon which nuclear technology has been based until now, and whose future mastery defines a revolutionary pathway for development of the Isotope Economy.

It is now well established, for example, that the stability or lifetimes of many nuclei can change by many orders of magnitude, depending on the electronic environment of the nucleus. Thus, for example, the isotope dysprosium-163 is stable in normal atomic form, but when ionized (stripped of its electrons) the Dy-163 nucleus becomes unstable. The rhenium isotope Re-187 has a half-life of over 40 billion years in atomic form, but when ionized, the half-life is reduced over a billion times, to less than 33 years. The complete ionization of a free atom is a very energy-intensive process. Smaller, but still easily measurable decreases in radioactive half-lives, have been obtained by much “softer” means: by embedding beryllium-7 atoms in so-called fullerenes (“buckyball” complexes of atoms), and just recently again, by embedding sodium-22 in palladium metal, afterward cooled to a temperature of 12°K. The effects in these experiments were only on the order of 1%, but 1) they refute the dogma that nuclear processes are “oblivious” to their environment, except under “high-energy” conditions; 2) they broadly cohere with the results of many “cold fusion” experiments, which are more



The stability of many nuclei can change, depending on the electronic environment of the nucleus. Decreases in radioactive half-lives have been obtained by embedding beryllium-7 atoms in the “buckyball” complexes of atoms shown here.



Vladimir I. Vernadsky, the Ukrainian-Russian biogeochemist, recognized a century ago, that the discovery of new dynamic principles, transcending the chemistry of the periodic system and closely bound up with the origins of our Solar System, would unleash a revolution in all aspects of man’s relationship to nature.

difficult to interpret, but show a multitude of transmutation effects—sometimes very spectacular ones—that demonstrably do not come from usual “high-energy” sorts of nuclear reactions.

The Role of Isotopes in Living Processes

The truly revolutionary aspect of the Isotope Economy, lies in the areas of intersection of the three great experimental domains in our universe: the domain of ostensibly nonliving processes, the domain of living processes, and the domain of those processes that depend upon human creative reason. The unequivocal proofs of the absolute distinction between the principles governing these three domains, were provided by Vladimir Vernadsky for the first and second domains, and Lyndon LaRouche for the second and third. All three domains are anti-entropic in character.

The most paradoxical, and fruitful feature of this strict division, arises from the circumstance that the principles underlying the three stated domains, insofar as they are truly universal, are *implicitly ever-present* and coextensive with the universe as a whole! In other words, we do not have three separate universes, one for each domain, but only *one, multiply connected universe*, in which every existing thing (singularity) participates simultaneously, but in different ways, in each of the three distinct principles (or sets of principles) of action. The meaning of this becomes clear, when we examine the special case of isotopes and nuclear reactions.

The existence of an intimate connection among nuclear reactions, isotopes, and living processes, is deeply rooted in the prehistory of our planet. To the best of our knowledge, the great bulk of atomic species, from which the tissues of living organisms on this planet are composed, were generated during earlier phases of the evolution of our Solar System, previous to the formation of the Earth, and constitute in that sense a “fossil” of that earlier development. Also, to the best

of our knowledge—although there are somewhat divergent viewpoints on this question—the Solar System originated in a single, proto-stellar entity which was our Sun at an earlier stage in its development.

A Unitary Origin of the Solar System

Before turning to living processes per se, let us look at the most coherent of the available hypotheses on what the earlier evolution of the Solar System may have looked like.

According to the “polarized fusion” hypothesis put forward by LaRouche, the array of atomic species found in the Solar System today was essentially generated *in situ*, as part of the same unitary process that led to formation of the system of planets: The proto-Sun was a rapidly spinning object, “spinning off” a disk of plasma and going on to “process” it, by a combination of intense radiation and powerful magneto-hydrodynamic inductions, driven by the proto-Sun’s rapid rotation and intense magnetic field. This action by the Sun created the conditions for “polarized fusion” to take place in the disk—a fusion process in which, it is proposed, an extremely strong magnetic polarization of the nuclei, and perhaps other “catalytic” effects of the electromagnetic geometry set up in the disk, caused the fusion process to be orders of magnitude more efficient than ordinary “thermal” fusion.

Thereby, the proto-Sun was able to generate the entire range of elements and isotopes, which we find on the Earth and elsewhere in the Solar System today. (This would include the atomic species heavier than iron in the periodic system, which could not have been generated, in the observed amounts, by the sorts of fusion reactions thought to occur in our present-day Sun. The magnetohydrodynamically structured plasma disk, with its newly generated stock of elements, subsequently resolved into an harmonically ordered array of rings, corresponding to the locations of the planetary orbits as we find them today. Finally, the planets themselves condensed out of the rings.

Unfortunately, most astrophysicists today reject the notion of a unitary origin of the Solar System, its elements, and the harmonic ordering of its planets. Instead they believe that the heavier elements found today in the Solar System, predate the birth of our present Sun and were generated by nuclear reactions during one or more gigantic explosions of stars—the “supernovas.” Which star or stars these were, nobody can say, because no astronomical traces of an such explosive processes have been observed in the vicinity of our Solar System. But there is another possibility, namely that the supernova events that astronomers actually observe from time to time in our galaxy, and which the astrophysicists interpret as bomb-like explosions, are actually processes of the type LaRouche has proposed; and that the heavy-element-generating supernova the astrophysicists postulate, is in reality just an exuberant phase in the early life of own proto-Sun!

However these issues may be resolved in the future, the implications are these:

First, from the standpoint of the prehistory of our Solar System, the existence of life on our Earth is inseparably connected with the existence of the nuclear reactions that produced the atomic species from which living tissue is composed. In that sense, the material preconditions for our biosphere and its organic evolution, were created by a preceding phase of non-organic, but anti-entropic evolution of the Solar System—the “nucleosphere.”

Second, life on Earth continues to be *nuclear-powered*: Our entire biosphere lives from the Sun, whose radiative power is generated by fusion reactions. But the biosphere is coupled to our star not only in terms of the gross flow of radiant power, but also through more subtle magnetic interactions, which cause what the Russian researcher A.L. Chizhevsky called “the biosphere echo of solar activity,” reflected in the behavior of microorganisms and other living processes, as well as in the weather and climate.

Having thus established, without any doubt, the *astrophysical* relationship between nuclear processes and life on the Earth, let us now look for the relationship on the *microphysical* level.

Following the discovery of isotopes, much experimental work was done in the effort to find a special role of particular isotopes in living processes. Early work indicated that living processes enriched isotopes to a certain extent—i.e., the ratios between the concentrations of isotopes of a given element in living tissue, differ from those in the environment around them in a *characteristic way*. Although this is today a well-established fact, widely exploited in investigations of geology, geochemistry, ecology, botany, paleontology, and so forth, the shifts in the isotope ratios involved are nearly always on the level of parts per thousand. This is comparable in magnitude to the isotope shifts caused by nonliving processes, and orders of magnitude less than the effect of concentration of the chemical elements themselves, to which we owe the biological origin of many concentrated mineral deposits. There have also been some indications, that microorganisms

may be able to carry out certain transmutations; however, the evidence remains equivocal, and no very good hypothesis has been proposed, for what fundamental role such transmutations, to the extent they occur, might play in the organization of living processes.

Leaving aside strongly radioactive isotopes, whose isotope-specific effects on living organisms appear entirely explicable on the basis of the radiation itself, living organisms seem rather insensitive to even gross changes in the isotope concentrations in the environment and in the material they ingest. Indeed, it is on this apparent indifference that the technique of isotope tracing of metabolic pathways and many medical diagnostic methods are based. The clear, but not surprising exception is deuterium, twice as heavy as ordinary hydrogen, whose ordinary chemical properties are already sensibly different from those of hydrogen. Ingestion of heavy water (D₂O) in large quantities leads to lethal metabolic disturbances in animals; nevertheless, bacteria can be raised on heavy water to the point that nearly all the hydrogen in them is replaced by deuterium, without seeming to cause harm.

The Role of Nuclear Magnetism

Does this mean that isotopes play no direct role, as such, in the organization of the living processes? On the contrary! But the best clue we have so far, comes from a very different direction than a mere statistical effect of isotope concentrations. The key lies in the *magnetic* characteristics of atomic nuclei, which differ radically between different isotopes of one and the same element. These characteristics are exploited on a routine basis in nuclear magnetic resonance (NMR) imaging, used in every modern hospital, and NMR spectroscopy, but their full significance is only beginning to be grasped.

The signals used in NMR, for example, are emitted by atomic nuclei interacting with the combination of a magnetic field produced by the coils surrounding the patient or specimen and a microwave pulse used to “excite” nuclear oscillations. Here, the differences among isotopes become decisive. For nuclei of isotopes whose atomic number and mass number are both even, the magnetic moments that determine the strength of interaction with the magnetic fields, are indistinguishable from zero. These nuclei contribute nothing to the signal. The nuclei with odd atomic number or odd mass number, on the other hand, have noticeable magnetic moments, whose values depend somehow on the internal configuration of the nuclei. They give distinct signals that permit NMR machines to “tune in” to specific isotopes in living tissue. Those signals express not only the presence of the corresponding isotopes, but also certain characteristics of the physical geometry around them, mediated through magnetic interactions among the various nuclei and the electron structures within which they are embedded. The interaction between nuclei and the surrounding electronic structures—known as the “hyperfine interaction”—also reflects itself in extremely slight, but very precisely defined shifts in the optical spectra of atoms and molecules, and in other types of spectra. The



The magnetic characteristics of atomic nuclei play a key role in living processes. These are exploited routinely in nuclear magnetic resonance (NMR) spectroscopy. Here, a spectrometer at the William R. Wiley Environmental Sciences Laboratory in Washington state.

hyperfine structure is closely related to the quantum-physical invariant called “spin,” which is believed to underlie the magnetic properties of nuclei and other particles, is closely interwoven with the so-called fine structure constant and other basic constants of physics. Unfortunately, of all the topics in quantum physics, the phenomenon of “spin” suffered the relatively greatest amount of mystification at the hands of Wolfgang Pauli and others.

Now, it is hard to imagine that such a well-organized, finely tuned process would have no *functional* significance in living processes. In fact, the extraordinary sensitivity of living processes to constant and varying magnetic fields is well known and forms an entire field of research, called “magnetobiology” or “biomagnetism.” The biosphere is constantly subject to the magnetic field of the Earth, which in turn is coupled to that of the Sun and with the Solar activity.

But despite many attempts, the fundamental biological significance of this sensitivity and the nature of the interactions involved, have not been clarified. Part of the reason, is the seemingly “infinitesimal” magnitude of the “*nuclear component*” of the magnetic fields in living and nonliving material. The magnetic interactions among molecules, which have been intensively studied and are known to play a decisive

role in the biochemistry and biophysics of living processes—especially as concerns the role of so-called free radicals—derive nearly entirely from their *electronic* structures, which—at least so it was assumed—are relatively independent of the isotope-related nuclear magnetism. The magnetic moments of nuclei are 1,000 or more times weaker than those associated with the electrons and their orbital configurations. To obtain a sufficient signal from the nuclei, NMR machines employ magnetic fields that are typically 20-30,000 times stronger than the natural magnetic field on the Earth.

The Strength of Weak Effects

But as science over the centuries has demonstrated again and again, it is often the weakest effects, the ones that tend to be ignored, that actually control the largest ones. In recent years, thanks particularly to the work of physical chemists in Russia, decisive evidence has been brought to light, for an essential role of isotope-specific “hyperfine” interactions in all living processes.

In the course of 2005, a research group led by the famous chemist Prof. Anatoly Buchachenko at the N.N. Semenov Institute for Chemical Physics of the Russian Academy of Sciences, demonstrated “magnetic isotope effects” in the biological synthesis of ATP, commonly known as the key “energy-carrying” substance in *practically all living cells*. The decisive process in ATP synthesis, known as phosphorylation, depends on the activity of several enzymes that contain magnesium ions in specific locations. Now it turns out, that the rate of functioning of those enzymes changes dramatically, when one magnesium isotope is replaced by another. In a paper published in the Aug. 2, 2005 issue of the U.S. *Proceedings of the National Academy of Sciences*, Buchachenko et al. report the results of their investigations with the following words:

In one of their brilliant papers, Weber and Senior pointed out that, despite great progress in our knowledge on the structure and our understanding of the molecular dynamics and functioning of ATP-synthesizing enzymes, the chemical mechanism of phosphorylation remains enigmatic: “Our understanding of ATP synthesis remains rudimentary in molecular terms.” . . . The key reaction for the formation of the energy-carrying chemical bond P-O-P remains obscure. . . . Within the area of enzymatic reaction chemistry, all ideas are limited to speculations. . . .

[But] an insight into the chemical mechanism follows from a recently discovered and remarkable phenomenon: a dependence of the phosphorylating activity of enzymes on Mg [magnesium] isotopy. This unusual effect was found for creatine kinase and ATP synthase. The rate of ATP production by enzymes in which the Mg 2+ ion has magnetic nucleus ²⁵Mg (nuclear spin 5/2, magnetic moment, -0.855 Bohr magneton) was shown to be *two to three times higher* than that induced by the

same enzymes carrying spinless, nonmagnetic nuclei ^{24}Mg and ^{26}Mg . The discovery of this attention-catching effect convincingly demonstrates that enzymatic phosphorylation is an ion-radical, electron-spin-selective process in which the Mg ion Mg^{2+} manifests itself as a reagent.

The paper goes on to report the comparable effect for still another crucial magnesium-containing enzyme involved in phosphorylation, phosphoglycerate kinase (PGK). Here the phosphorylation rates are 2.6 times higher with the magnetic isotope Mg-25, than with the nonmagnetic isotopes. Further analysis shows also that this is not a mere kinetic acceleration effect, but that the reaction process follows *different pathways* according to which isotope is present.

The technical details are not important for our present purposes. The point to be made here, is that a vast new field of biology and chemistry has been opened up, in which the *magnetic* characteristics of specific isotopes play a decisive role. Although the recent demonstration of isotope-specificity in the synthesis of ATP, obtained in materials of uniquely biological origin, constitutes a particularly striking case, these results cohere with the research in so-called “spin-selective chemistry,” that has been developing over the last 20 years. The following quotes give a certain sense of this direction, while highlighting the need to overcome the mystification of quantum physics, which I mentioned above:

Spin chemistry as a new field of chemical science is based on the fundamental principle: *chemical reactions are spin selective; they are allowed only for such spin states of products whose total electron spin is identical to that of the reagents and are forbidden if they require a change in spin.* Only magnetic interactions are able to change the spin of reactive intermediates. . . . Being *electron spin-selective*, the chemical interactions between the spin-carrying chemical species (radicals for instance) are also inevitably nuclear spin selective. If both electron and nuclear spin subsystems are coupled by the Fermi, or hyperfine magnetic interaction (HFI), then the nuclear subsystem can affect the behavior of the electron spin subsystem through HFI and, hence, modify the chemical reactivity. The *nuclear spin selectivity* differentiates the reaction rates for radicals (or, in general, for any other spin-bearing chemical species) with magnetic or nonmagnetic isotopic nuclei. This new phenomenon is the *magnetic isotope effect (MIE)* in contrast to the well-known classical isotope effect (CIE) which is a consequence of the nuclear mass selectivity of chemical reactions. Both isotope effects sort the isotope nuclei among the reaction products: *CIE selects the nuclei according to their masses, while MIE selects the nuclei according to their spins and magnetic moments.* (A. Buchachenko, “Comparative Analysis of Magnetic

and Classical Isotope Effects,” *Chem. Rev.* 1995, 95.)

The value for magnetic interactions of a field of 100,000 gauss with a nuclear spin is only ca. 1×10^{-5} Kcal/mole . . . or less [i.e., 500,000 times weaker than intermolecular bonds and more than 30 million times weaker than ordinary covalent bonds—JT]. In spite of the tiny value of these magnetic forces, we shall show that they can control the reactivity of radical pairs in a spectacular manner, if the supramolecular conditions are correct. (Nicolas Turro, *Chemical Communications*, 2002.)

Another, more speculative direction of thinking deserves mention:

The availability of chemical elements on Earth has spawned a nearly unlimited variety of structures and organisms by variations of the chemical composition. It appears that by finding some biological role for essentially all chemical elements (including “microelements”) Nature optimizes the resources of chemical diversification available to it. A similar possibility can likely arise for the isotopic diversity of elements. It seems improbable that Nature could “overlook” an additional level of informational diversification available through the isotopic degree of freedom. . . . Sternberg, DeNiro, and Savage (1986) and Galimov (1982) presented much-ignored findings about the isotopic composition of biochemical and genetic pathways. For example, during photosynthesis, the carbon obtained from CO_2 consists of ^{12}C and ^{13}C , but depending on the species of the plant, only one of these isotopes is preferentially fractionated. In the production of energy in the form of ATP, the carbon isotopes are selectively placed so that they will be propagated throughout the series of reactions in that same position. The conservation of isotopic structure persists in spite of the fact that the catalysis of enzymes changes the carbon skeletal structure of the intermediate molecules. . . . Elementary combinatorial analysis leads to an enormously large number of possible isotopic permutations of chemically fixed structures. For example, a segment of a DNA molecule with 1 million carbon atoms has about 10,000 randomly distributed ^{13}C atoms. The number of isotopically distinguished distributions (the number of possible placements of 10,000 atoms among 1,000,000 sites) is about $10^{24,000}$, far greater than the number of atoms in the Universe. . . .” (J. Pui and Alexander Berezin, “Mind, Matter and Diversity of Stable Isotopes, *Journal of Scientific Exploration*, Vol. 15, 2001.)

Pui and Berezin go on to speculate, that permutations of the isotopic distributions in the tissues of the brain, may play an essential role in mental processes.

I should emphasize, that the above-cited work on the “magnetic isotope effect” represents only one, rather promising direction of research. Relative to the question we posed at the beginning of this section, the cited work still has the weakness, that it focusses only on the chemical-combinatorial “machinery” of these new isotope effects, and not on their relationship to the principles of living processes per se.

We can clearly see from these studies, however, that it is the special *physical-geometrical* environment, created in living tissue, that provides the context within which “infinitesimally small” isotopic shifts—which in the nonliving domain under normal circumstances would have only marginal, apparently merely statistical effects—can play a determining role in the course of macroscopic events. The unique character of living processes would thus reside, not in some specific mechanism or structure, but in the *power to generate and maintain such higher physical geometries*, which Vernadsky identified in his work, but which is more adequately addressed by LaRouche’s elaboration of the Riemann-Dirichlet Principle.

The Multiple-Connectivity of Isotope Economy With Astrophysics, Space Colonization, And the History of the Solar System

Man’s physical existence, which depends upon his constant action upon the universe, calls forth another aspect of the relationship between the nonliving, living, and Noöspheric domains, which takes a new form in the Isotope Economy.

Up to now, mankind’s requirements for raw materials have been met nearly entirely on the basis of extracting those materials from surface or subsurface deposits of minerals, created in the course of hundreds of millions or even billions of years of the Earth’s geological history. The origin of many, if not most of those deposits is connected with activity of living organisms (mostly microorganisms) which concentrated specific chemical elements from their environment, and deposited them in fossil formations, sediments, or biological transformed rocks.

In practically all cases, man’s present rate of extraction of raw materials vastly—sometimes by billions of times—exceeds the rate at which mineral deposits of comparable quality are spontaneously replenished or created anew in nature.

Clearly, this process cannot continue indefinitely. True, in absolute terms man is still very, very far from exhausting the Earth’s immense store of mineral deposits. But the implicit limits of the present, purely extractive mode reflect themselves today in marginally increasing physical costs in extraction and processing, required to obtain any given quality of material. We are thus obliged to go into increasingly remote areas of the Earth’s surface, to meet greater costs in

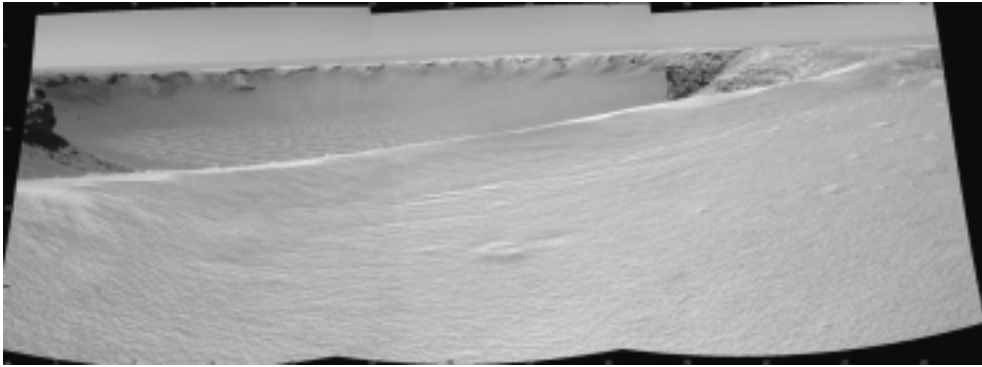
transport and other infrastructure; to dig or drill much deeper into the ground or sea bottom; to resort to lower-quality deposits having larger processing costs, as the higher-quality deposits become exhausted, and so forth.

These circumstances, together with the highly uneven geographical distribution of most raw materials, have already led to serious bottlenecks on a regional level and to a rise of geopolitical tensions through the maneuvering of nations such as China to secure their access to raw materials supplies, at the same time as speculative financial interests move to grab control over those same supplies, on the eve of an anticipated major crisis of the world financial system.

In the face of this situation, Lyndon LaRouche has proposed a “Vernadsky Strategy” with a 50-year time-frame. The Vernadsky Strategy provides for large-scale physical investments and other measures to guarantee adequate raw materials supplies at stable prices to all the world’s nations, as a key component of an overall policy for reorganization of the world financial and economic system. LaRouche’s strategy starts from the realization, that the task of securing long-term raw materials supplies to the world economy over the coming 50 years, can only be solved from the standpoint of Vernadsky’s “Noösphere”: Man must now progress from the stage of simply extracting mineral resources in a more or less disorganized way, to consciously managing and developing the entire process of generation and utilization of those resources on a planetary scale. This includes not only the “natural” processes of replenishment of resources within the biosphere, but also—increasingly!—the deliberate “de novo” *creation* of resources by man, through such processes as the large-scale transmutation of elements. At the same time, we need revolutionary advances in the technology of extraction and processing of raw materials and recycling of waste material, offsetting the tendency for marginal increase in the cost of raw materials, while at the same time radically increasing the range and quality of the final products.

Until the emergence of nuclear energy, man’s existence had been based exclusively upon a store of 83-odd chemical elements pre-existing in the biosphere, and whose existence dates back nearly entirely to the genesis of the Solar System itself (the exception is certain quantities of elements created after the formation of the Earth, by the radioactive disintegration of other elements).

In the course of the biosphere’s evolution, the circulation of chemical elements on the Earth—the geochemical migration of atoms, as Vernadsky called it—has become more and more dominated by the action of living processes. In virtue of their ability to concentrate elements existing in their environment, living organisms, among them especially microorganisms, actually created many of the mineral deposits that man mines today as sources of raw materials. In addition, even “inorganic” processes of ore-formation and evolution, which did not involve the *direct* action of living organisms, were *indirectly* influenced by the *biogenic migration of elements in the biosphere*. This migration of elements is by no



NASA/JPL-Caltech

NASA's Mars rover "Opportunity" reaches the rim of Victoria Crater on Sept. 26, 2006. Very few of the conclusions of astrophysicists, Tennenbaum writes, "have been established with any real degree of certainty; nor could they be, so long as human activity remains bound to the immediate vicinity of the Earth."

means limited to the immediate vicinity of the Earth's surface; the "sphere of influence" of the biosphere extends via the constant vertical circulation of water (and the gases and ions dissolved in it) all the way down to the upper and lower mantle of the Earth.

Man's development of large-scale mining, transport, and industrial activities has fundamentally changed the patterns of "migration" of mineral elements in the biosphere, leading finally to the point where man begins to *create* new resources by the transmutation of elements. This latest stage, Vernadsky associated with the emergence of the Noösphere.

As long as we merely used the elements, man was not directly concerned with the historical process of their creation as elements—although the geologist and prospector are very much concerned with the history of their subsequent migrations on the Earth. Now, this changes dramatically.

Man's Economy Becomes 'Astrophysical'

For the first time, human activity is transcending the limits of mere redistribution and combination of elements, to deal with their processes of generation. Indeed the business of large-scale synthesis, by nuclear reactions, of old and new atomic species, characteristic of the emerging Isotope Economy, brings man's economic activity into immediate, intimate relationship with the astrophysical domain, and the processes of formation of stars and planets. Discovering the principles behind those processes, and applying them to the task of further development of the biosphere and its extension into ever larger regions of the Solar System, self-defines man as a *universal being*, and not merely an inhabitant of the planet Earth; a being acting in accordance with a higher directionality, embedded in the cosmos as a whole.

Conversely, the constant stream of new scientific discoveries in subatomic physics and related areas, required for the realization and maintenance of an Isotope Economy on Earth, cannot be supplied without the extension of *large-scale human activity beyond the orbital vicinity of the Earth*, to Mars and eventually beyond.

There are many, interconnected scientific and physical-economic reasons for this. As even the notion of a "neutron

star," for example, suggests, subatomic processes are essentially *astrophysical* in character. Mankind's increasing mastery of such processes demands extensive cross-spectral investigations of faraway anomalous objects in our galaxy and in other galaxies, which cannot be made from the Earth or even from the Earth-plus-Moon system, on account of the insufficient parallax, disturbances coming from the Sun, and other causes. We must be able to carry out interferometry and related measurements on a length scale comparable to the Mars orbit—measurements eventually involving hundreds of laser-interlinked measuring stations "parked" in suitable solar orbits. To set up and maintain these stations, and to constantly update them with new instruments in keeping with the advance of science and technology, requires constant human intervention and, accordingly, a vast logistical base to support the needed labor force and its activity in these distant orbital regions.

Some, even among professionals, might disagree with our assertion, that the progress of nuclear physics and astrophysics really necessitates such a—seemingly extravagant!—program of space colonization. The "authoritative" tone of standard astronomical and astrophysical treatises, concerning such matters as the early universe, the structure of our galaxy and the mechanism of star-formation, the nuclear processes going on in the Sun, stars, and so forth, often gives the misleading impression, that the basic facts in these fields had already been established, and only details remain to be investigated. The truth, however, is that very few of those conclusions have been established with any real degree of certainty; *nor could they be*, so long as human activity remains bound to the immediate vicinity of the Earth.

This is the case even on the level of such "elementary" kinds of astronomical data, as the distances and true motions of relatively "nearby" objects in our galaxy. A shocking demonstration of this occurred late last year, when an international group of astronomers determined, by direct triangulation, that previous estimates of the distance separating our Solar System from the closest spiral arm in the galaxy—the Perseus Arm—were in error by 200%! That occurred, despite the impression of super-precision of modern astronomical mea-

measurements, generated with the help of sophisticated instrumentation on the Earth and orbital observatories.

Evidently, the maps of our galaxy, reproduced as “fact” in countless treatises and textbooks, will have to be redrawn. Perhaps we know as little about the real form, history, and inner workings of our galaxy today, as Europe knew about the continent of America prior to Columbus’s voyages! It is true, that Eratosthenes, many centuries earlier, was able to determine the diameter of the Earth to an astonishing degree of precision, from the evidence of a small portion of its surface; just as Johannes Kepler, a century after Columbus, could discover the basic principle of the planetary motions in our the Solar System, without leaving the Earth. The significance of those triumphs of human reason, however, is not that we can learn everything about the universe merely sitting in our armchair on the Earth, but rather, that, thanks to the accumulated accomplishments of human reason, we have learned enough, working *from* the Earth, to now move out *beyond* the Earth. Accordingly, Eratosthenes’ breakthrough was immediately followed by the first documented attempt to circumnavigate the Earth.

The point here is, that our present knowledge of nuclear physics, while highly imperfect, nevertheless suffices for the construction of first generations of nuclear fission- and fusion-powered space vehicles, and other technologies, and that will permit us to carry out the kinds of activities in the Solar System needed to assure a flow of future breakthroughs in nuclear physics.

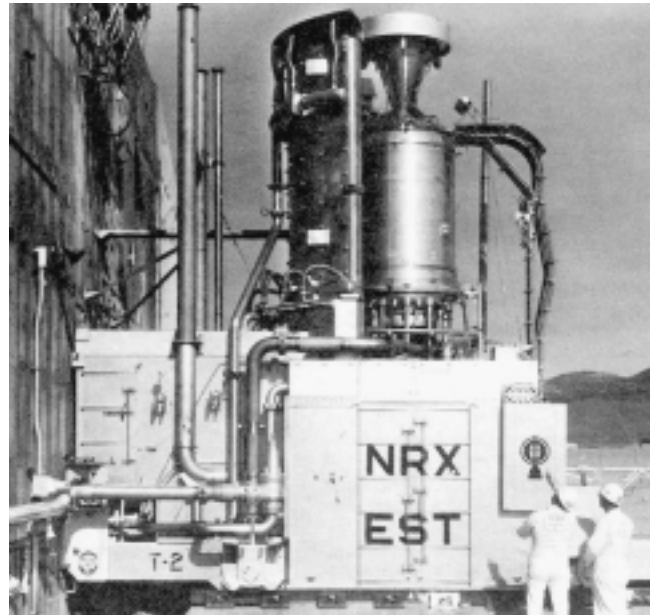
Naturally, the mere spatial expansion of man’s activities constitutes only a *necessary* condition for continued scientific breakthroughs. To get the breakthroughs, we need not only observations, but improved ways of *thinking* about them.

Back to Dynamics: The Revival of Nuclear Physics

In most of the discussion so far, I have restricted myself to developments that can be projected on the basis of the current knowledge and technological capabilities. These developments suffice to “insert” the world into the “orbit” of Isotope Economy, but not for much more. Very soon, the need to carry out a long-overdue, sweeping revision of present physical theories will become acute.

The medium- and long-term success of the Isotope Economy, depends upon doing the same thing for nuclear physics and physical science in general, as Johannes Kepler did for astronomy nearly 500 years ago.

Indeed, the present state of nuclear physics bears an uncanny resemblance to the hodgepodge of conflicting models and calculational procedures, which characterized the astronomy of Kepler’s day, and which he swept away with his epoch-making *New Astronomy*. Kepler was well aware of the



A nuclear rocket system ready for engine testing; the reactor and exhaust nozzle are visible above the lettering NRX (NERVA Reactor Experiment). The U.S. nuclear propulsion program, known as NERVA (Nuclear Engine for Rocket Vehicle Application), was developed in the 1960s as an essential component of the space program, but the nuclear program was killed in 1972 as part of the attack on science, and nuclear science in particular. Now NASA is again funding nuclear propulsion systems in its “Project Prometheus.”

fact that he was not simply correcting flawed theories, but was combatting a monstrous fraud, perpetrated centuries before by Aristotle and Ptolemy, whose political promotion imposed a “dark age” in European science, from the death of Archimedes until the 15th-Century Renaissance.

We should hope that the kind of training obtained by working through Kepler’s method of discovery, will permit a new generation of young physicists to accomplish the analogous task with nuclear physics and astrophysics today.

The concluding two sections of this article are intended as a prelude for things to come. I shall start with a very simple paradox, which one of the founders of nuclear physics, Werner Heisenberg, returned to at the end of his life.

The question is simply this: Nearly all of us are raised in the empiricist-reductionist doctrine, that every entity in the universe is built up from some sort of simpler elements or “building blocks” which are parts of them. A typical example of this is the notion of the so-called Rutherford atom, the notion that molecules are composed of atoms, atoms from electrons and nuclei, nuclei from protons and neutrons, etc. But what do we really mean, when we say that one entity is a *part* of another? Or that it is “made up of” such parts?

Without needing to go into anything so advanced as nuclear physics, we can demonstrate the paradox very beautifully with the case of *water*. In high school, we learn that

water is composed of entities called water molecules, and that these are composed of one oxygen and two hydrogen atoms each according to the formula H_2O . But, there is no simple relationship at all between the *properties* of oxygen and hydrogen, on the one side, and the properties of “water” which is supposed to be composed of them! In fact, the high school chemistry student, letting a bit of oxygen and hydrogen gas combine, will be very hard put to recognize *anything at all* suggesting the properties of those two gases in the droplets of water that are formed as a product of the little explosion in his test tube! At most, the *masses* of the reacting portions of hydrogen and oxygen, or rather their *sum*, appears to have been preserved as the mass of the resulting water. But even this (approximate) invariance is noticeably violated in the world of nuclear reactions: There, the result of the fusion of two nuclei can be very significantly *lighter* than the sum of their masses.

These anomalies make it clear, that the *source* of the properties of water (for example) cannot be found in either oxygen or hydrogen, neither separately nor together. Whence, then, did those properties come? Should we not rather assume, that “water” was already *present*, as a potential state of organization, and merely required the two as means to *express* itself? The essence of “water” lies in the *change* that occurred in the reaction.

The source of the difficulty is the tendency, going back to Aristotle, and renewed by Galileo and Paolo Sarpi’s counter-revolution against Kepler’s Platonic method, to falsely regard objects of the senses as “real,” and ideas as “abstract”; whereas in reality, the opposite is true; namely, that it is ideas that are real, and what we call sense objects are merely effects deriving from them.

This elementary error, in turn, lies at the origin of the still-ongoing, vain attempts by physicists, to deduce the properties of atomic nuclei from the assumption, that the nuclei are “made up” of particles interacting pairwise according to this or that mathematical formula. This attempt to emulate Isaac Newton, who in fact totally failed to account for the most elementary harmonic features of the Solar System with his force law, has now occupied nuclear physicists for nearly a century. Yet no one has been able to come up with a solution, and the vain search for one has led the entire theoretical development of nuclear physics into a blind alley.

In former times, many scientists had some awareness of the fraud of reductionism. Back in the early 1970s, for example, in the process leading to the founding of the Fusion Energy Foundation, Lyndon LaRouche became acquainted with the University of Chicago physicist and physical chemist Prof. Robert Moon, a veteran of the wartime Manhattan Project who had designed the first cyclotron used in the Project. According to the story I have heard, Moon then voiced his opinion, that “contemporary nuclear physics is a bunch of garbage.” As an *example* of this, Moon claimed that the standard interpretation of the famous “alpha scattering” experiments, upon which Rutherford and later physicists derived their estimates of the size and other fundamental characteristics of the atomic nucleus, were based on fallacious and arbitrary assumptions concerning the nature of the interactions between the nucleus and the alpha particles used to bombard the nucleus.

Similarly, according to Moon, the entirety of research into controlled nuclear fusion had been thrown onto the wrong track by the mistaken assumption, that a so-called “Coulomb force” between nuclei must be overcome, in order to make fusion reactions occur. It is this assumption, which precludes the possibility of “polarized fusion” of the sort LaRouche proposes. In the search for means to “overcome the Coulomb barrier,” fusion scientists saw themselves obliged to impart enormous velocities to the nuclei, which in turn meant working with temperatures of millions of degrees centigrade. And yet, as many experiments demonstrate, that “barrier” can be made to disappear, if the system is placed in a suitable physical geometry. (Such a possibility is already acknowledged in so-called wave mechanics, but in a sophisticated way, as “resonant tunnelling.”)

But if the states of atomic nuclei are not determined by elementary forces, and if indeed there is no such thing as an “elementary force,” then what determines the states of atomic nuclei? The first step would be to admit that *it is the states of*

Kepler’s Revolutionary Discoveries

The most crippling error in mathematics, economics, and physical science today, is the hysterical refusal to acknowledge the work of Johannes Kepler, Pierre Fermat, and Gottfried Leibniz—not Newton!—in developing the calculus. This video, accessible to the layman, uses animated graphics to teach Kepler’s principles of planetary motion, without resorting to mathematical formalism.

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The half-assembled Chicago cyclotron magnet. This cyclotron, the second in the world, was designed and built by the late Dr. Robert Moon and a team of students of Dr. William Harkins at the University of Chicago in 1936. Inset: Dr. Moon in 1986.

Dr. Robert J. Moon

organization themselves, and the intentionality behind them, which are the proximate efficient agents of nuclear processes. It is exactly with this idea in mind that the late Dr. Moon, inspired by discussions with LaRouche, in 1985 proposed a new, geometrical approach to nuclear physics, without the assumptions about “elementary forces.” In proposing his now-famous model of the nucleus in terms of embedded regular solids, Moon emphasized, for example, that “the proton is a singularity that exists within, and depends upon, the geometry of the whole of space.” He insisted that *the particles arise from the geometries, rather than the geometries arising from particles deciding to arrange themselves in this or that way.*

But how, for example, could a geometrical entity—let us say, a regular solid—be able to exercise any sort of efficient action in the universe? Consider the following four passages, one from Plato’s *Timaeus*, two from posthumous fragments by Bernhard Riemann (185?), and one from the last published writing by Werner Heisenberg (1976), respectively:

Plato in Timaeus:

What we always observe becoming different at different times, such as fire, we should not refer to as a *this*, but in each case as a *thus*, nor refer to water as a *this*, but always a *thus*; and of those things that we suppose we can indicate by pointing and using the expressions

“this” and “that,” we should never refer to any of them as if they have any permanence. . . . We should not use these expressions, but we should call “such-like” (“thus”) that which in each and every thing continually recurs as similar, and thus call “fire” that which is such-like throughout everything, and so on for everything which is subject to a process of becoming.

Riemann:

I. What an Agent strives to realize, must be determined by the concept of the agency; its action can depend on nothing else, that its own nature.

II. This requirement is fulfilled, when the Agent strives to maintain or to establish *itself*.

III. But such an action is unthinkable, if the Agent is a thing, an existent, but is only thinkable, when it is a condition (state) or a relationship. When there is a striving, to maintain something or to create something, then deviations from this “some-

thing”—in fact, deviations in varying degrees—must be possible; and this “something” will in fact, insofar as this striving is opposing other tendencies, only be maintained or created as closely as possible. But there is no degree of existence; a differentiation in terms of degree is only thinkable for a state or a relationship. Therefore, when an Agent strives to maintain or create itself, that Agent must be a condition or a relationship.

Second fragment:

With each act of thinking, something persisting and substantial enters our soul. I call it *Geistesmasse* [thought-mass]. All thinking, therefore, is generation of new *Geistesmassen*. . . . The *Geistesmassen* are imperishable, everlasting. Only the relative power of these connections changes, through the integration of new *Geistesmassen*. The *Geistesmassen* do not need a material carrier, and do not exercise any constant effect in the world of appearances. They have no relation to any part of matter, and are, therefore, not located in space. But, any *new* generation, and any new connection between *Geistesmassen*, requires a material substrate. . . . Each *Geistesmasse* strives to generate a similar *Geistesmasse*. It therefore strives to bring about the same form of motion of matter, through which it was generated.

Finally, Heisenberg:

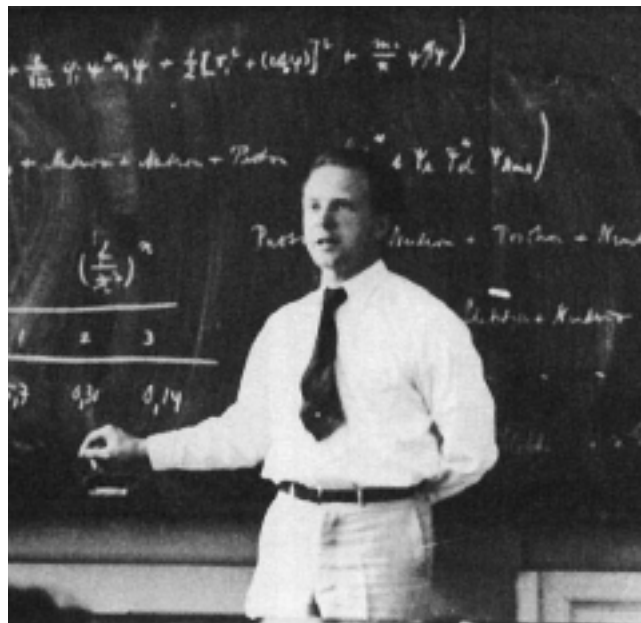
I believe that certain erroneous developments in particle theory—and I am afraid that such developments do exist—are caused by a misconception that it is possible to avoid philosophical arguments altogether. Starting with poor philosophy, they pose the wrong questions. . . .

Before this time [the experiments of Andersen and Blackett demonstrating so-called pair production of electrons and positrons by a quantum of light—JT] it was assumed that there were two fundamental kinds of particles, electrons and protons . . . their number was fixed and they were referred to as “elementary” particles. Matter was seen as being ultimately constructed of electrons and protons. The experiments of Andersen and Blackett provided definite proof that this hypothesis is wrong. Electrons can be created and annihilated; their number is not constant; they are not “elementary” in the original meaning of the word. . . .

There is no difference between elementary particles and compound systems [such as atoms and molecules—JT]. This is probably the most important experimental result of the last fifty years. That development convincingly suggests the following analogy: Let us compare the so-called “elementary” particles with the stationary states of an atom or molecule. We may think of these as various states of one single molecule or as the many different molecules of chemistry. One may therefore speak simply of a “spectrum of matter.” . . .

Wrong questions and wrong pictures creep automatically into particle physics and lead to developments that do not fit the real situation in nature. . . . We will have to accept the fact that the experimental data on a very large and very small scale do not necessarily produce pictures, and we must learn to do without them. . . . The philosophy of Plato appears to be the most adequate.

The particle spectrum can be understood only if the underlying dynamics of matter is known; dynamics is the central problem.



Werner Heisenberg wrote that when the wrong questions are posed in particle physics, the wrong answers naturally emerge. “The particle spectrum can be understood only if the underlying dynamics of matter is known; dynamics is the central problem,” he wrote, recommending the study of the philosophy of Plato to solve this problem.

essentially the same method, used by Johannes Kepler in his original discovery of the principle of gravitation in the *astrophysical* domain, to the domain of *microphysics*. That relationship between astrophysics and microphysics is lawful and necessary. It came to the fore once more, in the manner in which nuclear physics developed out of the anomalies of the periodic system of elements. So I will take up the story at that point.

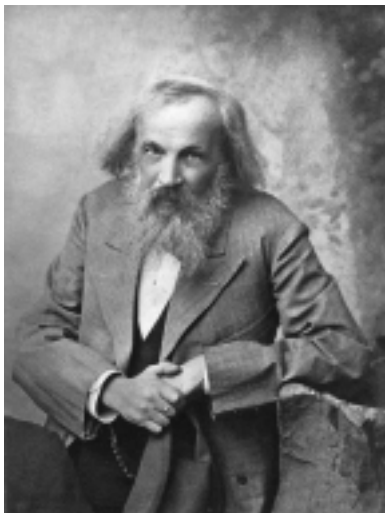
At the time that Dmitri Mendeleev began his scientific work in 1855, the central axiomatic assumption of chemistry was the notion of a chemical *element*. This notion is associated with the idea, that we cannot differentiate or divide substance indefinitely, without encountering some kind of a limit, boundary, or, as we say, singularity. In the specific practice of chemistry up to the time of Mendeleev, the exploration of this area took the form mainly of what are called chemical separation methods—distillation, precipitation, electrolysis, centrifugation, and so forth. Generally speaking, we start with any kind of stuff, and we do various things to it, to see if we can induce a separation or differentiation of the original stuff into two or more new substances, each having clearly distinct characteristics.

So in electrolysis, out of water, we produce hydrogen and oxygen, for example. And then we take those new substances which we produced by the separation of the first one, and try to do the same thing with each of those two. We keep doing that, trying to push the process to the point of a limit, a singu-

Radioactivity, Isotopes, and the Ironies of the Periodic System

Bearing these paradoxes in mind, the following paragraphs are intended to provide the reader—above all, the non-specialist reader—with some brief background on the discovery and nature of isotopes, and some principles of nuclear physics related to them, as far as they are known today.

One should always remember, that atomic and nuclear physics, insofar as they are valid, developed by applying es-



Dmitri Mendeleev.
“The implications of what was set in motion by the discovery of radioactivity and the isotopes, growing out Mendeleev’s ‘Keplerian’ understanding of the periodic system, go far, far beyond anything the world has seen up to now.”

larity. Through this kind of exploration, chemists in fact did arrive at a limit, as expected, in the form of what were sometimes called “simple bodies” or elements—substances which seemingly could no longer be caused to differentiate further. From ancient times, a number of such elements had been identified: iron, copper, tin, lead, mercury, gold, silver, sulphur, and carbon. About five more elements were added in the Middle Ages, and then, under the influence of Gottfried Leibniz’s work in launching the Industrial Revolution, there occurred, during Leibniz’s time, from about the 1740s, an explosive development of physical chemistry, so that, at the time Mendeleev graduated from the Main Pedagogical Institute of St. Petersburg, about 64 chemical elements were known.

There are different, opposing types of hypotheses associated with the term “chemical element.” Empiricism has insisted, for example, on the supposedly self-evident axiom or idea which is still repeated, unfortunately, in much of our elementary education: namely, that the elements represent unbreakable, ultimate “building blocks” of matter, whose supposed quality of reality is borrowed from the baby’s earliest years in the playpen. The great French chemist Lavoisier, on the contrary, adopted the more adult view that the chemical elements are *singularities*, are moments of change, in a search not for ultimate building blocks, but for what he called the “principles” of matter, the principle of generation of matter.

In 1869, Mendeleev published his first version of the Periodic Table, demonstrating that the chemical elements constitute a single, harmonically ordered organism—entirely as Kepler had seen the system of planetary orbits.

Mendeleev’s discovery of the periodic system was provoked by his work as a teacher. In teaching, he was irritated and provoked by the chaotic mass of data on the individual elements, and asked himself the question: Is what we’re doing here really a science? Can I present this as a science? Mendeleev wrote the following:

The mere accumulation of facts, even an extremely extensive collection, . . . does not constitute scientific method; it provides neither a direction for further discoveries nor does it even deserve the name of science in the higher sense of that word. The cathedral of science requires not only material, but a design, harmony . . . a design . . . for the harmonic composition of parts and to indicate the pathway, by which the most fruitful new material might be generated.

Mendeleev arrived at his discovery, after many failed attempts by other chemists, by juxtaposing two distinct types of experimentally defined orderings of the elements:

First, the natural division of the elements into *distinct chemical groups*, each composed of elements having similar or analogous characteristics of the member-elements, relative to the totality of the elements, in terms of the types of chemical compounds and crystals they form, and other physical-chemical properties.

Second, the “ranking” of the elements in a *single sequence*, according to increasing values of their atomic weight, starting from hydrogen and ending with uranium.

Mendeleev’s choice of that second ordering principle, was crucial. He correctly hypothesized, that the “atomic weights,” among all the known physical and chemical parameters, reflected an *invariant*, a “something” that is preserved in all chemical transformations. At the same time, Mendeleev steadfastly rejected all attempts at a simplistic explanation of the sequence of elements, in terms of their being built up, in a linear fashion; for example, from hydrogen as the main “building block.” Mendeleev insisted that each single chemical element represented a true “individual.”

Struggling with the ambiguities and inaccuracies of the then-existing empirical data, Mendeleev finally gave birth to the “natural system of elements,” as he called it, and the fundamental discovery, that the chemical properties of an element are essentially a multiple-periodic function of the *ordinal number* of the element in the series of increasing atomic weights. This principle not only permitted nearly the entirety of then-existing knowledge of the chemical elements to be brought together into a coherent whole, but also led Mendeleev, and later others, to successfully predict the existence and characteristics of “missing” chemical individuals.

The Underlying Dynamic Process

But Mendeleev himself regarded his discovery merely as a *first step*. In his 1870 article “On the Natural System of Elements,” he wrote:

When we succeed in discovering the exact laws for the periodic dependence of the properties of elements from their atomic weights, and for the atomic interrelations between the elements, then we will come nearer to understanding the true nature of the mutual differences

between the elements; then chemistry will be able to leave the hypothetical domain of the static conceptions, which have prevailed until today, behind it; and the possibility will open up, to apply to chemistry the *dynamical approach*, which has been so fruitfully employed for the investigation of most physical phenomena [emphasis added].

The breakthrough in uncovering the *dynamic* process underlying the periodic system, came from three experimental directions. First, by studying the anomalies of the system of elements: its still-unfilled gaps; the question, why the series of elements seemed to break off at uranium; and finally, the anomalous character of the atomic weights themselves, whose ratios are often close to, but still distinctly different from, simple whole-number ratios. Second, by investigating various forms of *radiation* emitted by atoms. Third, through pursuit of the anomalies of geochemistry, by investigating the distribution of the elements in nature, in minerals for example, where certain elements are found in close association with one another, “as if” they had some “hereditary” relationship to each other.

Following Röntgen’s discovery of X-rays, which are generated when accelerated electrons strike the surface of a metal, Becquerel found that salts of uranium *spontaneously* emitted a weak sort of radiation, capable of darkening photographic plates, but apparently without the need for any stimulation from the outside. Marie Curie later coined the term “radioactivity,” suggesting that the source of Becquerel’s radiation lay in an inherent, dynamic activity of the atoms themselves. Following up this situation with a new method of measurement, Marie Curie investigated all available minerals, finding Becquerel’s radiation present *exclusively* in minerals containing uranium and thorium—the last and next-to-last elements in Mendeleev’s system. Certain anomalies led her to suspect, that the main source of the radiation was not uranium and thorium themselves, but traces of some other element or elements, associated with them in the same minerals. Marie and her husband, Pierre, were subsequently able to isolate, from large amounts of the uranium ore by-product pitchblend, two *new*, highly radioactive elements: first polonium, and then radium, filling the empty spots of ordinal numbers 84 and 88 in Mendeleev’s table.

That was 1898. An avalanche of new experimental discoveries unfolded in the following years. It was found that radium, in addition to emitting a continuous blue glow, also produced significant amounts of heat, amounting each year to the equivalent of burning 100 times its weight in coal.



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Marie Curie surmised that radioactivity was connected with a process of “atomic transformation” that underlay the close association of radium and polonium with uranium and certain other substances. Subsequent research confirmed her conjecture: Radium was slowly being turned into lead.

And yet, the heat and light emission from radium seemed to continue, year after year, with no sensible decrease. But Marie Curie surmised that this radioactivity was connected with a process of “atomic transformation” that somehow underlay the close association of radium and polonium with uranium and certain other substances, always found together in uranium-containing minerals; and that the radium was very slowly transforming itself into one or other elements.

Subsequent research confirmed her conjecture: Radium was very slowly transforming itself into . . . lead! The rate of transformation was so slow, that after about 1,600 years only about *one half* of the original amount of radium will have turned into lead, accompanied by a simultaneous, gradual release of helium gas. In that process, the radium will have emitted an amount of heat equivalent to nearly a *million times* its weight in coal. It was immediately evident, that the discovery of this new, “atomic” energy would lead to a revolution in human affairs, as soon as means were found for accelerating the spontaneous, apparently very slow process of atomic transformation.

Meanwhile, the fuller picture gradually came into focus, of the existence of several distinct “radioactive decay chains,” starting from uranium and thorium, in the course of which

many successive atomic transformations occur, simultaneously and at widely differing average rates, and in which the generation and decay of radium and polonium constitute intermediate steps on the way to lead as the “end-point.” One of them, for example, has 15 transformations, jumping back and forth upwards and downwards in the periodic system, before finally arriving at lead. Some of the steps occur within seconds, others several minutes or days, still others take years, all the way up to *several billion years* for the initial step leading from uranium.

As Mendeleev had anticipated, a highly dynamic reality began to come into view, beneath the apparently tranquil surface of the periodic system, with its seemingly fixed relationships: a world of creation, death, and metamorphosis of elements, in which different principles are at work than those expressed in the Periodic Table *per se*.

Transmutation and the Discovery of Isotopes

So far, radioactivity concerned only the spontaneous, radioactive transformations occurring in a small handful of elements. But by 1926, scientists had learned to carry out the first “artificial transmutations” of other elements, transforming nitrogen atoms into oxygen atoms by exposing them to radiation from a radioactive source. Evidently, the transmutation of elements—the dream of the alchemists—was a universal potentiality. The view suggested itself, that the distribution of elements, found today on the Earth, is a “fossil” of an evolutionary process, involving possibly many forms of nuclear reactions. The phenomena of atomic energy provided a crucial clue to the long-standing riddle, what the power source of our Sun might be, as well as a possible relationship between nuclear processes going on in the Sun and stars, and the origin of the chemical elements.

But already, earlier during the first decade of the 20th Century, scientists had discovered something else of fundamental importance: There was something very special about the substances produced in radioactive decay processes. Some of those products of atomic transformations resembled naturally occurring elements very closely, and could not be separated from them chemically when mixed together; yet they had very different radioactive characteristics. For example, the substance then called “ionium,” arising from the decay of uranium, appeared chemically identical with thorium, but decayed in mere days; whereas the half-life of natural thorium is so long (over 10 billion years), that it could barely be estimated at that time.

In 1910, Frederick Soddy suggested that there might exist subspecies of one and the same element, having different atomic weights, but virtually identical chemical properties. He coined for these the term “isotope,” meaning in Greek “the same position,” to signify that from a chemical point of view, these subspecies would belong to the same position in Mendeleev’s periodic system. A few years later, researchers could confirm, for example, that the lead accom-

panying minerals of uranium has a *different atomic weight*, than the lead found in minerals of natural thorium. Thus, “lead is not lead”: Different radioactive chains end up in different lead isotopes.

These discoveries laid bare an extraordinary ambiguity in the concept of an element, which had been the entire basis of chemistry!

By the late 1920s, with Aston’s development of the mass spectrograph, and thereby of the ability to measure atomic weights with vastly greater precision, it had become clear that the existence of distinct isotopes was a ubiquitous property of the chemical elements; and that practically all elements found in nature, whether radioactive or not, consisted of mixtures of isotopes in various ratios. It became evident, that the number of isotopes is many times larger than the number of elements, even as regards the stable isotopes. Iron, for example, has four known stable isotopes; calcium has six, and tin, with the highest record, has ten, all occurring with significant abundance on the Earth. It lies in the nature of the nuclear transformation processes, that different isotopes of one and the same element will generally have *different* origins, different *pre-histories* in the evolution of the universe.

Today, some 3,000 different isotopes are known, most of which were created by man. That corresponds to an average of about 30 isotopes for each element! Most of these are short-lived in their “free” state, but they nevertheless represent realizable modes of existence of matter in our world.

All of this means adding a *new dimensionality* to Mendeleev’s periodic system. The discovery of isotopes called for a complete reworking of chemistry. How, then, should we now conceptualize the ordering of a newly emerging “periodic system of isotopes”? The answer, as far as science has gone with it until today, is inseparably connected with the *anomalies of the atomic weights*.

Mendeleev had based his periodic system on the *ranking* or *ordinal number* of the elements in order of their increasing atomic weight, using the comparison between this ranking and the periodicity of chemical and crystallographic characteristics, to correct for the inaccuracies errors of measurement of the atomic weights and to determine the position of “missing” elements in the series. The challenge remained, to better understanding the significance of the values of the atomic weights themselves, which manifested both regularities, as well as the curious irregularities. On the one hand, those values, regardless of the units used to express them, display an unmistakable tendency to form whole-number proportions. At the beginning of the 19th Century, the English chemist William Prout pointed out that the atomic weights of the elements appeared to be integral multiples of the atomic weight of hydrogen, the lightest element; and upon this he based his hypothesis, that the elements are somehow composed from hydrogen as the basic building-block.

Mendeleev rejected this reductionist conception on principle, and it was refuted experimentally by more precise mea-

measurements of the atomic weights. Particularly striking was the case of chlorine, recognized as a chemical element in 1820, and whose atomic weight, relative to that of hydrogen, is about 35.5. In fact, when Mendeleev made his periodic table, he listed the values of the atomic weights for the first two “octaves” of his system, as they were then known, in a very rough approximation, as follows:

H 1
Li 7 Be 9.4 B 11 C 12 N 14 O 16 F 19
Na 23 Mg 24.3 Al 27.4 Si 28 P 31 S 32 Cl 35.5

What is the cause of the mixture between (very nearly) integral, as well as clearly non-integral values, and of the irregular distribution of the “jumps” in the values between successive elements? Did this mean more “missing” elements, or even new chemical groups? Elements perhaps of a different kind, than Mendeleev allowed for?

New Anomalies

Here the discovery of the isotopes, and the subsequent measurement of their atomic weights, brought a crucial breakthrough. An extraordinary regularity emerged, that had hitherto been hidden; while at the same time, new anomalies appeared, which remain at the core of modern nuclear physics up to this day.

First, it was recognized that since the naturally occurring elements are in reality mixtures of isotopes, having themselves different atomic weights, the previous measured value for the elements reflected a kind of average of the atomic weights of the corresponding isotopes, “weighted” according to the relative percentages of the isotopes in the mixture. The reason for the half-integral value for chlorine, for example, lies in the circumstance, that naturally occurring chlorine is composed of a mixture of two isotopes, one with atomic weight very nearly 35, the other with atomic weight 37, in a ratio of approximately 3 to 1.

Comparing the atomic weights of the *isotopes* with one another, instead of those of the *elements*, the large divergences from whole-number ratios disappeared and a remarkable new set of relationships came into focus.

The relationships of the isotope values stick out most clearly, when they are referenced not to hydrogen, but to a certain specific isotope of carbon (nowadays denoted C-12). When we set as unit 1/12 the atomic weight of carbon-12, then the numerical values of the atomic weights of the known isotopes turn out, without exception, to be within a tenth of so, at most, from whole-number values. In most cases the deviation is even much smaller.

Thus, each isotope can be unambiguously associated with a certain whole number, nowadays called its “mass number,” which very nearly coincides with its atomic weight. Hydrogen, for example has naturally occurring isotopes, of mass numbers 1, 2; oxygen has three: 16, 17, 18; tin has ten: 112,

114, 115, 116, 117, 118, 119, 120, 122, 124, and so on. It was natural to expect, that where gaps existed in the series of mass numbers, as between calcium-44 and calcium-46, an additional calcium isotope with mass number 45 should exist, and probably an *unstable one*—as that would explain its apparent rarity in nature. Indeed, as accelerators and, later, nuclear reactors began to produce large quantities of new isotopes, many of those “holes” in the series of isotopes were filled, and existing series extended upwards and downwards. There could hardly be a doubt, that the isotopes of one and the same element are naturally ordered in the manner of successive whole numbers.

But then a whole new set of questions arises: Why are some isotopes stable and others not? Why do the gaps tend to occur most often at *odd-number* locations? What is the reason that some elements have many isotopes, others very few, or even only one? What is the reason for certain patterns in the relative abundancies of different elements in nature, which have no obvious relationship to the periodicities of Mendeleev’s table?

In the meantime, investigations of the X-ray spectra of chemical elements—of their resonant frequencies of absorption and re-emission when irradiated with X-rays—provided a new physical foundation for Mendeleev’s ordering of the elements themselves, independently of the atomic weights: the array of X-ray spectral frequencies of a given chemical element, change stepwise in completely regular and systematic fashion, as we go from one element to its successor in the periodic system. It became possible to predict the X-ray spectra of yet-unknown elements, and to identify and discover them, even in extremely small concentrations, through their telltale X-ray “signature.” But the X-ray spectra of isotopes of a given element, are nearly exactly identical, like their chemical behavior.

Isotopes and Gaussian Complex Numbers

Thus, atoms in our universe appeared to have a two-fold nature:

Firstly, their identity as chemical elements, reflected in their affinities for other elements, with which they form chemical compounds; in the types of crystals they form, alone or in combination with other elements; in the conditions under which they take solid, liquid, or gaseous forms, and so forth; and in their optical and X-ray spectra.

Secondly, their “new” identity as isotopes, in the context of the all the discoveries that we have just summarized, which form the main starting point for the domain called “nuclear physics.”

Finally, these two aspects must be intimately connected with each other, in ways that are not yet adequately understood.

Much is left to be done, but we know that the emergence of nuclear physics, in the process we have just sketched, exemplifies the form of progression of human knowledge that

Bernhard Riemann described with his famous paper on the “On the Hypotheses Underlying Geometry”: the generation of a higher-order manifold of human practice out of a lower-order one, by the integration of an additional newly discovered physical principle.

How, then, should we now represent the newly emerging *system of isotopes*? The most straightforward approach, given the fact of the emergence of a new “dimensionality” in Riemann’s sense, is that originally employed by Carl Gauss in his treatment of biquadratic residues. To map out the combined effect of two different ordering principles, Gauss extended the ordinary number domain by introducing the so-called *imaginary complex whole numbers*. Gauss’s system of complex whole numbers can be represented visually as the system of lattice-points in a plane, where the horizontal, so-called “real axis” represents the mode of displacement corresponding to the ordinary numbers, and the vertical so-called “imaginary axis” represents displacement according to the new principle. The relationship between the two principles of displacement, defines a third principle.

Apply this now to the ordering of the isotopes! Think of each isotope as being associated with a complex whole number—i.e., in the geometrical representation, by a specific locus in the lattice, in the following manner. The component of the isotope along the horizontal, “real axis,” should be the ordinal number of the corresponding element in Mendeleev’s original periodic system, otherwise known as its atomic number. The “imaginary part,” i.e., its component in the vertical direction, should be its mass number. Thus, the isotopes of a given element are located on lines parallel to the vertical axis, at heights corresponding to their atomic weights, or rather to the whole-number closest to them.

To put it more schematically: The isotope of an element of atomic number Z , and having mass M , corresponds to the Gaussian complex number $Z+iM$.

Merely mapping the isotopes by complex ordinal numbers only lays a preliminary basis for the real work, which is to discover the *physical principles* underlying the existence and transformations of the isotopes, and the relationship between the “chemical” and “nuclear” processes.

A crucial clue lies in the pattern of *tiny discrepancies* between the actual, physical values of the atomic weights, on the one side, and the integer mass numbers used in our mapping, on the other. It is exactly in those tiny discrepancies, that the whole potential of nuclear power resides! They are analogous to the tiny differences between the observed motion of Mars, from that predicted on the assumption of uniform circular motion of the planets, which permitted Kepler to discover the principle of universal gravitation.

For example, what is the relationship between the atomic weights of two atoms, and that of an atom that might, hypothetically, be formed by some sort of fusion of the two?

One of the simplest cases, would be to combine two atoms

of the *hydrogen* isotope of ordinal number $1+2i$ (called deuterium), to get an atom of the *helium* isotope $2+4i$ (the most common form of helium, helium-4). This idea corresponds broadly with what is believed to occur in the Sun. Here, the complex ordinal numbers add up algebraically. But what about the actual atomic weights?

The atomic weight of deuterium, from actual measurement, is 2.014102 mass units, the double of which is 4.028204. The measured atomic weight of an atom of helium-4, on the other hand, is 4.002603, which is slightly *smaller* than the former value, by 0.025601 mass units, or about 0.6%. What might follow from the observation, that a helium-4 atom is 0.6% lighter than two deuterium atoms, taken separately? If it were possible for the deuterium atoms to reorganize themselves into a helium atom, the result would involve a net *decrease in mass*.

In fact, the *fusion* of isotopes of hydrogen to form helium is believed to be the main power source of the Sun. The main reactions, that take the form of a chain, appear to be more complicated than our hypothetical one, but they share the common characteristic: At the end, the atomic weight of the end-product(s) is *less* than that of the reactants. What is the significance of that?

To the best of our present knowledge, Einstein’s general answer is correct, namely, that the rate of generation of “missing mass” is directly proportional to power output of the star. We cannot directly measure the slow loss of mass of the Sun, for example, but we can observe the same sort of proportional relationship quite directly in countless radioactive processes and nuclear reactions. That also holds for nuclear fission, where the sum of masses of the fragments, generated by the fission of a uranium nucleus, is very slightly, but measurably, smaller than the mass of the original nucleus. More precisely, the “missing” mass amounts to 0.087% of the mass of the uranium nucleus.

It seems, therefore, to be those tiny discrepancies in terms of atomic weights, that hold the key to the Sun’s power to maintain our biosphere, and to our own power to maintain the world population on the basis of nuclear energy in the coming period. And yet, as Kepler confronted the anomaly of slight “errors” in the predicted positions of Mars, relative to the reductionist calculations of Ptolemy, Tycho Brahe, and Copernicus—errors reflecting the existence of a higher principle that he later identified as universal gravitation—so today, a conceptual leap is required, to discover the principles of a new nuclear physics.

I will just note, in conclusion, that the magnetic characteristics of an isotope could be considered as, in a sense, the “imaginary” component of the value of the mass function for the corresponding complex ordinal. By including the additional dimension of nuclear isomers (so-called excited states of nuclei, which have changed magnetic characteristics), we can construct a more comprehensive Riemann surface function for the principles in question.

Is Desperate Cheney Scheming Nuclear Sneak Attack on Iran?

by Jeffrey Steinberg

Senior U.S. military and intelligence sources canvassed by *EIR* do not rule out the possibility of a White House-ordered “Global Strike” unprovoked sneak attack against sites inside Iran before the Nov. 7 midterm U.S. elections. In fact, a number of particularly well-placed military and intelligence professionals identified the period from Oct. 4-18 as a possible window for just such a pre-election “preventive strike.”

Operational plans for such an attack have been recently updated, and could be activated with virtually no lead time, utilizing long-range strategic bombers and missiles, and carrier-based fighter jets, already in or near the Indian Ocean and Persian Gulf region, according to one senior U.S. diplomat. “The military did the planning, but they hated it. Expect mass resignations at the flag level, if the orders come down to launch,” the source warned.

What’s more, in the aftermath of Israel’s failed “shock and awe” bombing campaign in the recent Lebanon war, do not rule out the U.S. use of nuclear “bunker busters” in an attack on hardened sites inside Iran, according to several of the sources.

Hezbollah fighters waited out the initial weeks-long Israeli bombing campaign, inside air-conditioned reinforced underground bunkers, and then emerged to launch a barrage of over 4,000 rocket and missile attacks against Israeli targets. The psychological impact of the rain of missiles on the northern half of Israel eventually drove the government of Ehud Olmert to deploy “boots on the ground” inside Lebanon’s treacherous southern region, leading to a second disastrous Israeli military debacle, at the hands of trained and seasoned Hezbollah partisan fighters.

While military professionals noted the Hezbollah victory as a turning point in the politico-military situation in the extended Southwest Asian and Persian Gulf region, fanatics in the Bush-Cheney White House have been reportedly driven

into an even more desperate flight-forward commitment to near-term military action against the Islamic Republic of Iran.

So-called Iranian “nuclear weapons sites” are far more heavily reinforced and could withstand any conventional bombing attacks, according to military specialists. Therefore, the nuclear bunker-buster option cannot be ruled out, despite an intensive “generals revolt” last Spring, which temporarily forced the White House to remove the use of tactical nuclear weapons from the contingency plans.

Public Warnings

While the establishment mass media has conducted a top-down coverup of the White House plans for a sneak attack on Iran, a number of think-tank journals and Internet-based news services have sounded the warning:

- On Sept. 23, former U.S. Sen. Gary Hart (D-Colo.), who headed a late-1990s Congressionally sponsored commission on the U.S. vulnerability to a terrorist attack, warned that the Bush White House was planning “The October Surprise,” in the form of a bombing of Iran. Writing on Huffington Blog, Senator Hart bluntly warned, “It should come as no surprise if the Bush Administration undertakes a preemptive war against Iran sometime before the November election. Were these more normal times, this would be a stunning possibility, quickly dismissed by thoughtful people as dangerous, unprovoked, and out of keeping with our national character. But we do not live in normal times. And we do not have a government much concerned with our national character. If anything, our current Administration is out to remake our national character into something it has never been.”

Senator Hart summarized the “Global Strike” war plan: “Air Force tankers will be deployed to fuel B-2 bombers, Navy cruise missile ships will be positioned at strategic points in the northern Indian Ocean and perhaps the Persian Gulf,



DoD/R.D. Ward

The bipartisan Senate surrender on Dick Cheney's beloved "torture bill" makes a flight forward into a sneak attack against Iran even more likely than it was before.

unmanned drones will collect target data, and commando teams will refine those data. The latter two steps are already being taken."

Indeed, U.S. military sources have confirmed that special reconnaissance units have been on the ground inside Iran since the Summer of 2004, planting sensors and recruiting intelligence assets, to prepare the battle field for a U.S. air campaign.

- On Sept. 26, conservative syndicated columnist Paul Craig Roberts wrote "Why Bush Will Nuke Iran," declaring that "the neoconservative Bush administration will attack Iran with tactical nuclear weapons, because it is the only way the neocons believe they can rescue their goal of U.S. (and Israel) hegemony in the Middle East."

- Several weeks before the Hart and Roberts warnings, The Century Foundation posted a 28-page analysis, "The End of the 'Summer of Diplomacy': Assessing U.S. Military Options on Iran," by Col. Sam Gardiner (USAF-ret.), a respected retired Air Force strategist and war-planner. The document detailed the Bush White House's fractured logic, leading to a military assault on Iran, aimed at regime change, not the delay or destruction of the Islamic Republic's purported secret nuclear weapons program. In plain language, Colonel Gardiner spelled out why an attack by the United States on Iran would occur sooner, not later:

"Waiting makes it harder. The history of warfare is dominated by attackers who concluded that it was better to attack early than to wait. One source of the momentum in Washington for a strike on Iran's nuclear program is the strategic observation that if such an attack is in fact inevitable, then it is better done sooner than later."

Colonel Gardiner documented that the order of battle for Phase I of war on Iran would require virtually no lead time to

put military assets in place. Rather, he spelled out a propaganda buildup as the key indicator of imminent attack: "The most significant indications will come from strategic influence efforts to establish domestic political support. The round of presidential speeches on terrorism is a beginning, but I expect more. An emerging theme for the final marketing push seems to be that Iran threatens Israel's existence. We can expect the number of administration references to Iran to significantly increase, and will see three themes—the nuclear program, terrorism, and the threat to Israel's existence." Gardiner added the warning that the Bush Administration would likely strike without seeking Congressional approval, concluding, ominously: "The window for a strike on Iran stands open."

- Months before the Gardiner report, *The National Interest*, the journal of the Nixon Center, published a detailed analysis by Col. W. Patrick Lang (USA-ret.) and Larry C. Johnson—two Middle East specialists with decades of military and intelligence experience—"Contemplating the Ifs," debunking the notion that the United States or Israel has any viable military option for confronting Iran. Taking a very dispassioned approach, the two reported: "Friends in the intelligence community tell us that civilian officials at the Department of Defense have been pushing aggressively for almost two years to 'do something violent' in Iran. but before we embark on another military operation, we must reckon the costs; we must ensure that we are willing to pay those costs; and we should ensure that neoconservative enthusiasts would not be tempted to say—if venturing into Iran becomes a misadventure—that it was impossible to foresee negative consequences. There are a lot of bad things that could happen if we launch a pre-emptive war with Iran. Before we act, we must thoroughly consider what our viable military options are."

Lang and Johnson dismissed, out of hand, a conventional ground invasion; disputed the viability of commando and air raids; blew off any "mirage" of a possible Israeli attack on Iran's nuclear sites; and then detailed Iran's asymmetrical counter-capabilities, concluding, "In the end, it may become necessary to confront Iran militarily over its emergent nuclear power status, but the costs would be so high that all diplomatic resources should be exhausted before such measures are adopted."

Voices in the Congressional Wilderness

The pathetic bipartisan surrender to the Bush-Cheney White House over the status of "enemy combatants," will only serve to send Dick Cheney and the ever-more-mad President George W. Bush into a flight forward into sneak attack war on Iran (see *Editorial*). A relative handful of Members of Congress from both parties have stood up against the tide of capitulation by both the Democratic and Republican leadership.

On Sept. 29, Rep. Dennis Kucinich (D-Ohio) filed a resolution in the House, giving the Bush White House 14 days to turn over policy documents relating to Iran, including intelli-

gence on Iran's nuclear energy program and "Iran's capability to threaten the United States with nuclear weapons"; any decision documents "to remove the ruling regime from power in Iran"; details of any "covert action being conducted by any United States Armed Forces in Iran"; details concerning "creation of a new office in the Department of Defense similar in scope, function, or mandate to the former Office of Special Plans"; any "Prepare to Deploy" orders by the United States Navy on the waters near Iran; and any National Intelligence Estimates or any other intelligence documents on the consequences, including economic consequences, of a U.S. attack on Iran.

The same day, Rep. Wayne T. Gilchrest (R-Md.) and 19 other House Republicans and Democrats wrote to President Bush, urging him to open direct dialogue with Iran "as soon as possible," noting that "more than 25 years of isolating Iran has moved us farther from, not closer to, achieving these goals."

Documentation

Congressmen, Military Experts Speak Out

The following reflect the concern of certain Members of Congress from both political parties, and qualified military experts, about the danger of an imminent Bush Administration attack on Iran.

Rep. Dennis Kucinich (D-Ohio) introduced the following resolution into the Congress on Sept. 28, and inserted the full text of an article by Col. Sam Gardiner (USAF, ret.) into the *Congressional Record*.

Requesting the President to provide to the House of Representatives certain documents in his possession relating to United States policy toward Iran.

Resolved, That the President is requested to provide to the House of Representatives, not later than 14 days after the date of the adoption of this resolution, all documents in the possession of the President relating to—

(1) the intelligence on Iran's nuclear energy program and Iran's capability to threaten the United States with nuclear weapons;

(2) any decision to remove the ruling regime from power in Iran, by means of United States military strikes, internal or external dissident groups and individuals, and by any other means;

(3) covert action (as defined in section 503 of the National Security Act of 1947 (50 U.S.C. 413b)) being conducted by

any United States Armed Forces in Iran, and training by United States Armed Forces of any group or organization for the conduct of operations hostile to the current regime of Iran, including the Mujahedin-e Khalq (MEK) and any individuals ever associated with MEK, and the Iranian Party of Free Life in Kurdistan (PJAK) and any individuals ever associated with PJAK;

(4) creation of a new office in the Department of Defense similar in scope, function, or mandate to the former Office of Special Plans;

(5) "Prepare to Deploy" orders by the United States Navy to the waters near Iran; and

(6) all National Intelligence Estimates or any other intelligence community analysis regarding the consequences of attacking Iran, including the likelihood of increased prices of gasoline and oil and the economic impact to the United States of such increased gasoline and oil prices, the likelihood of increased attacks on United States troops in Iraq, and the growth of anti-American sentiment in the Islamic world.

The following release was issued by Maryland Republican Congressman Wayne Gilchrest on Sept. 29, under the headline "Gilchrest Asks the President To Open a Dialogue with Iran."

U.S. Rep. Wayne T. Gilchrest (R-Maryland-1st) is leading an effort in Congress to ask President Bush to begin talks with Iran as soon as possible in hopes of averting another conflict in the Middle East.

In a letter sent to the President Friday, signed by 19 bipartisan members of the House, Gilchrest and his colleagues suggested that the last 26 years of a "no negotiation" policy has not yielded any positive results. By opening a dialogue with Tehran, the President can begin to try to solve this nuclear impasse diplomatically.

"If we hope to convince the American people, our allies, and the international community that we are committed to resolving this matter diplomatically, the U.S. must open up direct diplomatic channels with Tehran," the letter stated.

The letter also suggested that while talks with Iran's President may not be productive, there are other leaders and groups in Iran that would be receptive to such outreach.

"We remind you that decision-making power under Iran's government is diffuse. Although we are all familiar with the inflammatory rhetoric of President Ahmadinejad, there are certainly other significant government bodies in Iran that have demonstrated moderation and an eagerness for dialogue. We believe that such bodies should be sought out for engagement."

"There are seldom occasions in history where a great country should fear dialogue with a potential adversary. on the contrary, dialogue is needed to explain clearly the compelling nature of America's objectives in the Middle East. More than 25 years of isolating Iran has moved us farther from, not closer to, achieving these goals. No one can dispute that the U.S. has

a strong track record of diplomatic successes in autocratic societies after opening negotiating channels.

“We believe America’s diplomats are the best in the world and should be allowed to apply their talents to our conflict with Iran. We therefore respectfully urge you to begin the process of holding direct talks with Iran as soon as possible.”

Other members who have signed the letter include: Gil Gutknecht (R-Minn.), Ron Paul (R-Tex.), Vic Snyder (D-Ark.), John R. “Randy” Kuhl Jr. (R-N.Y.), Roscoe Bartlett (R-Md.), Jim Kolbe (R-Ariz.), Elijah Cummings (R-Md.), Earl Blumenauer (D-Ore.), John J. Duncan Jr. (R-Tenn.), David Price (D-N.C.), Jim Leach (R-Ia.), John Olver (D-Mass.), Walter Jones (R-N.C.), Peter DeFazio (D-Ore.), Joe Schwartz (R-Mich.), Maurice Hinchey (D-N.Y.), Phil English (R-Pa.), C.L. “Butch” Otter (D-Id.).

“The End of the ‘Summer of Diplomacy’: Assessing U.S. Military Options on Iran” by **Col. Sam Gardiner**, (USAF, ret.), is being imminently printed by The Century Fund, but is already being widely circulated on the Internet and cited for its authoritative reporting. It can be accessed in full at www.tcf.org.

Lt. Col. Karen Kwiatkowski (ret.) who formerly worked in the Office of the Secretary of Defense under Secretary Donald Rumsfeld, reported in a column on Sept. 25, that the invasion of Iran was already under way. The column can be found at LewRockwell.com, under the title “Are We Mice or Men?”

“The October Surprise” by former Democratic Senator **Gary Hart**, was printed on the Huffington Post website on Sept. 23, among other websites. It read, in part:

“It should come as no surprise if the Bush Administration undertakes a preemptive war against Iran sometime before the November election.

“Were these more normal times, this would be a stunning possibility, quickly dismissed by thoughtful people as dangerous, unprovoked, and out of keeping with our national character. But we do not live in normal times.

“And we do not have a government much concerned with our national character. If anything, our current Administration is out to remake our national character into something it has never been.

“The steps will be these: Air Force tankers will be deployed to fuel B-2 bombers, Navy cruise missile ships will be positioned at strategic points in the northern Indian Ocean and perhaps the Persian Gulf, unmanned drones will collect target data, and commando teams will refine those data. The latter two steps are already being taken.

“Then the president will speak on national television. He will say this: Iran is determined to develop nuclear weapons; if this happens, the entire region will go nuclear; our diplomatic efforts to prevent it have failed; Iran is offering a haven to known al-Qaeda leaders; the fate of our ally Israel is at stake;

Iran persists in supporting terrorism, including in Iraq; and sanctions will have no effect (and besides they are for sissies). He will not say . . . and besides, we need the oil.

“Therefore, he will announce, our own national security and the security of the region require us to act. ‘Tonight, I have ordered the elimination of all facilities in Iran that are dedicated to the production of weapons of mass destruction. . . .’ in the narrowest terms this includes perhaps two dozen targets. . . .

“The consequences? The sunny neoconservatives whose goal has been to become the neo-imperial Middle Eastern power all along, will forecast few. But prudent leaders calculate all the risks, and they are historic.

“These include: violent reaction throughout the Islamic world; a dramatic increase in jihadist attacks in European capitals and the U.S.; radicalization of Islamic youth behind a new generation of jihadist leaders; consolidation of support for Hamas, Hezbollah, al-Qaeda, and a rapidly spreading malignant network; escalating expansion of anti-American sentiment throughout the world, including the democratic world; and the formation of World War III battle lines between the U.S. and the Arab and Islamic worlds.

“In more rational times, including at the height of the Cold War, bizarre actions such as unilateral, unprovoked, preventive war are dismissed by thoughtful, seasoned, experience men and women as mad. But those qualities do not characterize our current leadership.

“For a divinely guided president who imagines himself to be a latter day Winston Churchill (albeit lacking the ability to formulate intelligent sentences), and who professedly does not care about public opinion at home or abroad, anything is possible, and dwindling days in power may be seen as making the most apocalyptic actions necessary.”

“Why Bush Will Nuke Iran,” by **Paul Craig Roberts**, Sept. 26, AntiWar.com.

Roberts, a former Nixon Administration official, states with certainty that the “Bush administration will attack Iran with tactical nuclear weapons.” Due to the Administration’s failures, Roberts argues, nuking Iran is the only way to ensure U.S./Israel hegemony in the Middle East. It has lost its wars in Iraq and Afghanistan and the “coalition of the willing” has disassembled. Why the United States must attack, Roberts claims, is because “Bush is incapable of recognizing his mistake. He can only ‘escalate.’ ”

Roberts asserts that the U.S. war doctrine now holds that tactical nuclear weapons entail rather little collateral damage, yet alter the psychological climate and can scare the enemy into meeting demands. And, Iran would not dare to retaliate.

“Contemplating the Ifs” is an article by military and counter-intelligence specialists **W. Patrick Lang** and **Larry C. Johnson**, which analyzes the costs of any attack on Iran. It can be found at www.nationalinterest.org.

Bill Clinton Snares the Fox

Fox TV-News got a come-uppance it did not expect on Sept. 22, when its prime interviewer Chris Wallace held an interview with former President Bill Clinton. Noted hatchet-man Wallace apparently told Clinton that he wanted to conduct an interview for his “Fox News Sunday” show, dedicated primarily to the Clinton Global Initiative, a fundraising program which President Clinton runs on behalf of charitable causes around the world.

There was little surprising about how the show went. Wallace devoted approximately 2 minutes to the subject of Clinton’s charitable work, before he shifted to the attack. “Why didn’t you do more to put bin Laden and al-Qaeda out of business when you were President?” he asked, claiming the question had come from e-mails into Fox News.

It was not long before Wallace realized he had made a big mistake.

From that moment on, President Clinton took over the interview, and interrogated Wallace. He blasted the Fox network for following in the footsteps of the ABC-News fraud on 9/11, which set the context for Wallace’s attack by claiming that his Administration had been responsible for that atrocity. He then began to demand answers from Wallace, and to rip his premises apart.

First, there was the fraud about Somalia, where Wallace had said that Clinton showed weakness in front of al-Qaeda. But al-Qaeda had nothing to do with Somalia, Clinton argued, and the Clinton Administration didn’t leave right away, *despite* the fact that all the neo-cons who are attacking him now were demanding that he leave.

Repeatedly, Clinton brought up Richard Clarke, the former head of counterterror in Republican and Democratic administrations, to similar effect, and hammered Wallace on his misrepresentations. When Wallace claimed he was just raising what was “on people’s minds,” Clinton pulled no punches:

“There’s a reason it’s on people’s minds. That’s the point I’m trying to make. There’s a reason it’s on people’s minds because they’ve done a serious disinformation campaign to create that impression. This country only has one person who has worked against terror under Reagan, only one, Richard Clarke. And all I’d say to anybody who wonders whether we did wrong or right, anybody who wants to see what everybody else did, read his book. The people on my political right who say I didn’t do enough, spent the whole time I was President saying “Why is he so obsessed with Bin Laden.” And “that

was ‘wag the dog’ when he tried to kill him.” My Republican Secretary of Defense—and I think I’m the only person since World War II to have a Secretary of Defense from the opposite party—Richard Clarke, and all the intelligence people, said that I ordered a vigorous attempt to get Osama Bin Laden and came closer apparently than anybody has since.”

After allowing Wallace to say “all right,” Clinton continued.

“And you guys try to create the opposite impression when all you have to do is read Richard Clarke’s findings and you know it’s not true. It’s just not true. And all this business about Somalia; the same people who criticized me about Somalia were demanding I leave the next day. Same exact crowd. . . .”

When the right-wing media went berserk after the interview, in protest against Clinton’s aggressivity, Clinton’s spokesman, Jay Carson, released a statement which said: “President Clinton fought back hard, just like any Democrat should when they are attacked with a baseless attack.”

So far, unfortunately, most other leading Democrats have failed to show even half the guts of the former President, in face of the Republican attacks.

Like Father, Like Son of a . . .

As for Chris Wallace, he had the dubious distinction of having undergone a virtual repeat of the drubbing given to his father, also a TV newsman, back in the 1950s.

Like his son’s show today, the Mike Wallace Interview show was known for grilling its guests. But, in the late 1950s, Wallace misjudged the situation when he invited Randolph Churchill, the only son of Winston Churchill, and a journalist himself, to appear on his show. In this case, Wallace decided to bait Churchill by bringing up an incident involving Randolph’s sister Sarah. Randolph Churchill erupted, and launched into an attack on the reporter, hardly letting him get a word in edgewise for the rest of the interview show.

There is, of course, no comparison between the characters of Bill Clinton and Randolph Churchill, in terms of the merits of their cases. Clinton was indeed telling the truth, while Churchill was an arrogant attack-dog from the get-go. There is, however, a lesson to be learned in terms of the chutzpah of a media which thinks it can bully and intimidate anyone it wants, and determine what is considered to be “acceptable” and true.

It’s a lesson those who want to save these United States from disaster, had better learn very quickly.

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Infrastructure Jobs Act Is Introduced in House

by Nancy Spannaus

Democratic Reps. William Lacy Clay (Mo.) and Major Owens (N.Y.), on Sept. 26, introduced a serious infrastructure employment initiative, unique in this “do-nothing” Congress, and modelled on Franklin Roosevelt’s Civilian Conservation Corps. The new bill is the “National Infrastructure Corps Act of 2006.” The Congressmen are circulating the bill for bipartisan sponsorship.

This bill, H.R. 6181, would transform some of the urban programs of Americorps—a national public corporation for volunteer programs, created by legislation in 1993—from volunteer programs, into employment programs on economic infrastructure projects “at reasonable prevailing wage levels.” It would link these programs to the Army Corps of Engineers’ infrastructure works projects, as well as the public works projects of the Transportation, HUD, and Labor Departments of the Federal government. For example, it would recruit and employ unemployed or semi-employed Americans to construction jobs on potential Army Corps lock-and-dam replacement projects on the Ohio and Mississippi River systems, or Gulf States disaster rebuilding projects, assisting those projects in getting done. Special emphasis is put on employing youth in their twenties. The sponsors’ “Dear Colleague” letter says that the bill would thus “enable Americorps to play a role in rebuilding our nation’s infrastructure while American workers find more jobs at reasonable prevailing wage levels.”

The bill would increase Americorps’ funding by the authorization of funding for Americorps employment projects up to a level of \$900 million annually for four years, thus creating up to 40,000 well-paid jobs on infrastructure public works. Should Congress move seriously to tackle a new national infrastructure for the U.S. economy, as Lyndon LaRouche has proposed in his Emergency Recovery Act of 2006, the Americorps Infrastructure Act could be rapidly expanded to provide more public works employment funding.

Put America Back to Work!

The “Dear Colleague” letter of Clay and Owens puts the issue behind this bill squarely on the table. “Let’s Put America Back to Work!!!” reads the headline, followed by

the subhead, “Approximately 3 million industrial jobs have been lost since 2000!!” It begins: “The American Society of Civil Engineers estimates that our nation needs to invest \$1.7 trillion to repair and replace obsolescent and broken-down infrastructure systems. This infrastructure crisis was made painstakingly clear after Hurricanes Katrina and Rita exposed the weaknesses in our nation’s infrastructure.”

Concretely, H.R. 6181 would amend the National and Community Service Act of 1990 to establish a National Infrastructure Corps to address the nation’s infrastructure needs and provide employment opportunities. It begins with the following findings:

1) The United States is suffering a worsening crisis in public infrastructure, including a lack or insufficiency of railroad, mass transportation, power, water control, river navigation, port, oil refining, and hospital infrastructure facilities.

2) The “infrastructure report card” issued by the American Society of Civil Engineers estimates the need for \$1.7 trillion in investments to repair and replace obsolescent and broken-down infrastructure facilities in the United States.

3) The nation’s infrastructure crisis became dramatically apparent after the breakdown of water control, transportation, and power infrastructure facilities in the Gulf States, following Hurricanes Katrina and Rita.

4) Each \$1 billion of Federal funding invested in infrastructure facilities creates approximately 50,000 jobs and \$6 billion in economic activity.

5) The United States continues to suffer high rates of unemployment in urban and rural areas, especially among males in their twenties, and individuals and households continue to experience decreases in wages and real income.

6. Regional, state, and local infrastructure rebuilding projects require a great deal of semi-skilled and labor-intensive employment.

7. These projects include the necessary repair and rebuilding of large numbers of the nation’s “upstream” dams, which could provide employment to 100,000 individuals, and the replacement of the ten obsolete locks and dams on the Ohio River Mainstem system, which would generate approximately 20,000 jobs over a multi-year period.

8. The Urban Youth Corps administered by the Departments of Housing and Urban Development and Transportation, the National Civilian Community Corps, and other volunteer programs of the Corporation for National and Community Service have greatly contributed to public works and disaster response projects.

9. The authority of the Corporation for National and Community Service should be expanded to provide employment opportunities and reverse trends in urban employment through the establishment of a National Infrastructure Corps modelled after the Civilian Conservation Corps created at the outset of the Great Depression.

Cheney Uses Hard-Core Fascists For Illegal CIA Operations

by Claudio Celani

Two parallel investigations in Milan have produced the broadest documentation and evidence so far of a case of CIA “extraordinary rendition,” i.e., the practice of kidnapping foreign citizens on foreign soil and “outsourcing” their imprisonment, interrogation, and torture. This illegal practice, violating the Geneva Conventions and all provisions of international law, has been implemented by the U.S. government, especially through the efforts of Vice President Dick Cheney’s legal counsel and chief of staff David Addington. The Italian case has brought indictments and warrants against 26 U.S. citizens, as well as the arrest of Marco Mancini, the number two of Italy’s military intelligence service SISMI, and a group of Mancini’s accomplices in private intelligence structures who have assisted special operations teams deployed by the CIA. In the background of such structures, the figure of the old spy and P-2 (Propaganda Due) puppetmaster Licio Gelli has surfaced, indicating that in order to carry out his illegal operations abroad, Dick Cheney needs help from convicted felons and *bona fide* fascists.

The Kidnapping of Abu Omar

In July 2005, prosecutors in Milan issued extradition requests for 26 U.S. citizens, including former CIA station chief in Italy Jeff Castelli and Milan CIA station chief Robert Seldon Lady. Castelli and Lady are accused of having planned and executed the kidnapping of Nasr Osama Mustafa Hassan, an Egyptian citizen better known by his religious name, Abu Omar. Omar was kidnapped in broad daylight in Milan’s Via Guerzoni, on Feb. 17, 2003, as he was leaving his flat. A witness, an Egyptian woman, reported to Omar’s wife that she had seen two men throw him into a van and drive away. A few days later, Omar’s wife filed a complaint with the

police. One year later, on April 20, 2004, she received a phone call from her husband, who reported that he had been kidnapped, flown to Egypt, where he is today, and imprisoned and tortured. Omar told the same story, with more detail on his tortures, in another phone call to a friend, a teacher in the Via Quaranta Islamic center, in Milan. Omar, who said that he was now free, but so physically damaged by torture that he can hardly walk, ordered his wife and his friend not to speak to anyone—police, journalists, etc.—as this was the precondition for him to obtain permission to call his family.

Unbeknownst to Abu Omar’s wife and the teacher, however, state attorneys in Milan were wiretapping their phones. So, by mid-2004, prosecutors knew that Omar had been kidnapped, and decided to push the investigation ahead. A thorough study of the records of mobile-phone conversations in Via Guerzoni, on the day of the kidnapping, prosecutors Armando Spataro and Ferdinando Pomarici could identify 66 of the callers as connected to the kidnapping. Seventeen cell phones were on site, in Via Guerzoni. Eleven of them accompanied the hostage as far as the highway. Six different phones travelled with the hostage on the highway, to the U.S. military base in Aviano. One cell phone number, starting with 335 and ending with 1143, communicated with the two groups, the one active in Via Guerzoni and the one who received the hostage at the highway, and drove him to Aviano: The user of the first phone is believed to be the head of the commando unit. And the CIA link was also established: Many of the cell phones were also in contact with Robert Seldon Lady, CIA station chief in Milan. This is the evidence that Abu Omar had been kidnapped by the CIA.

Spataro and Pomarici were aided by incredible carelessness on the part of the CIA command, indicating that they felt

themselves protected by Italian authorities: The agents flown in from the U.S.A. used their personal credit cards to pay for hotels, meals, and rental cars. They were even caught speeding through the streets of Milan by police cameras. From license plates, police could trace back the rented cars, and from the credit cards used, they obtained the names of the agents. Investigators could also identify the flights used to transfer the hostage: jet executive LJ35, flight code Spar 92, took off at 18:20 hours on Feb. 17, 2003, from Aviano to the U.S. military base in Ramstein, Germany. Next, Abu Omar was put on a Gulfstream (code N85VM), which flew from Ramstein to Egypt. This is the first time that an “extraordinary rendition” was precisely documented.

However, investigators suspected that Italian agents also participated in the operation. Abu Omar in fact told his wife that at least two of his kidnappers spoke Italian, and described the one who stopped him on the street as a “blond, tall man with blue eyes.” One of the cell phones active on the crime scene was owned by an Italian policeman, Giuliano Pironi, corresponding to that description, and nicknamed “Ludwig” because of his Teutonic appearance. Prosecutors interrogated Pironi, and he confessed.

The Italian Side

Through Pironi’s help, Spataro and Pomarici were able to reconstruct the operation in all its details. Pironi, like most members of the Carabinieri anti-terror team in Milan, knew CIA chief Bob Lady well; they shared a close cooperation and friendly relations. Lady, a veteran of CIA operations in Honduras, chose Pironi for the most delicate aspect of the kidnapping: The CIA group needed an Italian police official to stop Abu Omar without arousing his suspicion, and also to keep other police, who might have cruised into via Guerzoni that day, out of the area.

In his interrogation, Pironi told prosecutors on April 14, 2006: “Today, I intend to tell the truth. I admit to having been present on Feb. 17, 2003, in Via Guerzoni and to having asked Abu Omar to show his ID papers. . . . I was convinced to participate in an intelligence operation that, according to what Robert Lady told me, had been organized and prepared in agreement with SISMI and the Interior (Police) Department.”

Pironi also reported that he had hoped to join SISMI, and had considered the Abu Omar operation a sort of “test” for his admission. He had spoken about his aspirations to his friend Giuliano Tavaroli, a former Carabinieri officer, who had made a career, first as security chief for Pirelli, then for Telecom, Italy’s national telephone and communications network. Pironi knew that Tavaroli, in turn, was almost a “twin brother” of Marco Mancini, the head of the counterintelligence division of SISMI. But all Tavaroli could offer him was a job in Telecom. Disappointed, Pironi felt he had been “used.”

Prosecutors’ suspicions that Italian agencies, and ultimately the government, had passively or actively supported

the CIA operation were now being confirmed. Suspicions grew when they realized that SISMI’s Marco Mancini had replaced three SISMI station chiefs who were key to the operation—in Milan, Padua, and Trieste. When they interrogated one of them, Stefano Ambrosio, suspicion became evidence. Ambrosio, who is a friend of Robert Lady, reported Lady’s confidential remarks: Abu Omar’s kidnapping was “a project elaborated by Jeff Castelli, CIA station chief in Rome and responsible for the whole of Italy, in the context of precise orders issued from the United States, by the CIA office in Langley.” Bob Lady himself was skeptical about the operation, but he carried out the orders. He had also a very bad opinion of Mancini, whom he considered “a jerk who . . . would act only in his personal interest.”

At that point, Spataro and Pomarici decided to tap Mancini’s phone, and collect more evidence. On July 5, 2006, Mancini and his predecessor, Gen. Gustavo Pignero (Mancini’s superior in 2003), were arrested. At that point, it was not clear whether SISMI director, Gen. Nicolò Pollari, had authorized, or had been aware of, the kidnapping operation. This is still unclear today, as Pollari has denied it and even indicated that evidence in his favor is in the hands of the government, but classified as a state secret, as such evidence, if revealed, would “compromise Italy’s relations with other governments.” This is now a matter of an ongoing review by the Parliamentary Oversight Committee on Secret Services, which is putting pressure on the government.

Everything converges on the hypothesis that already in October 2001, when Prime Minister Silvio Berlusconi visited his “good friend” George W. Bush in Washington, promising him “full assistance in the war on terrorism,” the seeds were sown for U.S. assistance in illegal operations. Possibly, since it was too hot for everyone involved to officially deploy SISMI or other law enforcement agencies to help in the “extraordinary rendition” of Abu Omar, it was decided to deploy a private structure.

The ‘Beagle Boys’

Meanwhile, a parallel investigation by another Milan prosecutor on illegal wiretappings has brought another piece of the conspiracy to the surface. It has been discovered that Mancini and his buddy Tavaroli were running a system of illegal spying on prosecutors’ activity, as well as collection of dossiers on hundreds of Italian citizens, including a few national politicians and businessmen. The system would work in the following way: Mancini would ask Tavaroli to collect information on “Mister X”; Tavaroli would turn the request over to a third member of the group, Emanuele Cipriani, owner of a private detective agency in Florence. Cipriani, whose agency had virtually no staff, pulled the strings of dozens of police agents and state officials who had access to police and judiciary records, and would (illegally) supply sensitive information. Dossiers provided by Cipriani to Mancini via Tavaroli were then richly paid for by Tavaroli’s

Cheney-Addington Set Up Rendition Policy

Five days after the Sept. 11, 2001 attacks, Vice President Dick Cheney publicly announced the outlaw regime that he was already instituting for U.S. military and intelligence operations. In an interview on NBC's "Meet the Press," Cheney declared that "lawyers always have a role to play, but . . . this is war." He elaborated in this chilling manner:

"We also have to work, though, sort of the dark side, if you will. We've got to spend time in the shadows in the intelligence world. A lot of what needs to be done here will have to be done quietly, without any discussion, using sources and methods that are available to our intelligence agencies . . . and so it's going to be vital for us to use any means at our disposal, basically, to achieve our objective. . . . It is a mean, nasty, dangerous, dirty business out there, and we have to operate in that arena. I'm convinced we can do it; we can do it successfully. But we need to make certain that we have not tied the hands, if you will, of our intelligence communities in terms of accomplishing their mission."

The next day, President Bush signed a top-secret "Presidential Finding," undoubtedly authored by Cheney's legal counsel David Addington, which authorized U.S. intelligence agencies to establish the "extraordinary rendition" program, to create a network of secret prisons abroad, and to use interrogation methods that violated domestic U.S. law and international treaty obligations.

The Cheney-Addington legal theory, sometimes given an academic veneer by Justice Department lawyer John Yoo, asserted that the President, when acting as Commander-in-Chief in wartime, cannot be constrained by any

Congressionally enacted laws, or by any treaties signed by the United States and ratified by the Senate. It was a doctrine lifted straight out of the "Crown Jurist" of the Nazi Third Reich, Carl Schmitt.

Addington, sometimes called "Cheney's Cheney," shares with Cheney the view that the Presidency has been too constrained by Congress since the post-Watergate intelligence reforms of the 1970s were enacted to curb CIA and military spying and abuses against American citizens. Addington hooked up with Cheney during the Iran-Contra investigations of the mid-1980s, where they fought what they called Congressional encroachment on President powers, in connection with the Reagan-Bush covert action program in Central America. When Cheney became Defense Secretary in 1989, he brought Addington into his office, where Addington became enamored of military special operations, which he saw as a model for the more "timid" CIA.

Cheney and Addington seized the opening created by the shock of the 9/11 attacks to implement their doctrine of dictatorial Presidential power, with Addington providing the legal cover for Cheney's demand for unfettered Executive powers in the days following the attacks.

During that time, the overall covert counter-terrorism program, including the creation of "hunter-killer" squads combining military special operations forces and CIA special operatives, was placed under the control of Secretary of Defense Rumsfeld. But aspects of it, such as the "extraordinary rendition" program, were formally placed under the CIA, reportedly because that agency was not constrained by the Uniform Code of Military Justice which governs the conduct of military personnel. But whether it's under the Pentagon or the CIA, everyone knows that Dick Cheney is the ultimate Commander-in-Chief of all these "dark side" operations.

—Edward Spannaus

Telecom. Prosecutors could prove the transfer of at least 20 million euros from Telecom to Cipriani's accounts in London and in Switzerland. Additionally, Tavaroli had developed a spy system which alerted him to orders for eavesdropping on suspects; he was thus able to warn friends who were targets of such investigations in real time. Tavaroli, Mancini, and Cipriani were apparently called the "Beagle Boys" in their milieu.

When, on Sept. 20, 2006, Tavaroli, Cipriani, and 19 police and state officials were arrested, and the "Telecom spy system" was revealed, Italians had a *deja vu*. The story had too strong a resemblance to the P2 secret Masonic Lodge, whose Grand Master Licio Gelli had collected thousands of dossiers with which he was able to blackmail half the country's leading

figures. And indeed, the connection of the "Beagle Boys" to the P2 is not only on the question of method. Tavaroli, Mancini, and Cipriani are linked by old friendships, cemented during the years when all three were engaged in anti-terrorism police operations in the 1980s, at the Carabinieri "Pastrengo" division in Milan. In the Pastrengo division, which was highly infiltrated by the P2, Marco Mancini made a parallel career with Gustavo Pignero, his predecessor as head of SISMI counterintelligence division, under the protective wing of a person who has been in the middle of several key terrorism investigations, all of which are affected by intelligence manipulations and cover-ups. This person was Col. Umberto Bonaventura, whose team Mancini joined in the early 1980. Eventually, Mancini followed Bonaventura to SISMI, where

Bonaventura became head of the First Division (counterintelligence). When Bonaventura left SISMI, he was replaced by Pignero, who was then replaced by Mancini in 2005.

It happens that Bonaventura was involved in key terrorism investigations, all of which involved manipulations of some sort. The most important is the case of the “Moro Memorial,” the records of former Prime Minister and Christian Democratic chairman Aldo Moro’s kidnapping and interrogations by the Red Brigades terrorists, which were found by Gen. Carlo Alberto Dalla Chiesa’s men in Milan, in 1978, a few months after the Moro assassination. Bonaventura, a captain on Dalla Chiesa’s team, removed the papers before they could be put on the record, copied them, and gave them back with a number of pages missing. It was Bonaventura himself who confessed this before the Parliamentary Investigating Committee chaired by Sen. Giuseppe Pellegrino in May 2000. Bonaventura acted on behalf of circles who feared that Moro could have revealed NATO or other military secrets in those writings. Bonaventura’s action was unknown to Dalla Chiesa, a respected law enforcement officer who was killed by the Mafia in 1984.

Colonel Bonaventura also managed the “Mitrokhin Dossier” on alleged KGB spies in Italy, received through the British intelligence service MI6. A couple of days before his planned testimony to the Parliament’s “Mitrokhin” Committee, Bonaventura was found dead of “natural causes” in his apartment, on Sept. 7, 2002.

Bonaventura’s protégé Mancini has had an astonishing career, considering that he is a non-commissioned officer and has nonetheless become the number two of military intelligence. This is highly unusual and has raised some questions. Journalist Guido Olimpio, a counterterrorism expert, wrote in the daily *Corriere della Sera* that, “former CIA head George Tenet allegedly wrote a letter to support Mancini’s promotion.”

The Gelli Dynasty

Through Emanuele Cipriani, however, the ties of the “Beagle Boys” to the P2 and its Grand Master Licio Gelli become even more concrete. Cipriani, in fact, is an intimate of the Gelli family. In particular, he is a close friend and possibly a partner of Gelli’s son Raffaello. Cipriani has not hidden his friendship with Gelli Jr., which in itself is not a crime. But Raffaello Gelli is not just Licio’s son; he has been a collaborator of his father, whom he has defended and helped throughout Gelli’s judicial prosecutions. Additionally, one of Cipriani’s private investigative firms, Worldwide Consultants Security, is based in Montecarlo, 20 Boulevard Princesse Charlotte, which happens to be the address of Raffaello Gelli’s wife, Marta Sanarelli. Prosecutors have calculated that Pirelli and Telecom (Tavaroli) have channelled at least 17.5 million euros through the Barclays Bank accounts of WCS. It takes more than a friendship to lend your address for such a business, doesn’t it?

Indeed, a first circle closes through Cipriani and Raffaello Gelli. The Gelli connection easily explains how freemason Cipriani could pull the strings of police and judiciary officials to collect his dossiers.

It would take too long here to explain who Gelli has been, and what the P2 conspiracy was. Suffice to say, that Gelli is an hard-core Mussolini fascist, and that his secret freemasonic lodge has played a key role in major terrorist events, such as the 1978 kidnapping and assassination of Aldo Moro and the 1980 Bologna bombing. The P2, through its estimated 2,000 members among Italy’s political, military, judicial, business, and media elite, was a “state within the state,” able to manipulate and steer Italian politics. Gelli, however, was a low-level puppetmaster; the P2 was an extension of Anglo-American freemasonic networks and an instrument of global synarchist power.

Today, Raffaello Gelli seems to be on his way to become his father’s proud successor in the underworld of conspiracies, manipulations, and dirty money. He is already well placed in a network of murky international activities, centered around an organization that has a seat at the United Nations: the United Towns Agency for North-South Cooperation. Gelli joined UTA in 1996 through its founder, Henry Bandier, described by many as a “collaborationist” under the fascist Vichy government in France. Bandier, now dead, was “maybe a sympathizer of my father,” said Raffaello in an interview with the daily *La Nazione* in May 2001.

Through Bandier, Raffaello succeeded in becoming a member of the UN Committee on Human Rights, the Subcommittee on Promotion and Protection of Minorities, to be exact. However, Bandier’s and Gelli’s operations through the UN suffered a setback when, on request from the Cuban government, one of their organizations, the Asopazco (Association for Peace Among Continents), was expelled from the UN in 2000. The Cuban government had accused Asopazco of conducting subversive operations against Cuba.

Investigative journalists who have dug into the complicated network of organizations founded and run by Raffaello have found an interesting connection with Macedonia. In Skopje, there is a First Embassy of the Children in the World Megjashi (FECWM), run by a certain Dragi Zmijanac, who in 1999, was a member of the UN Subcommittee on Promotion and Protection of Minorities, together with Raffaello Gelli and his wife Marta. Until October 2005, among the “ambassadors” listed on the website of FECWM, was one Riccardo Sindoca, who was arrested in July 2005 by Italian police. Sindoca, a neofascist, had founded an organization called Dipartimento di Studi Strategici Antiterrorismo (Department of Antiterrorism Strategic Studies), suspected of being a sort of mercenary police, active also in Iraq.

Another “ambassador” of FECWM is Antonio Diletto, whose “diplomatic economic-legal advisor” Giovanni Pascone was also the legal counsel for former Prime Minister Silvio Berlusconi.

Syria and Israel Wait for A Signal from Washington

by Dean Andromidas

It would only take a positive signal from the Bush Administration to get the Syrian and Israeli governments into a dialogue, if not serious peace negotiations. But, as leading circles in both U.S. political parties know, the state of mind at the White House under the mentally unfit George W. Bush is locked into Dick Cheney's fanatical obsession with war and regime change against the Arab nations identified in his neo-conservatives' war plan, "Clean Break."

Nonetheless, as Lyndon LaRouche identified in his Aug. 14 statement endorsing the idea presented by former Israeli Justice Minister Yossi Beilin for a broad "Madrid II" peace discussion for Southwest Asia, the chance for peace is wide open, if LaRouche's concept of a new Peace of Westphalia is taken up. Nowhere is the opportunity more obvious than in Syria.

Although that signal from Washington has yet to be given, the Syria-Israel debate continues. It is crucial for such a dialogue to begin if the tenuous Israeli-Lebanon ceasefire is to be maintained, and no new escalation of Israeli-Palestinian violence generated.

Assad Makes an Offer

In a widely reported interview in the German weekly *Der Spiegel* (Sept. 25), Syrian President Bashar Assad declared that not only is now the time for a broad peace initiative, but only the United States can make such an initiative a reality. When asked by *Der Spiegel* "Wherein lies the opportunity" for a peace initiative, Assad replied: "First of all, it's clear to everyone that the status quo of war and conflict and instability is no longer acceptable. Now America enters the picture, because only America, because of its weight, can be the main broker for peace in the Middle East. But the Bush Administration is under pressure. It's being accused of not having managed to bring about peace

in six years. This pressure is good. Europe's foreign policy role is also growing. We specifically do not want a special role for the Europeans. We expect them to work together with America to achieve peace, and to do so on the basis of a vision America must develop."

When asked "What is Syria's role?", Assad laid out the crucial role that Syria can play in a solution that must address not only Israeli-Syrian relations but Israel's relations with the Palestinians and Lebanon. "There can be no peace in the Middle East without Syria," Assad said. "The Lebanon and the Palestinian conflicts are inextricably linked with Syria. I have already mentioned the 500,000 Palestinian refugees. Were we to resolve our territorial dispute with Israel over the Golan Heights alone, we wouldn't achieve stability. We would only be taking away the Palestinians' hope and would be turning them from refugees into resistance fighters. This is why Syria is so determined to achieve a comprehensive peaceful solution."

Assad's statement coheres with the Arab Peace Initiative of 2002, which called for a comprehensive peace in the Middle East, but which is rejected by the neo-cons.

Assad answered a question on the Palestinian refugees carefully, in a way that corresponded to the Arab Peace Initiative: "You would have to talk to the Palestinians about that. What we are talking about now is their return to the Palestinian state—which is something George W. Bush also speaks about. But it raises questions. What sort of state is this after all? A sovereign state or just a few specks of land covering a few square kilometers? Incidentally, I do not believe that the majority of the refugees want to return to Israel. Most of them want to go back to a Palestine within the borders of 1967. The problem is that at the moment Israel is even rejecting this return. This is unacceptable to us."

Commenting on the speech he delivered after the end of

the recent Lebanon war, which the media played up as a war-mongering diatribe, Assad reminded *Der Spiegel*, “In my speech, I used the word “peace” 57 times. And if this speech was bellicose, how should one interpret the fact that Germany sends a submarine to the Israelis every other year?” This last statement is a reference to the fact that Germany will soon supply Israel with two more submarines, that would give it five reportedly capable of carrying Israeli nuclear-tipped Cruise missiles.

As for calling Israel an enemy state, Assad said it was self-evident since “Israel occupies a part of my country—of course Israel is an enemy. . . .”

Asked about Iranian President Mahmoud Ahmadinejad’s verbal attacks on Israel, Assad said, “The statement is so famous because nobody believes any more in Israel’s peaceful intentions. An entire generation is growing up today with the conviction that only strength and war will lead to peace. . . .” But, he added, “I don’t believe in war, I believe in the principle of deterrence. . . . I don’t say that Israel should be wiped off the map. We want to make peace—peace with Israel. . . . But even my personal opinion, my hope for peace, could change one day. And when the hope disappears, then maybe war really is the only solution. . . .” But, “[I]f peace comes, then everything will change. Peace has a lot of strength.”

Only a few days prior to the appearance of Assad’s interview, Syrian Foreign Minister Walid Mualem said, “The war in Lebanon has created a genuine opportunity for peace and for solving the problems of the region.” Nonetheless, Mualem warned, “I believe the opportunity will not be exploited and will wither, and the dangers in the area will increase.”

Israeli Leaders Respond

Assad’s interview and Mualem’s statement sparked anew the debate on opening talks with Syria that began with the end of the Lebanon War (See *EIR*, Aug. 25, 2006). In response to Mualem, Beilin, chairman of the Israeli Meretz-Yahad Party, called on Prime Minister Ehud Olmert to immediately respond positively: “If Olmert continues to tread the path of blindness and arrogance, this will lead us into another armed conflict. Ignoring Syria’s call to renew negotiations and peace is a political abandonment that I can’t understand.” He called on Labor Party ministers in Olmert’s government to consider Syria’s gesture “before they lose their identities.”

Labor Party member Yuli Tamir, Minister of Education, did respond. She said, “Syria is a key axis among the Middle Eastern countries, and we must launch immediate negotiations with Syria.” She also called for holding a dialogue with the Palestinian Hamas government, saying, “There is no harm in a dialogue also in this area, and we must try to reach an understanding. I am ready to sit with whomever is willing to reach a peace agreement.”

Tamir and Beilin’s statements have been backed by similar calls over recent weeks by Israeli Defense Minister and Labor Party chairman Amir Peretz and Internal Security Min-

ister Avi Dichter. Dichter is not only a former director of the Shin Bet, the Israeli counterintelligence agency, but a leading member of Olmert’s own Kadima party. Defense Minister Amir Peretz, while speaking at the Forum of Leftist Organizations, said that while Assad makes warlike statements, “On the other hand, I believe that the minute conditions are made for talks with Syria, it must be done, because Syria is the key to stability in the Middle East. I hope these conditions are made.”

Opposition from Olmert and Rice

Assad’s appeal fell on the deaf ears of Israeli Prime Minister Olmert. On the same day the Assad interview hit the morning editions of the Israeli dailies, Olmert told the mass circulation daily *Yediot Ahronot*, “The United States is opposed to talks with Syria not because it opposes peace. It doesn’t believe that Syria wants peace. . . .” Olmert added: “I didn’t say Assad is not a partner. At this moment in time . . . I don’t see in him as a partner to steps that could lead to negotiations.” Two days later, at the weekly cabinet meeting, he scolded his ministers who have called for Syrian talks, declaring, “There are no negotiations with Syria. Whoever doesn’t agree doesn’t have to be in the government. . . .”

Assad’s statements were also, in effect, rejected by U.S. Secretary of State Condoleezza Rice. On the day of Assad’s interview, the *Wall Street Journal* published an interview in which she accused Syria of continuing to allow its borders to be used for infiltration of militants into Iraq. She threatened new sanctions.

According to several Israeli political sources, Olmert’s relations with the Bush Administration, especially Cheney, are not nearly as warm as those of his predecessor Ariel Sharon. These sources point to Israel’s failure to “win” the Lebanon war, especially its refusal to attack Syria, as being bitter disappointments for Cheney and the neo-cons.

These same sources point to Likud party chairman and opposition leader Benjamin Netanyahu’s intermediary role between Israel and the Bush Administration, especially Cheney and the neo-cons. Olmert felt compelled to meet with Netanyahu prior to the latter’s Sept. 5 meeting with the Vice President in Washington (*EIR*, Sept. 15, 2006). Netanyahu, serving as Cheney’s messenger, was one of the architects of the recent Lebanon war. Ever since the signing of the ceasefire agreement, he has been telling everyone who will listen that Israel has to prepare for the “next round” of war against Hezbollah.

Netanyahu recently met with Transport Minister and leading Kadima party member Shaul Mofaz, at the home of the latter’s private attorney. The discussion reportedly focused on whether Mofaz would lead a split in the Kadima party, and bring himself and nine or ten other Kadima Knesset members back into the Likud. Such a move would make the Likud the largest party, and put Netanyahu back into the Prime Minister’s office—a move which would lead to the “next round” Netanyahu has been promising.

LaRouche E-Mail Dialogue Continues On Eurasian Peace, Development

On Sept. 6, Lyndon LaRouche held a webcast in Berlin, with a videoconference link to a Washington, D.C. audience, and many "satellite" viewing sites around the world. LaRouche's speech and a portion of the conference dialogue appeared in EIR of Sept. 15, and papers and e-mails submitted by international dignitaries were featured in last week's issue. Here, we publish more e-mailed questions and comments, along with LaRouche's answers, as he makes his way through the hundreds of responses his webcast provoked.

LaRouche's next Berlin-Washington webcast will be on Oct. 31 at 10:00 Eastern Standard Time.

Iran

These questions were submitted by Abbas Bakhtiar, an Iranian national and journalist, operating out of Scandinavia.

Leading Question: The nuclear weapon states have had over 30 years to comply with the NPT (Non-Proliferation Treaty) and they haven't disposed of their nuclear arsenal. How can we force them to comply?

"Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with articles I and II of this Treaty."

LaRouche: In addressing the matter of the NPT, it is important to take into account the issue which the original NPT addressed, and avoid seemingly literal interpretations which do not coincide with the original and continuing issues posed in the period of the 1962 missiles-crisis confrontation between the U.S.A. and the Soviet Union, and, also, the role of the British Empire, as represented during 1945-1963 by Bertrand Russell, in setting up the circumstances under which the relevant expression of the 1962 missiles-crisis occurred.

The original development of nuclear weapons, by, principally, the U.S.A., was prompted by the belief, by President Franklin Roosevelt and qualified scientific advisors, that Nazi Germany had the scientific capability and intention to develop nuclear weapons. That capability did, in fact, exist. Both Germany and the Soviet Union had the scientific and related technological capability for development of nuclear weapons at that time. The Hitler administration, for its own

ideological and strategic reasons, scrapped the development of nuclear weapons; the Soviet Union did not have the supporting economic capability to actually develop the nuclear arsenal which was within the scientific capabilities which had been organized by the Academy of Science's V.I. Vernadsky.

However, the death of President Roosevelt resulted in a radical change from Roosevelt's post-war policy, a change to British-directed imperial perspectives, pushed by Winston Churchill and his successors, and adopted by the pro-British Liberal financier establishment who controlled Roosevelt's corrupt successor Harry S Truman. The U.S., under the direction of the British policy crafted by Bertrand Russell, adopted Russell's perspective of a "preventive nuclear" aerial attack on the Soviet Union at a time prior to the Soviets' assumed capability for the actual development of nuclear arsenals. The purpose of this British policy was, and remains today, what Russell described publicly, in September 1946, as the intention to conduct an airborne nuclear attack with the purpose of compelling the Soviet Union, and the world, to accept a form of global, post-nation-state imperialism, which Russell identified repeatedly as "world government," or, the same thing called "globalization" today.

The Soviet development of nuclear weapons, prior to the state of Anglo-American readiness for the planned attack on the Soviet Union, the failure of the Anglo-American intention of the Truman government in Korea, and Soviet priority in developing a thermonuclear weapons capability, led to the dumping of the depraved Truman, and his replacement by U.S. President Dwight Eisenhower, who successfully avoided the new risk of war which arose as a potential during the 1950s. However, a new Russell policy, called later "mutual and assured destruction (MAD)" led into the 1962 missiles-crisis, and the subsequent adoption, and further elaboration of the NPT treaty.

The intention of the NPT, as installed over the body of the assassinated President John K. Kennedy, combined with the Anglo-American launching, in late 1964, of the U.S. war in Indo-China, created an order, called "détente," an order based on the concept of mutually assured destruction (MAD), a policy based on the principal nuclear-weapons powers. However, the intent was not to prevent "peaceful development" and use of nuclear technology.



Institute for Science and International Security

Uranium enrichment plant at Natanz, Iran. "The U.S. assertion that the issue of 'nuclear weapons' is the current U.S. issue with Iran," writes LaRouche, "is a fraudulent piece of U.S. propaganda. The Bush Administration's belligerent policy toward Iran is based on that Administration's policy of 'regime change.'"

The interpretation of the NPT, and of its promises, must be limited to those general constraints which I have just summarized in their historically defined setting.

The issue today is the continuing intention of those Anglo-Dutch Liberal circles of Europe and North America, to carry through the British imperial intention adopted by the U.S. Truman Administration and its accomplices under the 1940s-1960s auspices of the nuclear-warfare policies of Bertrand Russell et al. The continuing intention of the Anglo-Dutch Liberal financier establishment is the early elimination of all sovereign nation-states, including the U.S.A. itself, in favor of a global imperialism, called "globalization," which is a modern resurrection of the policies of the Crusader alliance of Venice's financier-oligarchy and the Norman chivalry during the so-called medieval period of European history extending from about A.D. 1000 to the collapse of the Venetian financier system during the so-called New Dark Age of the Fourteenth Century.

Take, for example, the targetting of Iran today.

In response to the appointment of the U.S. British intelligence asset Henry A. Kissinger to the positions of, first, National Security Advisor to the Nixon Administration, and later, Secretary of State, the British intelligence services assigned its Arab Bureau chief, former Glubb Pasha associate Bernard Lewis, to a U.S. posting, for the purpose of shaping the policies of the U.S. Nixon Administration. Lewis has shaped the U.S. Middle East and related policies of three most

notable, British-intelligence-trained U.S. figures, Kissinger, Zbigniew Brzezinski, and Samuel Huntington. All three were among those trained by British Intelligence in a special, London-directed unit at Harvard University under William Yandell Elliott. All three have shared a common principal interest in the region of Southwest Asia associated with the Anglo-Dutch and Czarist Russia (Nicholas II) interests in the relevant area of Southwest Asia since the days of British asset Al-Afghani and the evolution of the Sykes-Picot agreement, through to the present day.

All of the questions, restated below, which you have placed with me, must be understood in no other way than in the strategic context which I have just described.

Bakhtiar: How can a country like Iran have an "inalienable right" under the NPT to research, develop, and produce full-cycle fuel enrichment and yet be threatened with sanctions and war? What do you think about this problem? . . . Do you think the U.S. will attack Iran? What would the consequences be for the U.S. and the region? What are the politicians in the U.S. thinking about? What is your opinion on Iraq?

LaRouche: At the present moment, the Anglo-American interest expressed in part by Vice-President Cheney and his wife's long-standing connections to British intelligence circles associated with the like of British Baroness Liz Symons, is committed to either a medium-term (e.g., February 2007) or an earlier, mid-October 2006 heavy aerial assault on Iran. The high risk that the already prepared assault might be launched without warning during the second half of October 2006, involves issues of both the November 2006 general mid-term election, and the extreme likelihood of a general financial-chain-reaction collapse of the world's present monetary-financial system during the weeks immediately ahead. Therefore, the "worst case" assumption of a mid-October assault must be the standard point of reference.

Bakhtiar: What are your views on Israel?

LaRouche: Israel has been a key Anglo-Dutch/American puppet-entity during virtually the entire sweep of the existence of the state of Israel. During the Ba'ath celebration which I attended in Iraq during April 1974, I had the occasion to warn my hosts and their relevant guests, that Henry A. Kissinger was behind the intention to launch a civil war within Lebanon during the immediate period ahead. Within a week, my warning had been realized. The sustained disruption of the entire region of Southwest Asia, has been the policy of the Anglo-Dutch Liberal faction, including its U.S. agents, consistently over the entire period, especially since the assassination of U.S. President Kennedy.

All sane figures of importance in the region, have understood that an Israeli-Palestinian agreement, whether as a matter of one, or two states, is a prospect on which the possibility of stability of the entire region continues to depend. The assas-

sination of Israel's Prime Minister Rabin may have been conducted by a homicidal lunatic, but that action, and its immediate aftermath, expressed a long-standing policy defined for the region, a policy crafted by the Anglo-Dutch Liberals of Britain, but supported by their collaborators inside the U.S.A.

Bakhtiar: How can the U.S. and Iran solve their existing problems?

LaRouche: The replacement of both President George W. Bush, Jr. and his Vice-President, simultaneously, is the only hope for a durable peace, and, indeed, the only hope that the entire planet will not be plunged into a prolonged new dark age by the presently onrushing general disintegration of the world's present monetary-financial system as a whole.

Bakhtiar: How do you see the U.S.-Russia relationship will develop over the next ten years? And with China?

LaRouche: My prospect, as set forth summarily in my Sept. 6th international webcast, is the adoption of a reform with two principal elements: a.) The early replacement of the present, hopelessly bankrupt, present world monetary-financial system, and b.) A new system of long-term cooperation in the scientific-technological development of Asia through cooperative efforts from western and central Europe.

Bakhtiar: How soon do you think the economy will collapse, and why?

LaRouche: It is presently in an advanced phase of an already ongoing general, global collapse. The relevant developments which have broken out, as I had warned, during September, signal this collapse as already ongoing. The collapse, unless reversed, will pass through several successive phases of a general breakdown of the entire world economy, with no part of the world an exception to this.

Bakhtiar: Who is running the show in the U.S.?

LaRouche: The Anglo-Dutch Liberal system which came to power as an empire of Lord Shelburne's British East India Company in the Paris Treaty of February 1763. This Liberal current, organized in the semblance of what biologists recognize as a slime-mold, a form copying the characteristics of the medieval Venetian financier oligarchy, is also the presently hegemonic political power over the U.S.A. Only if the U.S. frees itself from the grip of that financier oligarchy, is there a chance of survival for civilization anywhere on this planet during the period of successive crises immediately ahead.

Bakhtiar: How can the U.S. cope with mounting social security/pension debt?

LaRouche: Only by changing the current U.S. system as I have specified this in considerable detail. Otherwise, the entire U.S. system will spin into a prolonged general state of financial chaos.

Bakhtiar: Can going back to the gold standard be a way out?

LaRouche: "Gold standard" is an unfortunate term. The proper concept is the Bretton Woods "gold reserve standard," based on a bullion reserve, not a gold-currency system.

Bakhtiar: Considering the fact that six companies have monopolized all media access, how can you (we) get your message to the people?

LaRouche: That is an obstacle, but you greatly overrate its power.

Bakhtiar: How can we reduce the power of people such as Rupert Murdoch?

LaRouche: By ridicule, as, perhaps: the Australian, who like a bad kangaroo, picks other people's pockets.

Bakhtiar: The politicians need money for elections, the money that they have to pay the media, etc. The current system is based on whoever spends more will win (3 out of 4). A two-party system with a monopolized mass media and rich lobbying groups is not a democracy. It is the dictatorship of the rich. How can this be changed, since it needs the very same people who are part of the problem, to change the system?

LaRouche: The only remedy is that prescribed by the intent of the U.S. Federal Constitution, by political parties which keep faith with the majority of the American people and their posterity, as the ruling political parties have not only failed, but continue to refuse to do over the course of the recent thirty-odd years.

Mr. Ebrahimi, Islamic Republic of Iran Broadcasting (IRIB):

What do you think about Iran's nuclear energy program? Which country in the Persian Gulf region should play a leading role?

LaRouche: Without the proliferation of nuclear-fission and, beyond that, thermonuclear fusion technologies, there is no adequate long-term solution for the oncoming problems of any nation.

We require a regional agreement which eliminates all traces of the legacy of Sykes-Picot from the region as a whole. This means, primarily, a system of cooperation of the sovereign nation-states of the region, built around the cooperation of Iran and Turkey, but with equitable roles assured for the Arab peoples. This must be an economic development perspective, to assure that the family's children and grandchildren will live better and in a better world than their ancestors have lived before.

Man must see himself in the likeness and as the servant of the Creator. To this end, he, or she must serve the process of continuing creation. We, who are mortal, must fulfill the mission of a better world for our descendants.

Egypt

Dr. Mahmoud Khallaf, retired general, Cairo:

The problem of any attempt to build peace in the Arab-Israeli conflict is that Israel and the U.S. understand only one language: using force to terrify the Arabs, “shock and awe” strategy. Then they think they can reform the Middle East however they want. They never learned any lessons from Afghanistan, Iraq, Lebanon, since the neo-cons believed in unilateral power to solve political problems. Yet, they have had bad results so far. On top of that, the U.S. is losing the hearts and minds of the Arabs and the Islamic world. I believe that none of the neo-cons understands what the meaning of this is, and what kind of threats lie ahead against U.S. interests in the Middle East.

What is the meaning of “Islamofascist”? How is Mr. Bush thinking? Who can trust him as a founder of peace in the Middle East? I think the first step in talking about peace in the Middle East, is to start with confidence-building measures. That is the only start which works, before thinking of Madrid (II) or stabilizing Iraq.

LaRouche: Bush is, in fact, insane. His mental condition, always bad, has been deteriorating recently at an accelerating rate.

As for the opinion of the world, the so-called neo-cons do not care in the least. They are like an infestation of rodents, which we must expel from our houses out of consideration for the future of our children and grandchildren.

Poland

Boguslaw Zeznach: Hello, Mr. LaRouche. Best greetings from Poland, and even better wishes in your search for sanity, common sense, and basic ethical principles in today’s crazy and declining “Euro-Atlantic” world. Here is my contribution to the online debate:

1. Poland, my country, should naturally benefit from your idea of the Eurasian Land-Bridge, as we are directly on its way from Berlin to Moscow. Yet, the example of the Baltic Gas Pipeline, which is being built between Russia and Germany, so as to omit Poland, for outlays 6 times higher than if going on land through Poland’s territory, shows that strategic thinking is still far away from that idea in both Berlin and Moscow. True, it is in part meant to punish the present, very short-sighted and primitive Polish (rightist) government for their pro-U.S., anti-Russia, anti-EU stance. Anyway, that is a fact proving that rulers of the world prefer to invest *against* someone rather than *for* something. Which means that the real battle is not for money, but for people’s minds and souls, which you rightly emphasize in your teachings, too. I would suggest that you use also this example, when skeptics ask you how to get money for the Eurasian Bridge itself.

2. Poland as a nation-state is among the most homogenous nations in the world. Ninety-six percent of citizens claim Polish ethnicity; 93% have been baptized in the Roman Catholic Church; the Polish language has virtually no local dialects—

i.e., you cannot tell whether a speaker comes from Wrocław, Warsaw, Lublin, or Gdansk. And that is good, as it spares a good deal of tensions, friction, and internal conflicts. However, the EU laws and propaganda are telling us that we have to abandon that homogeneity and open ourselves to newcomers who come with their money to buy land and houses here, whereas young Poles should rather go and look for jobs elsewhere. More than 2 million young people and skilled hands have done so over the last few years. I know that, while coming from the multi-ethnic U.S., you’re also a strong defender of a sovereign nation-state. In view of the above, do you think that EU membership is any good for Poland?

3. Recent developments in Mexico, building parallel structures of power, seem particularly interesting and politically promising. Unlike revolutions in Venezuela and Bolivia, which I also welcome, but which come as a top-to-bottom initiative by populist Presidents and are enthusiastically but passively received by their respective peoples, the softer leftist current in Latin America, represented by Mercosur leaders (Argentina, Brazil, Uruguay) and Mr. Obrador in Mexico is—I believe—by far more reasonable and promising, as it is rather an evolutionary bottom-up process, actively involving citizens into a better understanding of their rights and in defense of common good. Here I would also expect your comments.

God bless you, Mr. LaRouche. Many people wish that you live long, keep healthy, and never stop sharing your thoughts with us.

LaRouche: The problem has been the trends in the policies of Poland’s recent governments, but not only Poland’s governments. Throughout eastern Europe’s former Comecon economies, the price of relative political freedom from Soviet domination has been a collapse of the physical economies of those nations to levels far below those of 1989. Under the Maastricht Treaty and its principal effects, as dictated by the Thatcher-Mitterrand government, the former Comecon region of eastern Europe, has been degraded, together with Germany and Italy, to levels of economy below that of 1989, while those states have also been pushed into participation in NATO.

As for the economic problems of Poland now: They are virtually all the result of the chain-reaction effects of the Maastricht and ECM systems.

This is also the state of affairs in the region of what was formerly known as the D.D.R. All of western Europe is now virtually bankrupt, and sinking into a pit which leans toward a plunge into a new dark age. Without breaking free of what the now archaic NATO system represents, there is no hope for any of the present nation-state economies of western and central Europe. All arguments on matters of the type to which you refer are rooted in that single issue. If Poland had not been raped, as it continues to be raped by European Union and related policies, the inequities to which you refer would not exist.

Eurasia: Main Routes and Selected Secondary Routes of the Eurasian Land-Bridge



Hence, my current approach to these ironies in Poland is currently trapped, as I have laid this out in my Sept. 6, 2006 Berlin-D.C. webcast, and will resume the discussion of that in my new Berlin-D.C. webcast being scheduled for the last week in October. We must change the system, and then many of the predicated problems of the present system can be removed.

—Lyndon

Jerzy Czeszko: Mr. LaRouche, how should we deal with the divisions resulting from different religions and cultures between nation-states, especially in the context of the Mid-east conflict, where Islam is *wrongfully* blamed as a source of war and terror? Also, I would like to hear your thoughts about the cultural dimension of the cooperation within the Eurasian Land-Bridge. Thanks and looking forward for your answer.

LaRouche: Ecumenical policy, as adopted by Charlemagne, by Cardinal Mazarin's initiative in the 1648 Treaty of Westphalia, and by Cardinal Nicholas of Cusa's *De Pace Fidei*, must be premised upon the concept of natural law.

I have been explicit on this in my treatment of the issue of the conception of the personality of the Creator of a continuing universal Creation. Whether persons and states accept

my knowledge of the subject of the Creator as defended by Philo of Alexandria, for example, or not, the natural law, as Johannes Kepler understood this correctly, like Cusa before him, is the principle upon which urgently needed cooperation among nations depends absolutely. I ask nations to agree to that conception of natural law, and of man's unique nature under natural law, and no more than that on theology.

The evidence that all mankind is trapped in a single, presently leaky boat, creates a situation comparable to that which Cardinal Mazarin and others faced in 1648. Men and nations sometimes agree only because there is no other visible choice. The chance that they might agree to needed changes in principled relations among states now, is premised on the sheer awfulness of failure to come to such working agreements, as in the situation of the Westphalian Treaty.

Prof. Dr. Janusz Czyz, Warsaw, mathematics professor:

1. Mr. LaRouche, in his recent government declaration, the new Polish Prime Minister, Jaroslaw Kaczynski, spoke about the need to develop energy alternatives for Poland—among them nuclear energy. A commission has been created in the Economics Ministry which is studying the question of nuclear energy. What do you think would be the impact if Poland would go with nuclear energy?

2. What do you advise the Polish authorities to do, so as to protect themselves against the attacks which are coming from Western mass media against the present government?

LaRouche: I would hope that notable private personalities from Poland would become participants in the attempt to define agreement on perspectives of cooperative development which I am pressing with the initiative around the Sept. 6, 2006 webcast. What is needed is deliberation among leading scientific and other relevant representatives of their respective nations, representatives whose participation in these discussions would provide their respective governments with evidence of existing alternatives for governments to examine, and, hopefully adopt.

The best way to remove a nagging conflict among nations, and also others, is a clear vision of a desirable common benefit in some form of cooperation over one or two generations to come.

The general need for certain changes in economic policies of, and among nations, points to the role of general cooperation in the nation's shared use of nuclear-fission and future thermonuclear-fusion technologies, as a fulcrum on which to lever cooperation in many other important areas

India

Prof. Lokesh Chandra, *historian, and former Member of the Indian Parliament, Sept. 6 (five questions, with answers from Mr. LaRouche interpolated):*

Mr. LaRouche, you have proposed both the construction of the Eurasian Land-Bridge as a way of integrating Eurasia economically and infrastructurally, as well as a 50-year perspective for a new Peace of Westphalia agreement for the development of existing raw materials, as well as the creation of new raw materials in the spirit of the Russian scientists Mendeleyev and Vernadsky.

Could the Shanghai Cooperation Organization become the vehicle for this, or how do you see the future role of the SCO? Do you think that the SCO could be an option to get the world out of the crisis, without an induced change of U.S. policy?

LaRouche: It could be an included vehicle. One among the essential arrangements required for long-term financing of development will be packaged treaty-agreement arrangements with ranges of between a quarter- and a half-century maturities. These will often be of the character of multi-national agreements. The fact that the SCO is already developing its role as a multi-national form of cooperation in development assures its potential role as a large factor in Eurasian development.

Chandra: Given the danger of geopolitical conflicts in the future, what in your view would be the best way for the SCO to relate to the U.S.?

LaRouche: It will be necessary to bring about a rather radical change in the current foreign-policy orientation of

the U.S.A. The orientation must be toward those forms of cooperation which would have been launched in 1945, had President Franklin Roosevelt's death not brought Winston Churchill's accomplice, President Harry Truman, into the Presidency. Without such a change from recent decades' trends, especially since the assassination of President John F. Kennedy, and, more emphatically, the anti-progress aspects of the 1968 youth tumult, the world as a whole were already doomed to the new dark age implicit in the current international monetary and financial systems.

Chandra: Many people in India have a completely different explanation for the origins of terrorism, than that presented by the United States or Great Britain. For example, there is the view, that a lot of the problems in the region from Southwest Asia to South Asia come from the colonial policies at the end of the Second World War and the division of India. Earlier the Sykes-Picot Treaty created the seed of future problems.

Given the fact, that some of the countries in the region have severe economic and social problems, which help to nourish terrorism, how could the Eurasian Land-Bridge contribute to the stabilisation of these countries?

LaRouche: The view of the problem as rooted in "colonial policies" is too simplistic and diversionary. Among the Marxists, Rosa Luxemburg was right in defining "imperialism," where Lenin and the German Social-Democracy were absurdly wrong. The U.S.A. veteran diplomat Herbert Feis's studies of imperialism confirm Rosa Luxemburg's derision of the German Social-Democracy and Lenin's mechanistic views precisely.

The present system, since the Paris Treaty of February 1763, has been the Anglo-Dutch Liberal system of imperialism crafted by the British East India Company's Lord Shelburne and Shelburne's Jeremy Bentham. The Anglo-Dutch Liberal system which has dominated the world, but for relatively brief periods of U.S. leadership, and which has ruled the world since August 1971, is modeled on the Venetian ultramontane system of empire during the nearly four centuries of domination of medieval Europe by the alliance of the Venetian financier oligarchy and the Norman chivalry. The system of submission of governments to the authority of so-called independent central banking systems, not colonialism, is the core of modern imperialism. The attempted imposition of "globalization" would mean both the perfection of the neo-ultramontane system of Anglo-Dutch financier imperialism, and also the virtually immediate general, chain-reaction collapse of the present world society into a prolonged new dark age, planet-wide.

International terrorism is an instrument of policy of the present form of the Anglo-Dutch-Liberal system. Its present goal is the breakdown of governments to the extent needed to eliminate the nation-state as a power-factor in society everywhere.

Chandra: Mr. LaRouche, given your love for India, which goes back to your presence in 1946 in the struggles in Calcutta, and the fact that you worked in 1979 on a 40-year development plan for India for Indira Gandhi, many people in India think that you are an American they can trust. So what would be your suggestion to emerging Asian countries in this perilous world situation?

LaRouche: We must accelerate the rate of development in, most emphatically, basic economic infrastructure, in order to create the platform to defeat the worsening effects of poverty on the lower seventy percentile of the poor of Asia. This requires such measures as a massive development of nuclear power, with the intent to enable a rapid, qualitative uplifting of the potential relative population-density of the whole population over the coming two generations. This will be the means for attacking the deadly water crisis now menacing India, using approaches which increase the potential relative population-density by transformation of the land-areas in which present and slowly improving skills of the poor are working. Power, water, and kindred basics of basic economic infrastructure are factors whose benefits run, initially, way ahead of gains through cultural uplifting of the skills of the population.

Chandra: Don't you think, that the heavy emphasis of the Indian economy on the computer and IT sector, is a vulnerability of India if the system of globalization collapses, and what should India do to deal with that? How can one create productive jobs for millions of people? How can India overcome the poverty, which was a big concern for our leaders Mahatma Gandhi and Nehru?

LaRouche: Reliance on the advancement of such sectors would be dangerous, unless the higher priority were based on development of high-gain potential of basic economic infrastructure. The problem today is that economists generally have no conception of the fact that real economies are physical first, and financial a poor second, and, that economic processes are not mechanistic, but dynamic. The factor of infrastructure is more important than technology, just as sanitation and good nutrition are more significant than medical care in promoting the general welfare of the population as a whole.

Philippines

Ronnie Velasco, *the former Minister of Energy and head of the Philippines National Oil Corporation under the Marcos Administration, who directed the construction of the first nuclear plant in Southeast Asia:*

Iran will not give up its nuclear aspirations. Israel clearly has the bomb. The U.S. took out Saddam, and Iran took over the group. Therefore, Iran believes that it must have nuclear weapons, to counter Israel. Am I reading it correctly?

LaRouche: You misread my statement. The Bush Administration's argument on this account is a lie, expressing a



Press Information Bureau of India

India's first lead-free integrated chip-plating process facility in Chennai. LaRouche warns that reliance on the IT sector "would be dangerous, unless the higher priority were based on development of high-gain potential of basic economic infrastructure."

feature of policy-shaping which is typical of the Bush Administration and Bush himself on virtually every significant subject-matter.

All nations have the natural-law right to access to nuclear technology. However, the state of the world has passed the point at which the NPT agreement on nuclear and thermonuclear weapons is a remedy.

However, the application of this principle is complicated.

For example, I had a mid-1970s meeting, in New York City, with the celebrated, then former Foreign Minister Abba Eban of Israel. The subject of our discussion was the need for an affirmative approach to Israel's relations with the Arab nations, the Palestinians most emphatically. His word of caution was, that it is not so simple: "Some heads of state are clinically insane." He was correct on that point, of course.

The general remedy, without which solutions are not possible, is the modern application of the first principle of the 1648 Treaty of Westphalia. The prolonged conflict between Arab and Jew, which has been cleverly engendered and nourished by the malignant actions of such typical British agents as the British Arab Bureau's Bernard Lewis, has created a situation comparable to that of the 1618-1648 Thirty Years' War. Without a replication of the Westphalian Peace today, the entire "Middle East" is condemned to a Hellish mutual extinction of Jew and Arab, in which Israel's already existing nuclear-weapons capability is a characteristic factor.

The U.S. assertion that the issue of "nuclear weapons" is the current U.S. issue with Iran, is a fraudulent piece of U.S. propaganda. The Bush Administration's belligerent policy toward Iran is based on that administration's policy of "regime change." The Bush Administration's policy toward Iran is the same as that administration's fraudulent pretext for war against Iraq: "regime change." Iraq had no "weapons of mass destruction" at that time, and the lying Bush Administration

knew that. There is no near-time potential of the alleged type in Iran, and the U.S. administration knows it.

The issue is nuclear power, not nuclear weapons.

Without nuclear power, no nation could be sovereign today.

Sen. Nene Pimentel, *leader of the opposition in the Philippines Senate*:

How can a return to the gold standard be achieved internationally, and what would be the effect of that on the world economy, and on developing sector countries in particular?

LaRouche: We must be precise and accurate in our use of terms such as “gold standard.” The fact that President Franklin Roosevelt proposed the use of reserve gold as a standard for the Bretton Woods system, does not mean that the Bretton Woods System employed a “gold standard.”

The “gold standard” was a standard of imperial policy of the British Empire. The U.S. Constitutional system, which was created and defended against the British system, is a constitutional state-credit system. Under the British system, and present systems of western and central Europe today, governments are not sovereign, but are subjects of control by the private financier interests represented as “independent central banking systems.” No government which submits to the existence of an “independent central banking system” is actually a sovereign.

The British gold standard used its control, since the Napoleonic wars, of the price of gold currency as an instrument of imperial hegemony over the nations of continental Eurasia and beyond. However, in 1931, the British gold standard collapsed, and a period of international monetary chaos persisted until U.S. President Franklin Roosevelt seized control over the gold of the U.S.A. itself. Had he not, Adolf Hitler would have conquered the world.

For example, the collapse of the British gold standard was a part of the process of Britain’s intent, at that time, to bring Adolf Hitler into power in Germany. The crucial event in that attempt was the establishment of the Basel Bank for International Settlements (BIS), which was to serve as the instrument through which its member, London’s protégé Hjalmar Schacht, prepared the arming of Nazi Germany in preparation for the war which Schacht’s patron, the Bank of England’s Montagu Norman, organized through credit made available by operations associated with both the BIS and France’s fascist Synarchist financier houses.

It was Franklin Roosevelt’s intervention which brought Britain into the anti-Hitler camp, despite the massive pro-Nazi factor within the British (and London-linked New York City bankers’) establishment of the 1930s.

The Bretton Woods system was a fixed-exchange-rate system within which gold bullion, not gold currency, was used to settle accounts for the purpose of maintaining that fixed standard of exchange. The British “gold standard” was based on a floating-exchange-rate form of free-trade system.

What is needed is a return to a fixed-exchange-rate credit system, a virtual return to the Bretton Woods system, in which gold bullion at a fixed rate would be a convenient means for managing threatened imbalances in accounts.

The purpose of a fixed-exchange-rate system, such as the Bretton Woods system, is to maintain a supply of international long-term credit at low fixed charges of between 1-2% over a span of a quarter to half century, with credit so extended chiefly for long-term investments in basic economic infrastructure and technologically progressive private enterprises. The British gold standard was designed to loot the world for the imperial purposes set forth under the direction of the British East India Company’s chief thug, Lord Shelburne.

With the events of 1971-1972, the U.S. became a part of what had been established under Shelburne as the British world empire.

Correction

In last week’s issue, page 40, the dialogue between Lyndon LaRouche and Chinese scholars Prof. Dai Lunzhang, Dr. Zhang Yan, and Dai Jun should have read as follows:

Prof. Dai et al., Question 5: Mr. LaRouche mentioned the necessity for the United States to change its present destructive policies, and to support such a development perspective. We know the forthcoming mid-term election of the U.S.A. in November is an important one.

So, my question is, how much will it affect the prospect of a political change in the U.S.A.? And furthermore, what impact will the 2008 Presidential election have on the political landscape of the U.S.A.?

LaRouche: As I have warned my friends and others in leading circles of the U.S. Democratic Party, and also others, the immediate future of politics belongs to the cause of the lower eighty percentile of the income-brackets of the U.S. citizens. In the pattern of results from Democratic primary elections so far, the trend is toward voter preference for the anti-Bush candidates, and for the candidates who are sensitive to the concerns of the voters from the lower eighty-percentile of family-income brackets. The economic and other political shocks to the population are arriving at an accelerating rate. Given the inherent uncertainties which I see clearly as an insider of the political process, unless what I am supporting wins, the situation for humanity as a whole would not be encouraging. However, like a commander, I must fight the battle which is set before me, on which I must act. That is the best that anyone can do at this moment. I estimate our chances of success are good, but no one can be certain at this moment.

A Child Of Two Augusts: Russian Central Banker Kozlov Assassinated

by Roman Bessonov

In June-July 2006, when the St. Petersburg International Economic Forum and the G-8 summit demonstrated a qualitative increase of Russia's economic and political weight, the defeated critics of the Russian leadership turned towards mysticism. They predicted new problems for the country in August. Why? Because August is known as a "month of surprises." The outstanding examples were the coup attempt of August 1991, resulting in the break-up of the U.S.S.R., and the financial crisis in August 1998, when Russia's default on government bonds shook the world monetary system and caused enormous losses for the state budget and for Russian citizens.

Nonetheless, this August came and went, without unpleasant surprises. By the time of the 15th anniversary of the 1991 disaster, the Russian Finance Ministry had finished repaying the Paris Club state-to-state debt of Russia and the Soviet Union. Earlier in the month, the political brawl in Ukraine ended with a strategic defeat for the designers of "colored revolutions" in the post-Soviet area.

Encouraged, the Russian leadership turned to concentrate on domestic issues. The commitment to economic sovereignty, directly expressed by President Vladimir Putin, as well as a number of new ambitious economic and social initiatives, reflected in four priority national projects, required resolute changes in economic and financial policy.

On Sept. 9, the Bank of Russia (Central Bank) announced new initiatives in banking regulation. Henceforth, auditing companies would share responsibility for financial swindles in banking; they were now obliged to report any financial wrongdoing that they detected to the Central Bank. In addition, the Central Bank proposed to introduce a legal penalty for bankers who were convicted of financial crimes: a lifelong ban from the profession.

Both initiatives were made public at a Russian Banking Association conference in Sochi. The first one was announced by Andrei Kozlov, one of four first deputy chairmen of the Bank of Russia. Since his return to the Central Bank in 2002, Kozlov had served as newsmaker, announcing new initiatives at the Bank's press conferences.

Kozlov's main portfolio was supervision of banking regulations, and their enforcement. In early 2006, the Central Bank initiated a purge of so-called "problematic banks." In a period of six months, more than 70 private financial institutions lost their licenses. At one recent press conference, Kozlov admit-

ted that his office had drawn up a blacklist of unscrupulous banking institutions. This report triggered a panic, undermining several medium-sized banks and accelerating their bankruptcy.

Kozlov's colleagues acknowledge that he had personal enemies. Still, despite the personal challenges that came with his job, the first deputy head of the Bank of Russia often rejected the service of bodyguards.

On Sept. 13, 2006, a group of unidentified persons approached Kozlov near the parking lot of the Spartak Sports Club, where the state banker had taken part in an amateur soccer game. Obviously, they knew his schedule. Moreover, they managed to calculate that Kozlov would leave the sports club after some of his colleagues, but before a group of others, with whom he spent some time in the club's sauna. Perhaps the group of unidentified persons had an agent among either the bankers, or the club's personnel.

According to official investigators, the unidentified persons approached Kozlov's car and started talking. A passerby heard the men shouting, but did not understand any of the conversation, which ended with shooting. The criminals killed the banker and his driver, and escaped through a hole in the Sports Club fence, and then through a park to the next street.

The police found two pistols in the bushes, one of them homemade and the other modified by hand, rather primitive weapons, atypical for hired assassins. Weapons of this type are more convenient for threatening a person by placing the gun at his ear, or for shooting at close range. Perhaps the assassins intended to negotiate with the banker, and to use weapons only if he rejected their proposal, or refused to sign something or to give them something.

The assassins also stole Kozlov's bag. For some reason, the mass media chorused that "there was an attempt to make it look like a robbery." Not a single journalist raised questions about the contents of the bag, or the banker's plans for the evening. Was he on his way to a confidential meeting?

As soon as the banker said "no" to the unidentified persons, they fired at close range, hitting first his neck, then his head. The driver was shot in the back as he tried to flee. He had not taken part in the strange, incomprehensible discussion between the killers and the victim. His death eliminated a witness, and prevented his travel to a place where, perhaps,

somebody else was waiting for the banker.

The Lenta.ru web site headlined, “Investigators seek the assassins in Kozlov’s own circle.”

A Post-Soviet Career

Andrei Andreyevich Kozlov, a graduate of the Moscow Finance Institute, started his career at the U.S.S.R. Central Bank in 1989, at the age of 24. By 1990, he already headed the Department of Stock Operations Methodology. The following year, he was rehired by the transformed Bank of Russia, as director of the Department of Securities. In 1995, when Tatyana Paramonova was acting chairman of the Central Bank, Kozlov was elevated to the post of deputy chairman, a position he retained after Paramonova’s replacement by Sergei Dubinin. Kozlov rose to first deputy chairman, and even held on to that job for six months after the August 1998 financial crisis, when former Central Bank chief Victor Geraschenko returned to the Central Bank under the Yevgeni Primakov government, to stabilize the institution in the aftermath of the default.

Kozlov was known as one of the initiators of the large-scale emission of the short-term state bonds, known as GKO. By April 1998, the GKO pyramid was in trouble. At that time, the weekly *Zavtra* reported from foreign sources, Dubinin and Kozlov made an unpublicized visit to Washington for “consultations on possibilities to prevent an Asia-style of crisis in Russia.”

In July 1998, as the impending crash of the GKO pyramid loomed larger, the International Monetary Fund (IMF) disbursed a \$4.8 credit to Russia. The funds were transferred through Edmond Safra’s Republic National Bank. Later, a special investigatory commission of the State Duma tried and failed to trace the pathway of this transfer, but it did not blame any of the top Central Bank figures. The Ministry of Internal Affairs and the Prosecutor General’s Office, however, charged that several Central Bank officials had siphoned off state budget monies into personal accounts abroad. The Duma commission’s report mentions then-First Deputy Chairman of the Central Bank Sergei Alexashenko in this connection. Andrei Kozlov was mentioned as a witness.

In January 1999, Kozlov’s name surfaced in the scandal more substantially. According to a Prosecutor General’s document, published Jan. 12, 1999 in *Nezavisimaya Gazeta*, “it was discovered that in his function as First Deputy Chairman of the Central Bank, [Kozlov] had several ruble and foreign currency accounts, accumulating money derived from GKO trade. His ruble account at Avtobank alone absorbed 12 deposits, totalling 560 million rubles, and the currency account—\$42,000. . . .”

The scandal around this revelation resulted in Kozlov’s resignation in January 1999. He then put his skills to work in private business, as chairman of the board of Russky Standart Bank, founded by the alcoholic beverages merchant Rustam Tariko. The bank soon became a “problem” institution, but it



Russian Central Banker Andrei Kozlov was assassinated Sept. 9, shortly after the Russian Central Bank announced new initiatives in banking regulation. But there is more to the story.

was not put into receivership. Why not? A former Central Bank economist named Mikhail Smirnov claims that “this bank, which was actually insolvent, enjoyed high-level protection from the World Bank.”

There were other leads, as well, connecting Kozlov with international financial institutions. From Russky Standart, he moved to the airline Aeroflot’s insurance company, which soon went bankrupt. The young banker then found a job with the Washington-based Financial Services Volunteer Corps (FSVC). This agency, founded by former U.S. Secretary of State Cyrus Vance, had provided consulting services to the Russian Central Bank on the “methodology” of issuing state bonds. In 2002, Kozlov was invited back to the Central Bank by its newly appointed chairman, Sergei Ignatyev.

Analysts speculated about the involvement of leading U.S. circles in the infamous “evaporation” of the July 1998 IMF credit to Russia. When the Bank of New York (BONY) scandal, involving Russian criminals and vast-scale money laundering, broke in 1999, the damage to U.S. national interests was played up by GOP campaigners as “the Democrats’ ” fault. Swiss investigator Caspar Ancermet believes that a large part of the loan did end up in BONY.

Kozlov survived the subsequent political changes in Russia. Like another survivor, “young reformer” Anatoli Chubais, Kozlov gradually reprofiled himself as a patriot, rather than a free-trade liberal. Since 2004, the murky fate of the IMF loan was swept under the carpet in both Washington and Moscow, while BONY-linked figures from the world of the shadow economy moved on to other business ventures, such as taking control over the Russian-Ukrainian gas trade.

More Hidden Springs

Izvestia, commenting on the assassination of Kozlov, explained the strange 1999 trajectory of the banker’s career in terms of a “change of opinion” in the Primakov government. In 1998, the paper suggested, the Central Bank leadership was

desperately trying to prevent further damage to the federal budget, and, at the same time, to dampen the panic. In this process, Kozlov publicly announced that individual depositors, in order to protect their money, should pull it out of targetted banks and transfer it to the State Savings Bank (Sberbank). In the event, depositors lost more than half their savings, as the ruble was devalued. Only in January 1999, almost months after the ruble's collapse, did the government "decide" that the proposal had been a mistake.

This concoction was hardly invented for the sole purpose of protecting Kozlov's reputation. *Izvestia* seems to be furthering a cover-up of what went on in the crisis year of 1998. Meanwhile, the taboo on any discussion of the events of that year leaves many other questions open, including very current questions. Why, for example, did the Central Bank decide to demote Tatyana Paramonova, just days before Kozlov's assassination. Relations between Kozlov and his former boss were far from friendly.

On his web site, the embittered former Bank of Russia official Smirnov named partners of Kozlov at the Central Bank and Sberbank, who, according to his version, siphoned portions of Sberbank loans abroad. Smirnov had even filed two lawsuits against Kozlov in this connection, but with no results.

Smirnov points to a special role, played by Kozlov, in rescuing funds from Mikhail Khodorkovsky's Bank Menatep, in the aftermath of the 1998 crisis. Bank Menatep was severely affected, but Smirnov says that Khodorkovsky's money survived by being transferred to DIB Bank (later renamed Trust Bank, since somebody noticed that "DIB" sounds like "Dieb," or "thief" in German) and to Bank Menatep's own St. Petersburg branch, which already had the status of an independent institution. Whistleblower Smirnov even mentions the names of intermediaries, who allegedly delivered Central Bank insider information to Bank Menatep.

Other authors write that Kozlov got his Aeroflot job through the same Yukos/Bank Menatep connections.

Smirnov filed his suits in 2003 at the Basmany Court in Moscow, the same court that handed down harsh sentences for Khodorkovsky and his associates at Yukos Oil. Evidently, the plaintiff hoped that exposing Central Bank and Sberbank corruption would restore justice, and help him to return to his job as Central Bank economist, from which he was fired without explanation.

Smirnov's allegations also refer to the famous financial swindler Artyom Tarasov, who escaped from Russia to Istanbul in 1990 with huge sums of money from the U.S.S.R. state budget. Tarasov moved on to London, then ran successfully for the State Duma, and even tried a run for Governor of St. Petersburg. This reference brings us to the secret of Andrei Kozlov's exceptionally successful career, during the murky period of the dissolution of the Soviet budget and the transformation of relevant institutions. Tarasov's lucky escape from investigation is explained by a number of authors,

as the result of his special services to Russian leader Boris Yeltsin in the fight between the Soviet and Russian governments over financial flows during 1989-91. These half-criminal dealings, with a high degree of international involvement, played an important role in the chain of events, leading to the August 1991 collapse of the Soviet Union.

One should not be surprised that the passerby, who heard Andrei Kozlov talking with his assassins, did not understand anything: the language of financial swindlers is too specific. One should also not be surprised if the assassins turn up dead; they may know too much about the background of the Central Bank's connections with foreign institutions, as well as about the mechanisms of careers in Russian state banking. Some mass media are already preparing public opinion for the assassination of the assassins: "They may be throwaway people, like their throwaway pistols."

Smuggling

Izvestia mentioned one more lead in the Kozlov case. One of its articles refers to the case of Sodbiznesbank and its clone, Credit Trust Bank, owned by a certain Alexander Slesarev. When these two private financial institutions were stripped of their licenses by the Central Bank, the paper says, some of their assets were funnelled to another institution, National Capital Bank. Its owner, Dmitry Plytnik, received physical threats from unidentified persons, and was forced to go into hiding. In February 2006, the bank was declared bankrupt by the Deposit Guarantee Agency, which Kozlov had established.

This agency was described in the Russian media as a "filter" for Russian banks, to sort out which ones would be allowed to manage individual investors' money. The choice of "good" and "bad" banks did not necessarily correspond to criteria of stability; the "white list" included dozens of small and little-known regional institutions, while such large banks as Mezhprombank were left outside without explanation. Some of the unlucky bankers dubbed Kozlov "Mister Filter," and charged that it took payment of a formidable bribe, to be white-listed.

Plytnik's letter, complaining of pressure against him, was written in December 2004, but published only in October 2005. Days later, Slesarev was assassinated on the Kashira Highway near Moscow, along with his family. There were no surviving witnesses. *Izvestia's* author suggested that some persons, who lost money in Slesarev's banks, "tried to get it back, and he pointed at Andrei Kozlov."

In this description of a gangster brawl, Kozlov figures not as a state official, but as a private person, whom other private persons are "pointing at" to get their problem solved. If that were really the case, then the portrait of Kozlov as an exceptionally decent official, drawn by the same *Izvestia* in other articles, has nothing to do with truth.

What does appear to be the case, is that clan warfare is going on among groups of financiers and bankers, allied with

domestic and foreign partners in large-scale international shadow-economy operations. These largely involve smuggling.

The daily *Kommersant* noted that the central focus of Kozlov's recent efforts was the use of banks for illegal ("gray") customs operations. This kind of crime is still flourishing not only because of gaps in the legislation, but, much more, because of gaps in Russia's borders—one of the most disturbing legacies of the disintegration of the U.S.S.R. in August 1991.

During the past 15 years, the cooperation of smugglers with border officials has given birth to a whole "state within a state" of shadowy clans, each with its own lobby at the level of the federal executive and legislative authorities. Illegal operations dominate the market for a number of products, for which legal imports are saddled with disproportionately high customs duties, plus the unofficial bonus that importers must pay to the customs clans.

Official Reactions

The first official to react to the news of Kozlov's murder was Chubais, though his present position as head of the national electricity company has little to do with banking. In a chorus with him, the foreign press described Kozlov as nothing less than a symbol of Russian banking reform.

President Putin was silent almost two days after the killing. On Sept. 15, he invited Central Bank Chairman Ignatyev for a talk that lasted an hour and 20 minutes. The next person to visit the President was General Alexander Bortnikov, head of the Federal Security Service's Economic Security Directorate, which is responsible for anti-smuggling enforcement. Next came Minister of Internal Affairs Rashid Nurgaliyev, and then Ignatyev again.

Only after these consultations, did Putin speak out, calling the assassination "a sign of the exacerbation of economic crime." Recalling that Kozlov dealt with "problem banks," the President elaborated on the use of the banking system for criminal purposes: capital flight; illegal non-cash/cash deals, bribery, terrorism, and drug trafficking. Finally, he insisted on changes in legislation, concerning the "treatment of suspicious clients" by banking institutions.

The President was reluctant to mention names. Moreover, Kozlov's activity was described as "dealing with," without positive or negative emphasis. Political child of two disastrous Augusts, partner of unscrupulous U.S. consultants, lucky playboy (as *Profil* magazine wrote in July 2004), Andrei Kozlov could not be painted in just one color. Like the whole of his generation, he was "controversial," and was continuing his career with an old, murky shadow behind him.

At Kozlov's funeral, his colleagues highly appreciated his role in "establishing the Russian securities market." That market is far from transparent. The attempts of Ignatyev and his subordinates to clean it up were certainly initiated by the Kremlin. Still, there were other factors, such as a continuing

negative rating of Russia by the Fitch agency, which motivated one of the two bold initiatives, now posthumously associated with the name of Kozlov.

The Kremlin's intention to clean up the national banking system is certainly sincere, also for political reasons. "In my 20-page analytical paper, addressed to Ignatyev, I insisted on the need for legislative amendments on regulation of the system of plastic cards. Because of primitive regulations, including a lot of contradictions, this system is dominated by shadow-economy turnover. There is hard evidence that such a situation may result in large-scale bribery of state officials in the period of the election campaign," writes Smirnov, referring to the very banks where some of the top figures of Russia's permanent financial *nomenklatura* have found temporary employment.

The Achilles' heel of Putin's leadership is insufficient competence in finances, especially in their international aspect. The very fact of Kozlov's return to the Central Bank in 2002 indicates the strategic significance of this problem. Taking charge of the central financial institution after the retirement of Gerashchenko, Ignatyev was sorely in need of competent cadre. The easiest possible way to address the problem was to invite a person with a good reputation in the West and a doubtful reputation at home, who would be forced to behave decently under pressure from both sides.

At the present stage of Russia's development, such an approach to personnel policy should be regarded as obsolete, as should obsessive curtsying to the liberal establishment, involved in international shadowy deals.

On the other side, cavalry charges like the proposed lifetime banning of suspicious bankers from the profession are unlikely to provide a positive effect, if implemented immediately. The law enforcement bodies also would need to be purged, before becoming competent to judge who is suspicious, and who is not. In early September, as a matter of fact, a dozen Russian police and security generals were fired. In most of the cases, the central suspicion is smuggling. A comprehensive investigation is likely to reveal alliances between administrative, private, and public policy figures. The purpose of such an investigation would not be to launch a purge as such. A thorough screening effort, along with legislative amendments, would have to focus on the very roots of criminal rivalries, as well as the basis for their continuation, in an ineffective trade policy. The elimination of this basis would create the necessary conditions for acceptable personnel selection.

The banking system might be healed, only after clan warfare throughout the establishment were effectively overcome; after the Russians finally abandoned all servility before Western-educated financial specialists; and, certainly, after the Russian banking system gained real independence from clans operating through the World Bank, the IMF, and other semi-shadowy instruments of the greatest financial crime of today, namely, globalization.

It's Not the Homes, But the Bubble Loans That Won't Sell

by Richard Freeman

The era of “exotic” or “non-traditional” mortgage loans is coming to an end with a vengeance. On Sept. 26, the National Association of Realtors reported that in August, expressed on an annualized basis, total existing homes sales fell to 6.30 million units, compared to a 7.21-million rate in August 2005, a collapse of 12.1%. The median price of an existing home fell to \$225,000 in August, a fall of 1.7% from the level of \$229,000 in August of 2005; this is the first year-to-year price drop in eleven years. Punctuating the alarm is that the inventory of unsold homes rose to 3.9 million existing homes available in August, which would take 7.5 months to sell—the highest inventory level since 1993.

What is becoming unsaleable now is the mortgage speculation in the housing bubble, rather than the homes themselves, commented Lyndon LaRouche, the world's foremost economist, on Sept. 26. “It's not the houses that won't sell, it's the mortgages that won't sell,” he observed. Over the last five years especially, in regions of the United States, bankers have proliferated exotic mortgages to pump up housing prices, and make it possible to sell homes at inflated prices to home purchasers, many of whom could not afford them. Through these exotic mortgages, the bankers, as well as speculators in these mortgages, sucked out enormous money flows, usually in the first months of the mortgage, from the home-buyers onto whom the mortgages were dumped. Now, without the ability to sell these homes at an even more inflated price, the home-owner, whose living standard has been collapsing, cannot meet the mortgage payment.

There's not a solitary national housing bubble, added LaRouche. There are specific regions where the risky mortgages and speculative practices dominated, where the housing bubble built. Now, these regions inundated with “non-traditional loans,” are the ones whose housing markets are blowing apart.

U.S. homeowners owe \$9.84 trillion in home mortgage debt, as of the end of the second quarter of 2006. But against that mortgage paper, the giant secondary housing market agencies, Fannie Mae and Freddie Mac, have pyramided an additional, *separate* \$6 trillion in mortgage-backed securities, derivatives, and bonds. Accounting for additional housing-linked debt, U.S. housing-related paper is above \$16 trillion. It penetrates every pore of the U.S. economy, as much of consumer spending comes from borrowing against the value of homes. The oncoming series of homeowner defaults and foreclosures will ignite a shock wave blowing out the leading banks, financial institutions, and foreign lenders who have invested more than \$2 trillion in U.S. housing—and the \$500 trillion derivatives market.

Dangerous Loans from A to Z

There is a veritable alphabet-soup of mortgages, which are mislabeled “non-traditional” or “exotic” mortgages. With such mild names they are often passed off as basically normal mortgages with a few added features. In reality, they have all the safety of permitting a six-month old infant to play with a hand grenade.

Two standard “non-traditional” mortgages are frequently used:

- *Interest-Only Mortgage* These are mortgages in which the home purchaser is permitted to take out the first few years of a long-term mortgage—a period of anywhere from two to five years—at a fixed, low, teaser rate of interest of 2-3%. During this initial period, the home buyer pays no principal, and interest at this lower rate only. After the initial period is over, the mortgage “resets,” and the home-buyer must pay an adjustable rate of interest (called an Adjustable Rate Mortgage or ARM), currently above 6%, and which could go to double digit levels. Plus, the home-owner must start paying

principal. This often leads to a shock, as the amount of monthly payment required can rise by 50%.

- **Minimal Payment Loan.** This is the most widely used of “option payment loans.” This loan is even more radioactive than the interest-only loan, having the feature that during the mortgage loan’s initial period of 2-5 years, the borrower not only, as under the interest-only loan, pays no principal; he also pays only part of the interest. Let us say a borrower takes out a “minimal payment” mortgage loan in which the interest is \$2,000 per month, but the borrower pays only \$1,200 and does not pay the remaining \$800 in interest. After three years of this arrangement, the borrower owes the full original loan amount, plus \$28,000 in back interest, which is rolled over into the total loan. Interest must be paid on the additional \$28,800. This loan should be declared illegal.

During the 1990s, these exotic loans were rare. In 2000, they constituted only 15% of all mortgages. But in 2005, non-traditional mortgages constituted 37% of all new home mortgage loans originated, with a value of \$420.6 billion. *EIR* projects that non-traditional mortgage loans outstanding total \$2-2.5 trillion, with somewhere between \$400 billion and \$1.2 trillion “resetting” during the next 15 months. The resetting process is already underway: Realtytrac, a foreclosure tracking service, reported that in August, nationwide home foreclosures rose 24% from the level in July, and 53% from August of 2005.

Exotic Loans

If you buy a home today, more than half the time, you will be offered completely free, either: swimming pools, fireplaces, marbled table tops, hardwood floors, garages, or landscaping, or a combination of several of these.

Gopal Ahluwalia, director of research for the National Association of Home Builders, reported that 55% of homebuilders are offering “free upgrades” to get a customer to buy their home, up from 37% in 2005. Four percent of homebuilders are offering free cars, and four percent are handing out free vacations. These figures are for new homes, but increasingly the broad trend applies to existing homes, as well.

Lawfully, the housing market has become like the desperate auto market, where bountiful incentives are ladled out to move the product. This was a reckless last gasp to buy a few more months’ time for the housing market. But cold reality is intervening; the “free goodies” are not working.

Rupturing Regional Bubbles

It is precisely in those regions in America where bankers forced excessive and speculative non-traditional mortgage loans onto home-buyers, to create artificial “red-hot” housing markets, that the bubbles are blowing apart; this is striking confirmation of LaRouche’s assessment. Many home-buyers were witting participants in this process: they thought they could buy homes, even under onerous mortgage terms, reckoning that they could hold the home properties for less than a year, and then sell them at a higher price for a profit. They

reckoned wrong.

California: California’s home sales plunged 30.1% in August, compared to sales in August 2005, the California Association of Realtors reported Sept. 26. *This is the steepest year-to-year home sales decline since August 1982*; during that time 24 years ago, Federal Reserve Board chairman Paul Volcker’s “controlled disintegration” policy—with prime interest rates above 15%—was in effect.

California is America’s largest housing market, accounting for one-eighth of all U.S. home sales. The California home market is important in itself, but also as a harbinger for what will occur in the rest of America. In areas such as the San Francisco Bay region, 80% of all new mortgages written this year were risky “non-traditional” mortgages. In several other parts of the state, 40% or more of all new mortgages written were non-traditional loans; but they were used to keep the median home price in California at \$576,360. Leslie Appelson-Young, the chief economist of the California Association of Realtors, reported Sept. 25, “The share of [California] homes on the market for 90 days or longer has nearly quadrupled from 6% in August 2004 to 22% last month.” Most revealing, more than 43,000 California homes are in one stage or another of foreclosure. Even in this state, Alexis McGree, President of Foreclosures.com warns that the worst is yet to come. She stated Sept. 25, “You could say that this . . . is the calm before the storm.”

Massachusetts is a haven of exotic mortgages. ForeclosuresMass reported Sept. 25 that foreclosures in the state are escalating at rates that it hasn’t seen “since the housing crash of the early 1990s.” Massachusetts foreclosures for the year ending Aug 31, 2006, compared to the same period a year earlier, leapt by 72%. In August, home prices fell by 6% statewide compared to July, to \$352,000; at the same time, sales declined for the fifth straight month.

Florida: Foreclosures.com reported that “It looks to us like they have been selling [homes] to each other in Florida, rather than to end users. Now, the party is over.” Every irresponsible mortgage financing gimmick was used to sell homes in Florida. For 2006, through Sept. 11, almost 23,000 people’s homes in the state were in a stage of foreclosure, more than 33% more than last year.

Driven by foreclosure, as millions of households are unable to pay mortgages that are inherently unpayable, the whole rotten structure of exotic mortgages is poised to fall.

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CDC Call for Mass HIV Testing Echoes LaRouche 1980s Anti-AIDS Program

by Mary Jane Freeman

The Centers for Disease Control and Prevention issued new guidelines Sept. 21 for mass testing for HIV (human immunodeficiency virus) in the United States. Not a program for universal testing, the agency's plan is that HIV screening should be offered to everyone ages 13 to 64 in every hospital, doctor's office, and clinic—especially in pre-natal care for all pregnant women, to help in diagnosis and control of the AIDS epidemic (acquired immunodeficiency syndrome). In a radical revision of previous guidelines, pre-test written consent forms and counselling are no longer required.

In the District of Columbia, where there is an explosion of new AIDS cases, a mass testing pilot project is already under way. It is estimated that 25,000, or 4%, of D.C.'s 600,000 residents could be infected with HIV, but not know it.

The CDC testing plan is short of, but in the direction of, what Lyndon LaRouche advocated in his national campaigns in the 1980s, soon after the syndrome (and later, the virus) was identified. LaRouche called for universal screening to curtail the impending epidemic, an Apollo-style scientific effort to find a cure for the disease, and an infrastructure mobilization to treat everyone. Contrary to popular opinion and the CDC, LaRouche identified the context for the spread of HIV/AIDS as economic impoverishment, not simply "life-style" and sexual transmission. Poverty has increased globally in the intervening years and the epidemic has spread. Now that HIV and AIDS are the leading causes of death and illness from infectious disease, LaRouche's call for universal testing is all the more urgent today.

But typical of Bush Administration policies, the CDC plan does not provide funding for the initiative. Rather, private interests should pay. In fact, just as the CDC's initiative went public, White House allies in Congress sought to redistribute, rather than increase, funding from states with high HIV/AIDS incidence (like New York and California) to states in which the epidemic has more recently become prevalent (like Alabama).

Simultaneously, Bush Administration representatives at the just-concluded World Health Organization annual Asia-Pacific conference in New Zealand Sept. 22, forced the defeat of a resolution favoring universal HIV/AIDS treatment and care by 2010.

Routine testing for HIV is a critical public health tool to curb or reduce transmission of the virus. This is particularly true now that antiretroviral therapies have been developed to suppress or interfere with the virus's action, which attacks the body's defense or immune system. The CDC motivated its new testing guidelines by stating that an estimated "one-fourth of the approximately 1 million persons" in the United States who are living with HIV "do not know they are infected." Early detection is key. A 1999 Institute of Medicine call for universal testing, with opt-out screening of pregnant women, combined with medical care, "contributed to a dramatic 95% decline in perinatally acquired AIDS cases," the CDC reports. The tests have been much improved, and LaRouche's universal testing plan could be carried out even more efficiently today.

As of now, there still is no cure for HIV. And if not treated and contained, it develops into the deadly AIDS. Within three years of full-blown AIDS, most persons die. Between 1981, when the first AIDS cases were reported, and 2003, more than 900,000 people were diagnosed with AIDS in the United States. After 1981, the incidence of new U.S. AIDS cases increased rapidly, peaking in 1992 with 78,000 cases diagnosed, then levelling off to about 40,000 cases a year until 2000. But by 2003, 43,171 cases were diagnosed, a 4.6% rise over 2002.

A disproportionate number of AIDS cases nationally are among African-Americans. Though constituting about 13% of the population, African-Americans represented 49% of newly diagnosed AIDS cases in 2003. A study, "An Overview of HIV/AIDS in Black America," published by the Kaiser Family Foundation in August 2006, showed that African-Americans with AIDS in 13 metropolitan statistical areas were an astounding 68% to 84% of the total AIDS cases in each. (See Table 1.) A CDC June 2006 report found that of 35 areas reporting, "51% of HIV/AIDS cases diagnosed during 2001-2004 were among blacks," up from previously reported levels.

LaRouche 1980s Battle Plan Against AIDS

LaRouche had identified biological pandemic potentials, like HIV/AIDS, as early as 1974, when he warned that eco-



EIRNS

At the 1986 Gay Pride parade in San Francisco, Lyndon LaRouche was a target for attack, because of his backing for Proposition 64 on the November ballot, calling for AIDS public health measures.

communicable disease and take standard public health life-saving measures. With 690,000 signatures, coordinated by the Prevent AIDS Now Initiative Committee (PANIC), “Proposition 64” appeared on the Nov. 4, 1986, ballot. It received 30% of the vote, with nearly 1 million votes.

A huge counter-LaRouche operation was mounted against this public health approach, by political/financial interests opposed to infrastructure development. Their catch phrases ranged from “invasion of privacy,” to “cost prohibitive.” Hollywood whoredom was whipped into action. Actress Patti Duke took the lead. Gay Pride marchers were incited to attack LaRouche organizers. In late November 1986, police raided the PANIC offices in San Francisco and Los Angeles, under false charges of petitioning irregularities.

But as the disease gained ground, LaRouche stepped up the fight. In 1986, a LaRouche-commissioned 140-page EIR Special Report, “An Emergency War Plan to Fight AIDS and Other Pandemics” was released by the EIR Biological Holocaust Taskforce. In his Feb. 7, 1988, ‘My Program Against AIDS,’ LaRouche called for screening, isolation, and a crash R&D program. He did a half-hour, prime-time national TV show in his Presidential campaign, which aired June 4, 1988, “Nothing Short of Victory: War Against AIDS,” bringing out the principles involved.

Unfortunately, reality has proven LaRouche’s analysis of two decades ago to be correct, on the potential for HIV/AIDS to be a global killer if economic and public health policies were not changed. Over the past 20 years, HIV has grown to worldwide pandemic proportions, with Africa a catastrophe. Globally, 65 million people have become infected and 25 million people have died of the disease. In 2005, the CDC reports, 4.1 million people worldwide were newly infected with HIV, 2.8 million persons died from AIDS, and 38.6 million were living with HIV. In the United States, from 1981 to 2005, more than 1.5 million people have been infected with HIV, and more than 500,000 people have died.

Washington, D.C. Testing Initiative

In June of this year, Washington, D.C. launched a mass HIV testing campaign, called “Come Together D.C., Get Screened for HIV.” The District of Columbia has the highest U.S. rate of new AIDS cases. It is estimated that about 10,000 residents, 2% of the population, already have HIV/AIDS. Dr.

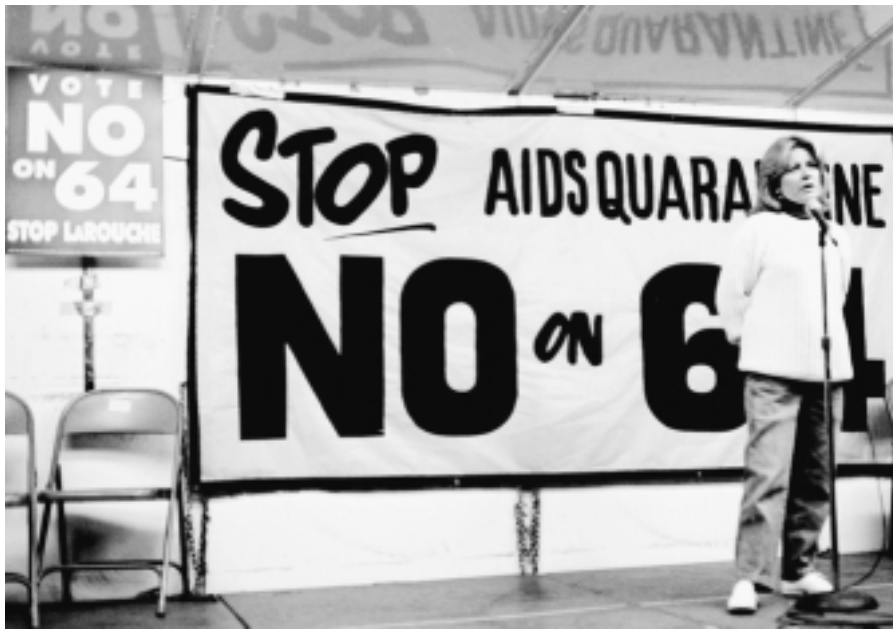
nomic austerity policies of the World Bank and International Monetary Fund were creating the conditions for such outbreaks. In November 1974, LaRouche initiated a Biological Holocaust Taskforce. By 1985, as AIDS was becoming epidemic, LaRouche issued an emergency program to fight the disease, including plans for 100% screening of the U.S. population. In October that year, LaRouche associates launched a petition drive for a California referendum to treat AIDS as a

TABLE 1

Afro-Americans With AIDS in 12 Metropolitan Areas Where They Are the Highest Percentage of Total Cases, 2004

Jackson, MS	84%
Baltimore, MD	82%
Baton Rouge, LA	80%
Columbia, SC	78%
Memphis, TN	77%
Augusta/Richmond, GA	76%
Washington, D.C.	74%
Richmond, VA	73%
Raleigh, NC	72%
Charlotte, NC	70%
Atlanta, GA	69%
Detroit, MI	68%

Sources: Kaiser Family Foundation, Jennifer Kates, Presentation to Black AIDS Institute symposium: “Moving Forward: The State of AIDS in Black America,” Aug. 2006; CDC HIV/AIDS Surveillance Report; *EIR*.



EIRNS

In September 1986, Actress Patti Duke spoke at a rally against public health measures to fight HIV/AIDS in Proposition 64. LaRouche was her special target.

cal science research programs, is obvious.

Instead, during August, White House Republican allies Sen. Mike Enzi (Wyo.) and Rep. Joe Barton (Tex.), who chair the respective congressional health committees, shepherded companion bills through their committees to amend the Ryan White Comprehensive AIDS Resources Emergency Act, not to increase its funding, but to require a shift in how its minuscule \$2.1 billion is distributed over the next five years. They also seek to expand the number of people eligible for coverage by counting patients with the HIV infection who have not yet developed AIDS, but without increasing funding.

A group of Senate Democrats, Barbara Boxer (Calif.), Hillary Clinton and Charles Schumer (N.Y.), Robert Menendez and Frank Lautenberg (N.J.), blocked action on the

Senate bill. And Rep. Frank Pallone (D-N.J.) scored the GOP House effort, “We shouldn’t be robbing Peter to pay Paul, and that’s essentially what’s happening.”

Congress will have to step outside the budget box to adequately address this national health threat. It will require LaRouche’s “War Against AIDS” approach to secure the health and well-being of all our citizens.

TABLE 2
Top 15 States by AIDS Case Rate per 100,000 Among African-Americans, 2004

District of Columbia	335.1
New York	158.7
Florida	148.7
North Dakota	131.1
New Hampshire	114.7
New Jersey	110.2
Maryland	92.6
Rhode Island	86.9
Pennsylvania	84.6
Delaware	77.1
Connecticut	74.5
Texas	68.4
Louisiana	65.8
Illinois	62.4
Georgia	61.8

Sources: Kaiser Family Foundation, Jennifer Kates, Presentation to Black AIDS Institute symposium: “Moving Forward: The State of AIDS in Black America,” August 2006; *EIR*.

Gregg A. Pane, director of the city’s Health Department called the testing program a “cutting edge . . . comprehensive” effort to stem the spread of the HIV virus. With \$8 million of city funds, the program ordered 80,000 rapid HIV test kits; put up posters and billboards; and is coordinating a community outreach program aimed at reaching 400,000 men and women ages 14 to 84 years old.

Dr. Marsha Martin, director of the city’s HIV-AIDS Administration, told the PBS “NewsHour” program in August, that the rapid test “has shown 99.95% accuracy,” takes 20 minutes, and does not require blood to be drawn.

Initial results from those tested so far were released on Sept. 19, showing that of the more than 7,000 residents tested, the rate of HIV-positives is about 3%—more than twice what is considered the national prevalence. More than 1 in 20 inmates at the D.C. jail have HIV. Nearly 10% of the users of the D.C. mobile van for needle-exchange are HIV-infected. Overall, the rate of AIDS cases per 100,000 D.C. residents is nearly 180 persons. But among African-Americans in D.C., as of 2004, the rate was 335 per 100,000, according to the Kaiser Family Foundation August 2006 study. (See Table 2.)

HIV/AIDS Spreads As Congress Stalls

As poverty has increased in both the nation’s urban and rural areas, and reporting of HIV/AIDS cases became mandatory in 2002, the prevalence of the disease has become more widely recognized. The need for a national mobilization of funds and public health workers, along with expanded medi-

LaRouche's Three-Point Battle Plan To Stop AIDS

Excerpted from a July 1991 pamphlet, "LaRouche Was Right About AIDS," issued by the LaRouche in '92 campaign for the Democratic Presidential nomination.

On June 4, 1988 Democratic presidential candidate Lyndon LaRouche delivered a half-hour nationwide prime time television address, urging an immediate mobilization for "a war against AIDS—nothing short of victory." LaRouche reiterated the three-point program for the nation's war against the AIDS virus which had been at the center of his fourth run for the White House, which he had announced in September 1985:

1. Not less than \$3 billion a year for an Apollo-style "crash program" of research to develop a cure for AIDS.
2. Application of time-tested public health measures against the virus, including universal mass-testing for the infection, combined with public health and out-patient medical services to all infected persons and their families.
3. A large-scale program of constructing hospital-bed capacity for handling the expected case-load of AIDS-infected persons requiring hospital care.

We elaborate LaRouche's war plan here, drawing from pamphlets, press releases, and campaign speeches by the candidate and his leading advisors during 1988.

1. Apollo-Style Research Effort

This article was first published in 1988 in a LaRouche Democratic Campaign pamphlet titled "My Program Against AIDS."

As scientists have already learned, AIDS poses one of the toughest biological challenges ever faced by research. Therefore, we should not limit ourselves to off-the-shelf medical capabilities, hit or miss so-called "miracle" drugs and existing molecular biology approaches, but force through a succession of major breakthroughs at the frontiers of basic physics, biology, and chemistry. Such a broad-based "crash" scientific program along the lines of the Manhattan Project of World War II or the Apollo Program of the 1960s, not only maximizes the chances for an early scientific solution to AIDS, but also returns the greatest profit in the form of new technology and increased productivity into the economy as a whole.

Among the most fruitful areas of interdisciplinary research is an advanced area of science known as **optical biophysics**, or the area which studies the electromagnetic radiation "tuning" properties in living systems. The healthy living cell is much more than the sum of its chemical elements; it is a highly ordered electromagnetic domain defined by complex interactions. Many of the scientific achievements of our space program and Strategic Defense Initiative (SDI) program—from the free electron and x-ray lasers to high-power pulsed magnetic fields—have direct relevance to this domain of basic biological science.

Among the most important basic science questions for AIDS will be to explore the "nonlinear spectroscopy" of mitosis, or cell division. The unique biological feature of the slow-acting AIDS virus is that when it infects a cell, the genetic message migrates to the cell's nucleus, where it incorporates itself into the normal genetic message of the cell. The message may lie dormant across many cell divisions before it receives an "activation signal," and turns the cell during the process of mitosis into a virus factory. What is the origin of the "activation signal"? Can the cell nucleus be sent a "deactivation signal" instead? Is the AIDS virus tuned more to the neurological system or the immunological system or to the "whole body," or does its tuning vary?

We don't need gimmicks. We require fully-backed basic science in depth. Already, certain projects have demonstrated the fruitfulness of such an approach as the following brief outline of a representative sample of pilot projects in the area indicates:

1. Electromagnetic Waves May Kill AIDS Virus in Blood. Low-power laser light can destroy viruses in the blood—including possibly the AIDS virus—according to a leading physiologist. His work under contract with the Strategic Defense Initiative Office is a form of photodynamic therapy which has already been used successfully against tumors. Non-toxic dye particles are attached to the virus envelope. A laser frequency that excites the dye to a higher energy state is then used to irradiate the virus. The laser-excited dye alters the viral envelope and "inactivates" the virus. In future experiments the Free Electron Laser (FEL) may prove to be an ideal instrument because it can be tuned to a wide range of frequencies.

2. Microwaves May Inactivate the Virus. One physicist has proposed to pass AIDS-infected blood through an intense, solenoidal magnetic field where the field is changing most rapidly, forcing the electron-dense RNA nucleus of the virus to align its symmetry axis parallel to the direction of the blood flow. While held in this position by the magnetic field, the nuclei are to be irradiated by polarized microwaves propagated directly into the oncoming flow of blood. The patient's blood could be circulated outside of the body in the manner of renal dialysis, in order to treat it. Various other scientists throughout the United States and Western Europe are working on similar approaches to deactivating the AIDS virus.

3. The Signal Between the AIDS Virus and Its Targeted Cell May Be Jammed. A leading biophysicist is working on experiments based upon “radar jamming” techniques to interfere with the electromagnetic tuning signal between the AIDS virus and T-lymphocyte cells. Essentially, the horns on the outside of the virus function like broadcasting antennae to the receiving antennae or (receptors) on the T-lymphocytes. Using basic radar, science experiments are under way to see if the radar signals can be jammed with electromagnetic means.

4. Nuclear Magnetic Resonance (NMR) and Radio Frequency Therapy Against AIDS. For several years NMR and Magnetic Resonance Imaging (MRI) devices have given scientists graphic images of the way in which the virus alters the brain and neurological system of AIDS patients. Experiments have demonstrated that certain experimental NMR techniques, at least with cancer, can go beyond mere “picture taking” to actual radio frequency magnetic therapy. Several biophysicists are engaged in long-term experiments to assess the possibilities of applying such approaches to AIDS.

If we could successfully send our citizens to the Moon and bring them back healthy and happy to Earth nearly two decades ago, there is no reason we can’t achieve a total victory over AIDS. We have a lot of scientific work to do before we conquer this disease. But with basic science we shall.

2. Traditional Public Health Measures

On June 7, 1988, hundreds of thousands of Californians voted for Proposition 69, the second public referendum to have been placed on the statewide ballot by supporters of Lyndon LaRouche. Unfortunately, Proposition 69, like its 1986 predecessor Proposition 64, was defeated at the polls. Had the public health measures called for in the LaRouche-backed referenda been voted up and implemented, it is likely that thousands of California residents now infected with AIDS could have been spared.

We excerpt here sections of Proposition 69, which was written to serve as a model of similar legislation by other states.

Section I

The purpose of this Act is to:

A. Enforce and confirm the declaration of the California Legislature set forth in Health and Safety Code Section 195 that Acquired Immune Deficiency Syndrome (AIDS) is serious and life-threatening to men and women from all segments of society, that AIDS is usually lethal, and that it is caused by an infectious agent with a high concentration of cases in California;

B. Protect victims of Acquired Immune Deficiency Syn-

drome (AIDS), members of their families and local communities, and the public health at large; and

C. Utilize the existing structure of the State Department of Health Services and local health communities, and the statutes and regulations under which they serve, to preserve the public health from Acquired Immune Deficiency Syndrome (AIDS).

Section II

Acquired Immune Deficiency Syndrome (AIDS) is an infectious, contagious and communicable disease and the condition of being a carrier of the HTLV-III virus or any other viral agent which may cause Acquired Immune Deficiency Syndrome (AIDS) is an infectious, contagious and communicable condition, and both shall be placed and maintained by the director of the Department of Health Services on the list of reportable diseases and conditions mandated by the Health and Safety Code 3123, and both shall be included within the provisions of Division 4 of such code and the rules and regulations set forth in Administrative Code Title 17, Part 1, Chapter 4, Subchapter 1, and all personnel of the Department of Health Services and all health officers shall fulfill all of the duties and obligations specified in each and all of the sections of said statutory division and administrative code subchapter in a manner consistent with the intent of this Act, as shall all other persons identified in said provisions.

Argument in Favor of Proposition 69

Proposition 69 extends existing public health codes for communicable diseases to AIDS and AIDS virus carriers. This means that the same public health codes that already protect you and your family from other dangerous diseases, will protect you from AIDS. Proposition 69 will keep AIDS out of our schools, out of commercial food establishments, and give health officials the power to test and quarantine where needed. These measures are not new; they are the same health measures applied, *by law*, every day, to every other contagious disease.

Today AIDS is out of control. Present “policy” is a disaster. There were about 500,000 AIDS carriers in California in 1985, according to health authorities. At that time the number of cases of this highly contagious disease was doubling approximately every 6-12 months. Even assuming that the doubling rate had slowed to every 24 months, this would mean an estimated 1 million Californians infected with the AIDS virus today. Many of these newly infected persons can thank those who fought against Proposition 64 for their tragic condition.

The number of “unexplained” AIDS cases—cases not in “high-risk” groups, such as homosexuals and intravenous drug-users—continues to grow at alarming rates. Indeed, the majority of cases worldwide fall into no identifiable “risk-group” whatsoever. The AIDS virus has been found living in

many bodily fluids, including blood, saliva, respiratory fluids, sweat, and tears, and it can survive upwards of seven days outside the body. There presently exists no cure for the sick, and no vaccination for the healthy. It is 100 percent lethal.

AIDS is the gravest public health threat our nation has ever faced. Traditional California public health law clearly states that certain proven public health measures *must* be taken to protect the public from *any* communicable disease, and no competent medical professional denies AIDS is “communicable.” Nevertheless, politicians and special interest groups have circumvented the public health laws. California’s current “AIDS testing confidentiality” statute even prohibits doctors from disclosing AIDS infection status to health authorities, endangering medical and law enforcement personnel and the general public. For the first time in our history, a deadly disease is being treated as a “civil rights” issue, rather than as a public health issue.

Under present policy, since health officials generally do not know who is infected, there is little they can do either to prevent the infected person from infecting others, or to get that person proper medical attention before they develop full AIDS. Many who spoke against Proposition 64 now call for testing and contact tracing. Had it passed, these measures would already be in effect. How many more Californians must become sick and die before we act to stop this epidemic?

The medical facts are clear. The law is clear. Common sense agrees. You and your family have the right to protection from *all* contagious diseases, including AIDS—the deadliest of them all. If you agree, vote *yes* on Proposition 69.

3. Hospital Construction Program

The following is excerpted from pre-broadcast material prepared by LaRouche for his half-hour television broadcast on AIDS on NBC-TV, June 4, 1988.

The problem is that the United States has presently no capability for handling the hundreds of thousands of AIDS cases who will require hospitalization each year beginning the early 1990s. AIDS patients require special kinds of hospital facilities, not only because they are very infectious in that stage, but because they are helpless to resist opportunistic infections. We must invest in building the required number of hospital-



EIRNS/Chris Lewis

In Pittsburgh in 1986, a LaRouche Presidential campaign organizer mobilizes support for LaRouche’s three-point program to eliminate the threat of AIDS.

bed facilities now. . . .

There is no denying that this will cost a lot of money, but there is no price too high for saving human lives from this terrible infection. . . .

The best guesses on costs of medical treatment for each AIDS-infected person are between \$100,000 and \$150,000 total for each case hospitalized. This must come from a combination of federal, state, local and private agencies. With the number now infected, this will cost about \$100 billion a year or more by sometime during the early 1990s. We have no choice; our morality will not permit us to see millions of Americans dying helplessly in hospices which are simply death camps.

Don’t worry about the money. If I become the next President, the average real income in this country will increase by between 20 percent and 30 percent over the coming four years. We shall simply have to pull millions of Americans out of the bottom-wage jobs created under the Reagan-Bush administration, and put those people to work in jobs where they produce real wealth and once again earn the level of real wages industrial employees used to earn back at the end of the 1960s.

If we continued to do little but send silly letters, as Washington is doing today, this infection is fully capable of making the human species extinct by sometime during the first half of the next century. That need not happen. Let us declare war against this virus, bring it under control, and wipe it from the face of the Earth by the end of this century. Let us put an end to penny-ante moaning and groaning about costs. With the aid of science we can win this war; therefore, let us act now, and proceed to total victory over the worst plague which mankind has ever faced.

A Matter of Survival

On Friday, Sept. 29, 2006, American statesman Lyndon LaRouche issued the following statement:

“The calamitous failure on Thursday, by the leadership of the Democratic Party fraction in the U.S. Senate, on the matter of the torture policy, although not the Democratic fraction as a whole, has occurred at a time when the issues foremost in the life-experience of the lower eighty percentile of the U.S. citizenry as a whole show that the popular trend going into the November mid-term elections is a policy directly opposite to that expressed over the period from the Alito confirmation to yesterday’s Senate vote which has been, and is still required today.

“This is not an ordinary sort of error by the Senate Democratic leadership. We are in a time when the planet as whole is being readied for a plunge into Hell by the current U.S. Administration, by its worse than useless response to the onrushing global financial avalanche and the Administration’s present commitment to the war against Iran now fully prepared for action as early as mid-October.

“The most relevant precedent for what is happening in the body of the Democratic (and Republican) Senate leaderships as such, is comparable to the way in which a form of Sophistry like that which gripped a self-doomed Athens under Pericles led to the virtual destruction of ancient Greek civilization in the ensuing Peloponnesian War. Nothing so neatly echoes that case of ancient, self-doomed Athens as the U.S.A. under George Shultz’s version of H.G. Wells’ ‘The Island of Doctor Moreau,’ the Cheney-Bush Administration of 2001-2006 to date. The Sophistry exhibited during 2006 to date, by the Democratic leadership in the Senate, reflects that body’s current efforts to caricature the fate of Pericles’ foolish Athens.

“The spread of similar exhibitions of Sophistry, is also characteristic of the leadership of the governments and reigning political parties of western and central Europe. They all appear to have kissed the face of the Gorgon Medusa.”

A close look at the process by which the U.S. Senate, after a spirited fight by Republican Senators only two weeks ago, decided to vote *for* the adoption of the Bush-Cheney torture policy, only underscores LaRouche’s

argument. In *all* the votes on Democratic substitutes, and amendments, the opponents of Cheney’s torture policy rallied more than 41 votes, the number required in order to filibuster the Administration bill. The bill by Republican Sen. Arlen Specter, who vigorously opposed the elimination of *habeas corpus* for individuals designated enemy combatants by the Administration, received 48 votes, and thus went down to only a narrow defeat.

Yet the Democratic leadership *refused* to mobilize a filibuster—in the same tradition they followed from 2001 forward, starting with the Ashcroft nomination, and proceeding to the confirmation of Nazi jurist Carl Schmitt-afficionado Samuel Alito. The leadership knew *exactly* what it was voting for in all cases. In the first two, the LaRouche movement carried out a mass mobilization to inform them of the stakes. In the case of this torture bill, leading members of the U.S. military stepped forward to make the point clear.

Only two weeks ago, no less a prominent military spokesman than Gen. Colin Powell (ret.) weighed in to oppose the Bush Administration’s “reinterpretation” of the Geneva Conventions against torture. Many others have fought consistently. “There is no need for this bill,” Lt. Cmdr. Charles Swift told *EIR* Sept. 25, after a Senate Judiciary Committee hearing where he testified against the elimination of *habeas corpus* in the proposed “compromise.” Rear Adm. John Hutson (ret.), the former Judge Advocate General of the Navy, seconded the evaluation, telling *EIR*, “If they don’t fix the *habeas corpus* part of it, then we’re better off with nothing.”

Yet during this entire fight, most of the Democratic Party leadership sat on the sidelines, treating the fight among Republicans as if it were to their advantage. Then, when faced with a vote, many decided it was electorally “smart” to vote for torture, in futile hopes of staving off lunatic Republican attacks on them for being “pro-terrorist.”

The job has been left to LaRouche’s forces and the American people, to make it clear that Americans have not abandoned the tradition of Washington and Lincoln, and that we will not permit our government to carry out Nazi crimes of torture and aggressive war. It is, as Mr. LaRouche wrote, a matter of survival.

SEE LAROCHE ON CABLE TV

All programs are *The LaRouche Connection* unless otherwise noted. (*) Call station for times.

INTERNET

- ACCESSPHOENIX.ORG
Click *Live Webcast*
Fri: 6 pm
(Pacific Time only)
LAROCHEPUB.COM
Click *LaRouche Writings*
(Available 24/7)
- SCANTV.ORG
Click *Scan Web*
Wed: 4 pm
(Pacific Time only)

ALABAMA

- BIRMINGHAM Ch.4
Wed: 11-11:30 pm
- UNIONTOWN Ch.2
Mon-Fri: every 4 hrs.
Sun: Afternoons

ALASKA

- ANCHORAGE Ch.10
Thu: 10 pm

ARIZONA

- PHOENIX Ch.98
Fri: 6 pm
- PHOENIX VALLEY
Quest Ch.24
Fri: 6 pm

ARKANSAS

- CABOT Ch.15
Daily: 8 pm

CALIFORNIA

- BEVERLY HILLS
Adelphia Ch.37
Wed: 4 pm
- BREA Ch.98
Thu: 6:30, 10:30 pm
- CARLSBAD
Adelphia Ch.3
1st/3rd Wed: 10 pm
- CLAY/CONCORD
Comcast Ch.26
2nd Tue: 7 pm
Astound Ch.31
Tue: 7:30 pm
- CONTRA COSTA
Comcast Ch.26
2nd Tue: 7 pm
- COSTA MESA
Comcast Ch.35
Wed: 10 pm
- E.LOS ANGELES
Adelphia Ch.98
Mon: 2 pm
- HOLLYWOOD
Comcast Ch.24
Thu/Fri: 4-4:30 pm
- LANCASTER
- PALMDALE
Adelphia Ch.36
Sun: 1 pm
- LONG BEACH
Analog Ch.65/69
Digital Ch.95
4th Tue: 1-1:30 pm
- LOS ANGELES
Adelphia Ch. 98
Wed: 3-3:30 pm
- MARINA DEL REY
Adelphia Ch.98
Wed: 3-3:30 pm
Comcast Ch.24
Thu & Fri: 4 pm
- MIDWILSHIRE
Comcast Ch.24
Thu/Fri: 4-4:30 pm
- N.ORANGE COUNTY
Adelphia Ch.95/97/98
Fri: 3:30-4 pm
- NE SAN.FDO.VLY.
Comcast Ch.20
Wed: 4 pm
- OJAI
Adelphia Ch.10
Mon: 12:30 pm

- SANTA MONICA
Adelphia Ch.77
Wed: 3-3:30 pm
- VENTURA CITY
Comcast/Wave Ch.6
Mon: 7 am
Fri: 10 am
- VENTURA COUNTY
Adelphia/Comcast
Channels 8/16/25
Mon: 1 pm
- WALNUT CREEK
Comcast Ch.6
2nd Tue: 7 pm
Astound Ch.31
Tue: 7:30 pm
- W.HOLLYWOOD
Adelphia Ch.3
Wed: 4 pm
- W.SAN FDO.VLY.
TimeWarner Ch.34
Wed: 5:30 pm

COLORADO

- DENVER
Comcast Ch.57
Sat: 1 pm

CONNECTICUT

- GROTON—Ch.12
Mon: 5 pm
- NEW HAVEN Ch.23
Sat: 6 pm

DISTRICT

- WASHINGTON
Comcast Ch.5
Starpower Ch.10
Irregular Days/Times

FLORIDA

- ESCAMBIA
Cox Ch. 4
Last Sat: 4:30 pm

IDAHO

- MOSCOW Ch.11
Mon: 7 pm

ILLINOIS

- CHICAGO Ch.21
Comcast/RGN/WOW*
- PEORIA COUNTY
Insight Ch.22
Sun: 7:30 pm
- QUAD CITIES
Mediacom Ch.19
Thu: 11 pm

IOWA

- QUAD CITIES
Mediacom Ch.19
Thu: 11 pm

KENTUCKY

- BOONE/KENTON
Insight Ch.21
Sun: 1 am
Fri: Midnight
- JEFFERSON
Insight Ch.98
Fri: 2-2:30 pm

MAINE

- PORTLAND
TimeWarner Ch.42
Mon: 1&11 am, 5 pm

MARYLAND

- ANNE ARUNDEL
Annapolis Ch.76
Milleneum Ch.99
Sat: 12:30 am
Sun: 12:30 am
Tue: 6:30 pm
- MONTGOMERY
Comcast Ch.21
Fri: 10:30 pm
Sun: 1 pm
- P.G.COUNTY
Comcast Ch.76
Tue: 3 pm
Thu: 11:30 am

MASSACHUSETTS

- BRAintree
Comcast Ch.31
BELD Ch.16
Tue: 8 pm
- CAMBRIDGE
Comcast Ch. 10
Tue: 2:30 pm
Fri: 10:30 am
- WALPOLE
Comcast Ch.8
Tue: 1-1:30 pm

MICHIGAN

- BYRON CENTER
Comcast Ch.25
Mon: 2 & 7 pm
- DETROIT
Comcast Ch.68
Unscheduled pop-ins
- KALAMAZOO
Charter Ch. 20
Thu: 11 pm
- KENT COUNTY
Comcast Ch.25
Fri: 1:30 pm
- N.KENT COUNTY
Charter Ch.22
Wed: 3:30 & 11 pm
- LAKE ORION
Comcast Ch.10
Mon/Tue: 2 & 9 pm
- LIVONIA
Brighthouse Ch.12
Thu: 3 pm
- MT.PLEASANT
Charter Ch. 3
Tue: 5:30 pm
Wed: 7 am
- PORTAGE
Charter Ch.20
(Coming Soon!)
- SHELBY TWP.
Comcast Ch.20
WOW Ch.18
Mon/Wed: 6:30 pm
- WAYNE COUNTY
Comcast Ch.16/18
(Coming Soon!)
- WYOMING
Comcast Ch 25
Wed: 9:30 am

MINNESOTA

- BURNSVILLE
EGAN
Comcast Ch.14
S,T,T,S: 4:30 pm
M,W,F: 4:30 am
- CAMBRIDGE
US Cable Ch.10
Wed: 6 pm
- COLD SPRING
US Cable Ch.10
Wed: 6 pm
- COLUMBIA HTS.
Comcast Ch.15
Wed: 8 pm
- DULUTH Ch.20
Mon: 9 pm
Wed: 12 pm
Fri: 1 pm
- MINNEAPOLIS
TimeWarner Ch.16
Tue: 11 pm
- MINNEAPOLIS
(Northern Burbs)
Comcast Ch.15
Thu: 3 & 9 pm
- NEW ULM Ch.14
Fri: 5 pm
- PROCTOR Ch.12
Tue: 5 pm to 1 am
- ST.CLOUD AREA
Charter Ch.12
Mon: 9:30 pm

- ST.CROIX VLY.
Comcast Ch.14
Thu: 1 & 7 pm
Fridays—9 am
- ST.LOUIS PARK
TimeWarner Ch.15
Wed & Fri:
12 am, 8 am, 4 pm
- ST.PAUL
(city only)
Comcast Ch.15
Fri: 11 pm
- ST.PAUL
(North suburbs)
Comcast Ch.14
Mon: 7 pm
Tue: 3 & 11 am
- St.PAUL
(S&W suburbs)
Comcast Ch.15
Wed: 10:30 am
Fri: 7:30 pm
S.WASHINGTON
Comcast Ch.14
Thu: 8 pm

MISSOURI

- ST.LOUIS
Charter Ch.22
Wed: 5 pm
Thu: 12 Noon

NEVADA

- WASHOE
Charter Ch.16
Thu: 2 pm

NEW HAMPSHIRE

- MANCHESTER
Comcast Ch.23
Thu: 4:30 pm

NEW JERSEY

- HADDEN TWP.
Comcast Ch.19
Sun: 8 am
- MERCER COUNTY
Comcast*
TRENTON Ch.26
3,4 Fri: 6-6:30 pm
WINDSOR Ch.27
Mon: 5:30-6 pm
- MONTVALE/MAHWAH
Cablevision Ch.76
Mon: 5 pm
PISCATAWAY
Cablevision Ch.22
Thu: 11:30 pm
- UNION
Comcast Ch.26
Unsched. Fillers

NEW MEXICO

- ALBUQUERQUE
Comcast Ch.27
Thu: 4 pm
ANTHONY/SUNLAND
TimeWarner Ch.15
Wed: 5:05 pm
- LOS ALAMOS
Comcast Ch.8
Wed: 10 pm
- SANTA FE
Comcast—Ch.8
Thu: 9 pm
Sat: 6:30 pm
Tue: 11 pm
- SILVER CITY
Conley Productions
Daily: 8-10 pm
- TAOS Ch.2
Thu: 7 pm

NEW YORK

- ALBANY
T/W Ch.18
Wed: 5 pm
- BRONX
Cablevision Ch.70
Fri: 4:30 pm

- BROOKLYN
T/W Ch.35
Cablevision Ch.36
2nd Mon: 9:30 am
- CHEMUNG
T/W Ch.1/99
Tue: 7:30 pm
- ERIE COUNTY
Adelphia Ch.20
Thu: 10:35 pm
- IRONDEQUOIT
T/W Ch.15
Mon/Thu: 7 pm
- JEFFERSON
- LEWIS
T/W Ch.99
Unscheduled pop-ins
- NIAGARA COUNTY
Adelphia Ch.20
Thu: 10:35 pm
- ONEIDA
T/W Ch.99
Thu: 8 or 9 pm
- PENFIELD Ch.15
Penfield Comm. TV*
- QUEENS
T/W Ch.35
Tue: 10:30 am
- QUEENSBURY Ch.71
Adelphia Ch.71
Mon: 7 pm
- RIVERHEAD Ch.20
Wed: 8 pm
- ROCHESTER Ch.15
Sat: 4 pm; Wed: 9 pm
- ROCKLAND Ch.76
Mon: 5 pm
- SCHENECTADY
TimeWarner Ch.16
Sat: 1:30 am
Fri: 1 p.m.
- STATEN ISL.
TimeWarner
Thu: 11 pm (Ch.35)
Sat: 8 am (Ch.34)
- TOMKINS
Sat: 6 pm
Sun: 12:30 pm
- TRI-LAKES
Adelphia Ch.2
Sun: 7 am, 1 pm, 8 pm
- WEBSTER Ch.12
Wed: 9 pm

NORTH CAROLINA

- HICKORY
Charter Ch.3
Tue: 10 pm

OHIO

- AMHERST
T/W Ch.95
Every Day!
12 Noon & 10 pm
- CUYAHOGA
T/W Ch.21
Wed: 3:30 pm
- OBERLIN
Cable Co-Op Ch.9
The: 8 pm

OKLAHOMA

- NORMAN
Cox Ch.20
Wed: 9 pm
- OREGON
• LINN/BENTON
Comcast Ch.29
Tue: 1 pm
Thu: 9 pm
- PORTLAND
Tue: 6 pm (Ch.22)
Thu: 3 pm (Ch.23)
- RHODE ISLAND
• E.PROV. Ch.18
Tue: 6:30 pm

- STATEWIDE
RI Interconnect
Cox Ch.13
Tue: 10-10:30 am

TEXAS

- DALLAS
AT&T Ch.13-B
Tue: 10:30 pm
- EL PASO COUNTY
TimeWarner Ch.15
Wed: 5:05 pm
- HOUSTON
TimeWarner Ch.17
TV Max Ch.95
Wed: 5:30 pm
Sat: 9 am
Wed, 8/6: 8 pm
- KINGWOOD
Cebriidge Ch.98
Wed: 5:30 pm
Sat: 9 am
Wed, 8/6: 8 pm

VERMONT

- GREATER FALLS
Adelphia Ch.10
Mon,Wed,Fri: 1 pm
- MONTPELIER
Adelphia Ch.15
Tue: 9 pm
Wed: 3 pm

VIRGINIA

- ALBERMARLE
Adelphia Ch.13
Sun: 4 am
Fri: 3 pm
- ARLINGTON
Comcast Ch.33
Mon: 1 pm
Tue: 9 am
- CHESTERFIELD
Comcast Ch.6
Tue: 5 pm
- FAIRFAX Ch.10
1st & 2nd Wed: 1 pm
- LOUDOUN
Comcast Ch.23
Wed: 6 pm
- ROANOKE Ch.19
Tue: 7 pm
Thu: 2 pm

WASHINGTON

- KING COUNTY
Comcast Ch.29/77
Sat: 2 pm
- TRI CITIES
Ch.12/13/99
Mon: 7 pm
Thu: 9 pm
- WENATCHEE
Charter Ch.98
Thu: 4 pm

WISCONSIN

- MADISON Ch.4
Tue: 1 pm monthly
- MARATHON
Charter Ch.10
Thu: 9:30 pm
Fri: 12 noon
- WYOMING
• GILLETTE
Bresnan Ch.31
Tue: 7 pm

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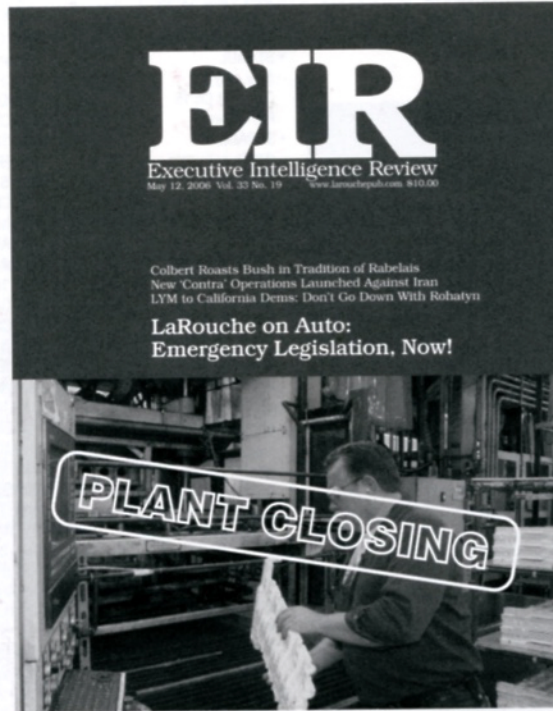
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