

Brutish Bastards Are At It Again!
The Crisis Is Already Here; Now, Grab the Solution
Onward to Mars: The Triumph of the Weak Forces

U.S. Patriots Must Ram FDR's Glass-Steagall Through Now!



What Is LaRouche Saying **About How To Solve** The Global **Economic/Financial**

LaRouche: Economy for Scientists Economic Science, in Short **Economy for Scientists: Economics as Science, in Short**

Lyndon LaRouche

Crisis?

THE SCIENCE **OF PHYSICAL ECONOMY**

With this present opening of this third section of this trilogy on the underlying, practical foundations of the science of physical economy, we have presented ourselves with the task of untangling the most crucial

of the issues posed by recorded human history, with emphasis on the history of European civilization from its ancient to modern times, up to the present day.

> —LaRouche, from the final segment of "The Science of Physical Economy"

A Seguel on Economics as Science:

The Rule of Natural Law

EIR. July 17, 2009

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Economics as History: The Science of Physical Economy EIR, Sept. 18, 2009

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e-mail: eirns@larouchepub.com www.larouchepub.com www.larouchepub.com/eiw Webmaster: *John Sigerson* Assistant Webmaster: *George Hollis* Editor, Arabic-language edition: *Hussein Askary*

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European Headquarters: E.I.R. GmbH, Postfach 1611, D-65006 Wiesbaden, Germany; Bahnstrasse 9a, D-65205, Wiesbaden, Germany Tel: 49-611-73650 Homepage: http://www.eirna.come-mail: eirna@eirna.com

Montreal, Canada: 514-855-1699

Denmark: EIR - Danmark, Sankt Knuds Vej 11, basement left, DK-1903 Frederiksberg, Denmark. Tel.: +45 35 43 60 40, Fax: +45 35 43 87 57. e-mail: eirdk @hotmail.com.

Mexico: EIR, Manual Ma. Contreras #100, Despacho 8, Col. San Rafael, CP 06470, Mexico, DF. Tel.: 2453-2852, 2453-2853.

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From the Managing Editor

The reinstitution of Franklin Roosevelt's "Glass-Steagall" law of 1933, which Lyndon LaRouche and *EIR* have been demanding for a few decades now, has now come to center stage internationally—which is where it belongs. In his May 8 webcast, which we will publish in next week's issue, LaRouche hit the point repeatedly: Unless such banking legislation is adopted *soon*, there is no hope to replace our bankrupt global financial system with something beneficial to mankind.

Okay, so what is Glass-Steagall? Many people know that the law separated commercial banking from investment banking, making it illegal for commercial banks to sell or underwrite securities (stocks, bonds, what are today called derivatives, etc.). Eyes glaze over. "So what?" Why is that something that—as LaRouche said in his webcast—will destroy the power of the City of London and Wall Street, otherwise known as the British Empire? Why is that something all patriots have to demand that their Senators and Congressmen support? Think of it this way: If you put your savings in the local bank, you want the money to be there when you need it, right? The bank can invest your money wisely, in productive activities in the community, ensuring that your money will be repaid. But what if that bank instead takes your money to the global gambling casino known as the derivatives market? For a while, as we all know, the bubble created by such behavior kept going up and up; but then, as LaRouche had warned, it collapsed, wiping out your local bank, your job, your pension, and your life savings. Now, that's getting serious!

Our cover story addresses the question from the highest strategic standpoint, including the mortal crisis in the European Union, and the moves by Senators McCain, Cantwell, and others to bring back Glass-Steagall. You'll find there a preview of LaRouche's remarks at the webcast (the video is at www.larouchepac.com).

In *World News*, Rainer Apel reports from Germany on the related developments there, as voters repudiated the government's insane support for the trillion-euro bailout of the speculators (it's officially called a bailout for "Greece," but it's the gambling bankers who are getting the money, whereas the people of Greece will be squeezed tight and then hung out to dry).

Don't miss Oyang Teng's excellent report on cosmic radiation and manned spaceflight (*Science*). He and others of the LaRouche "Basement Team" will have much more to say on these matters.

Susan Welsh

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BRUTISH BASTARDS ARE AT IT AGAIN!

LaRouche Demands Patriots Act To Pass Glass-Steagall

FLASH: The British swine have once again imposed a 1923-style hyperinflationary collapse on modern Germany, with the trillion-dollar bail-out scheme imposed on the Eurozone this past weekend. Only the immediate enactment of a Glass-Steagall law could prevent the United States itself from falling into the same fate now destined for continental European victims such as, above all other targets for total destruction, the Federal Republic of Germany.

Chancellor Frau Merkel's Germany was given virtually no option in this matter. Indeed, only the immediate enactment of the return to President Franklin Roosevelt's Glass-Steagall law in the U.S.A. could create the shift in global conditions which would prevent the British hyperinflationary policy for continental Europe from plunging the entirety of this planet into the darkest dark age in known history now.

-Lyndon LaRouche

by Nancy Spannaus

May 10—As the British imperial financial establishment scrambled desperately to pull together a self-doomed "rescue" for their imploding system, Lyndon LaRouche took the stage for an international webcast from Northern Virginia on May 8, to demand that U.S. patriots to protect the United States, and ultimately the world, by passing the Glass-Steagall amendment which has been submitted to the U.S. Senate banking reform bill (see *Documentation*, below). "The bill must be fully

supported, without quibble," LaRouche said. "If you don't support this, it means you don't care about civilization."

The Glass-Steagall amendment, introduced on May 6 by a group of Senators led by John McCain (R-Ariz.) and Maria Cantwell (D-Wash.), is the act of a growing group of patriotic Members of Congress, LaRouche asserted. While they introduced their Franklin Roosevelt-style legislation to protect commericial banking from speculative trading back in December of 2009, they have now sprung into action under pressure of the crisis now erupting in the Eurozone. They know that the only way the U.S. system can save itself from being sucked into the collapse spiral which British monetarist policies have caused in Europe, is to implement Glass-Steagall at home, and prepare to institute a recovery process that will bring in the rest of the world as well.

LaRouche's presentation was punctuated by up-tothe-minute reports from the battle zone in Europe, where the media was reporting the pressure being put on Germany, in particular, but also all other Eurozone nations, to pour untold billions of funds into trying to save the bankrupt system. LaRouche's response, at every turn, was to re-emphasize his crucial point:

"There is only one thing to do with this thing. Obviously, the operation in Germany is British-run....

"Now, what we do, is we, in the United States, mobilize to the extreme, for this reform which we're pushing: Back to Glass-Steagall. The Glass-Steagall reform

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www.cantwell.senate.gov

The Glass-Steagall Amendment, introduced on May 6 by a group of Senators led by John McCain (R-Ariz.) and Maria Cantwell (D-Wash.), is the act of a growing group of patriotic Members of Congress, LaRouche asserted. The two Senators are shown here at a press conference in December 2009.

will crash the British system. When we have crashed the British system, by re-establishing Glass-Steagall, by doing that, we're going to create a situation where the British will no longer be able to impose these things."

The next day, the British, with Obama's aid, succeeded into putting together promises, from continental EU member-states, of a more than \$1 trillion bailout, to try to save their system. That action—Weimar hyperinflation on a world scale—only increases the urgency for U.S. patriots to act.

The U.S. Battleground

The Senators leading the Glass-Steagall offensive at present, represent a growing bipartisan grouping, which is acting as patriots, as well as in response to the mass strike ferment within the U.S. population. The intensity of that ferment, which—despite all news media tripe to the contrary—is primarily focussed against the murderous and criminal economic policies of the Bush and Obama administrations, is dramatically increasing.

McCain and Cantwell are joined by four Democratic Senators—Barbara Boxer (Calif.), Tom Harkin (Iowa), Russ Feingold (Wisc.), and Ted Kaufman (Del.)—and Independent Sen. Bernie Sanders (Vt.), in sponsorship of the original bill (S. 2886). But the small number of names belies the broad support for the measure.

For example, there are 14 sponsors of a similar bill for the simple restoration of the Glass-Steagall standard, in the House of Representatives (H.R. 4375).

Democratic insiders have reported to the LaRouche Political Action Committee (LPAC) that extensive polling on the Glass-Steagall issue per se, has shown that 78% of the electorate is in favor of the reform, which would erect a firewall between commercial and investment banking. Also indicative of the mood, is the fact that a growing number of "Prodigal Son patriots" from the banking community

are issuing public statements indicating that they now realize that the repeal of Glass-Steagall in 1999 was a very bad mistake. These include Warren Buffett's number two Berkshire Hathaway executive Steve Munger, Merrill Lynch former CEO David Komansky, Kansas City Federal Research Board chief Thomas Hoenig, and former Citibank CEO John Reed, among others.

The leading voice for restoring Glass-Steagall, of course, has been LaRouche himself, who issued a call on Sept. 27, 2008, for bringing back the FDR standard, as an essential follow-on to his Homeowners and Bank Protection Act. LaRouche has emphasized that the thinking expressed by McCain and Cantwell, in their public statements on the bill, is fully consistent with his intention and policy.

While the McCain-Cantwell initiative has now been introduced as an amendment to Sen. Chris Dodd's 1,400-page financial reform bill, LaRouche has emphasized that its passage would totally change the character of the bill as a whole, by putting forward the only statement of principled intent. President Obama, who, along with the leaders of his economic team, has promised to veto the financial "reform," if it were to include this measure, would be put on the spot, as to whether he would support it, or expose his traitorous nature by acting against it. If he did the latter, this could well be the issue that leads to his impeachment.

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On May 6, the British financial predators received a new jolt, with the socalled unexplained 1,000 point drop on the U.S. stock market—an indication that their global system was going through a totally uncontrolled meltdown.

It is quite possible that the British-controlled President, acting through Senate Majority Leader Harry Reid, will try to prevent the Glass-Steagall amendment from being added to the Dodd bill, by denying it a vote. Should this happen, Cantwell and Feingold, at least, have indicated that they are so determined to put this protection in place, that they will filibuster the bill as a whole. It remains to be seen whether the U.S. public, under LaRouche's leadership, will permit Reid's shenanigans to prevent this crucial piece of legislation

from coming to the floor for debate, and near-certain passage.

Europe Implodes

Meanwhile, the breakdown crisis of the world financial system is setting the world on fire.

LaRouche stressed, in his webcast address, that it was the British themselves, acting through their Inter-Alpha Group, who detonated this new, more dramatic stage of the crisis, by the way they detonated the Greek crisis. They were going for a "gamechanger," which would take the next giant step toward destroying all sovereign nation-states, with Germany as one major target—to be followed by the United States.

On May 6, they received a new jolt, with the so-called unexplained 1,000 point drop on the U.S. stock market—an indication that their global system was going through a totally uncontrolled meltdown. The British escalated.

The British government and its puppet, Barack Obama, went into action. Through a series of weekend emergency meetings, they pushed European Union finance ministers and heads of state into new, huge panic bailouts "for the euro"—in which Her Majesty's U.K. government itself does not intend to take part. The new bailouts, announced Sunday night in a rush before Asian markets opened on the morning of May 10, ended up totalling over \$1 trillion.

It won't succeed. As LaRouche said at the webcast, "The attempt to pull a swindle ... using a bailout of Greece, to try to wreck the nations of the continent of Europe, the euro group, has backfired, and has struck

at the heart of the system, the euro system, which is controlled by the British monarchy, the British Empire group." If the United States now adopts La-Rouche's Glass-Steagall policy through the Senate, defeating Obama's moves to stop it, the British pound, and the whole British policy swindle, will sink to the ground.

As bank and bond credit conditions in the past week plunged back to their "freeze-up" status during the crash phase of early 2009, three and perhaps more new

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White House/Pete Souza

President Obama called Chancellor Merkel on May 7 and May 9, and "stressed the urgency of all European Union members taking resolute steps to build confidence in the markets," the White House confessed. Germany then capitulated to the \$1 trillion bailout of the British banks. The two leaders are shown here, at the G20 meeting in September 2009.

bailout schemes were being whipped up by the finance ministers for instant attempts at implementation. British Prime Minister Gordon Brown had called Germany's Chancellor Angela Merkel, whose government is supposed to cough up the greatest part of the bailout funds, on May 7 and 8, to break her resistance to the schemes. Obama called Merkel on May 7 and 9, and "stressed the urgency of all European Union members taking resolute steps to build confidence in the markets," confessed the White House.

But British Chancellor of the Exchequer Alistair Darling had the following nice formulation for Sky News: "When it comes to supporting the euro, that is for the Eurogroup countries [Britain is not one]. We need to show again today that by acting together we can stabilize the situation."

One scheme will add EU60 billion to an existing EU50 billion "currency stabilization fund"—up to now, a back-up facility for currencies of non-EU member countries—and turn it to one that would "defend the euro." A second crazy element would let the European Commission, a wholly appointed (i.e., non-elected) supragovernmental bureaucracy, use the European Union's budget as collateral to borrow bailout funds, immediately for the sovereign debts of Spain and Portugal this week. A third scheme is to create a

"European IMF," requiring all EU governments to cover any debts if one country defaulted on loans backed by its EU "partners." The Wall Street Journal reported that the 27 euro-fools pledged to accelerate budget cuts across the bloc, and devise severe sanctions for violations of the "Maastricht 3% rule," which bars EU nations from incurring deficits greater thanof GDP. A fourth scheme would have the U.S. Federal Reserve bank flood the European central banks with currency swaps liquidity. And the European Central Bank will probably play a role, said the Journal.

The Federal Reserve provision, while not highlighted in any of the discussion of the agreements, is perhaps the most crucial of all. It means that, without the Glass-Steagall protections, the U.S. currency will be drawn into the vortex of the European collapse, and be set up for destruction, faster than you can say "Weimar hyperinflation."

If you didn't like the bailouts of 2008, wait until you see this one.

Heaven or Hell

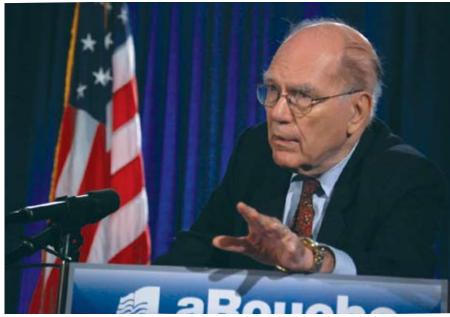
LaRouche's May 8 webcast was dominated by the Glass-Steagall question, both in the opening presentation, and throughout the questions and answer period that followed, in which he came back repeatedly to the fact that passage of this crucial amendment was the *only* issue on the agenda, the strategic opening available to shift the entire system. (The full webcast can be viewed at www.larouchepac.com, and the transcript will be available there in the near future. The next issue of *EIR* will also publish the entire transcript.)

We include some crucial elements here, beginning with the challenge LaRouche posed at the end of his opening statement:

Glass-Steagall is "the only thing that's important right now, because it's going to determine the course of future history: Is the Glass-Steagall reform, which is now on the table, going to be immediately implemented, to prevent the United States from joining the British in going to Hell? Because, if not, we don't have a future, at least, not for a long time to come. If we do, then there is a future. And then, once we decide we're going to do that, how do we maintain the morale, the moral character of our populations? We do that, by providing

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them the assurance, of a knowable, understandable science education, and practice, where they can understand in their own terms of reference, at least in good approximation, that mankind has a future! And that we must organize our policy, not simply for our comfort—we must do that; but we must organize our policy, with a view to what is going to happen to future generations of humanity. We have to earn the respect of future humanity! That we are not only providing the solutions for these problems, or the seed for the solutions, but we are creating a system of commitment, which will ensure that we will continue to progress in that direction, indefinitely; and will give people some sense of what the practical measures are, which can lead to that result.



EIRNS/Stuart Lewis

In response to a question at his May 8 webcast, Lyndon LaRouche declared: "What the British are afraid of, right now, most of all is a Glass-Steagall reform by the United States." LaRouche is shown here addressing the webcast.

"So, let's take the issue: The issue of the collapse of society, the collapse of the present world system, which is now ongoing, which exploded in your face on Thursday [May 6], in the stock market, and which is going to explode in a higher form this coming week, because it's already exploding. Are you going to respond to this, with this change, which I indicate—the Glass-Steagall reform? Otherwise, if you're not going to respond to the Glass-Steagall reform now, you're wasting your time by being alive! It's that true.

"This is the only thing that's morally significant: Are we willing to commit ourselves to this Glass-Steagall perspective *now?!* Now, that leading political forces have put the thing on the table? It's the only thing that'll save us, and there's nothing else worth doing. Anything else, *is a damned waste of time! Just babble*.

"So, let's take the position: Understand the crisis; we can solve it. We have a core of recognized American leaders, who are now leading an effort which will grow very rapidly, not only in the United States, but will grow also, by reputation, in Europe and elsewhere. Let us assume that we are going to win! Because there's no time worth spending on the alternative: You're looking at Hell or Heaven. And once you've made the choice, then you better to start exploring Heaven. Not

going there faster—that may happen, but in terms of, you are committed to ensure, that our victory over the enemy, our victory through initiation of a Glass-Steagall reform, will empower actions, which will lead to the salvation of mankind, from the kind of threat that's immediate."

The 'Greek Crisis'

The first question to LaRouche, following his keynote address, came from Russia, and dealt with the Eurozone crisis, in terms of the Greek situation. LaRouche elaborated on the significance of that blowout, and its solution, as follows:

"So what there is, is there's an effort of this empire, which is an international financial empire, of a monetary system—this empire has now gone to the point, with the aid of Alan Greenspan, of creating a mass of nominal monetary debt, which exceeds all imagination! Nobody knows how big this thing is! It's growing like a wild cancer. And the world can not live with this debt. But the people who are behind it, insist on having the power to rule.

"Now, the tendency to have under these conditions are two: one, is to simply proceed to blow up the world, as has been done by empires before. This was done in the 14th-Century New Dark Age: 30% of the popula-

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tion or more was wiped out by this process! And a completely new form of civilization eventually emerged. That's the one thing that's coming out of the British Empire.

"And the British Empire also controls most of the financial-monetary systems of the world. So, if you're going to save civilization, you have to destroy it, you have to destroy the British Empire. The British Empire has gone ahead, under the filthy Presidents, such as George H.W. Bush, George W. Bush, and now, Obama, who are completely alien in terms of their policies to anything that corresponds to the interests of civilization generally, or the United States in particular.

"And the system is coming down.

"What they're trying to do, is blow up the system, by, instead of allowing Greece to reorganize its money system, they are imposing that the Greek debt be bailed out by Europe! Now, the debt is *worthless*, in large part! Therefore, asking a Europe, which is already on the edge of breaking up, to absorb an unpayable debt, which the Greeks can never repay—not possible!—means you're going to blow up Europe. And the British are doing that.

"Now, what the British are afraid of, right now, most of all—the thing they fear the most—is a *Glass-Steagall reform by the United States*. If the United States adopts the Glass-Steagall reform, which is now being pushed, as I mentioned earlier, then the British Empire is defeated, and we are saved.

"Europe, in the meantime, would go through a collapse. But it could be temporary, if the United States had reestablished itself as a Roosevelt-style reform, as I indicated earlier today. Then we can make it, and we could save Europe, we could save Russia. We could also by doing that, we could ensure the security of China, of India, of other parts of the world. We could stop this world crisis, even now, if we did that.

"If we don't do it, if we don't push through the Glass-Steagall reform, which I specified, there is no hope for humanity's decent existence in the immediate future—beginning this week! And next. What happened on Thursday was no accident: it was a lawful development in a system which is doomed.

"The center of the power of fake money, is the British Empire. It's located, as I said, in this group that was organized by Jacob Rothschild, back in 1971, called the Inter-Alpha Group: That is the center of political-monetary power on this planet. And that thing is ready to collapse, especially with the case of a very sloppy elec-

tion in Britain, which is another factor of instability.

"So what we have to do, is say: 'You're finished' to them. 'We are establishing a U.S. dollar system again. We're going to cancel all these forms of debts which are fraudulent. We're going to reorganize the banks, the way we know how to do it, and have done in the past, following our laws which we voted in our Constitution and other forms. We're going to survive! And the world

"Now, what the British are afraid of, right now, most of all—the thing they fear the most—is a Glass-Steagall reform by the United States. If the United States adopts the Glass-Steagall reform, which is now being pushed, as I mentioned earlier, then the British Empire is defeated, and we are saved.

is going to turn around to cooperate with us, to replace the British system, with a system consistent with the Glass-Steagall principles.'

"That's what has to happen, and that's the way you have to look at it.

"Actually it was no coincidence that it happened in this period. When I scheduled this appearance, here, today, for this time, I knew we were entering into exactly this type of property. And that's what's happened to us.

"But the problem is, that most people who call themselves economists, don't understand economy! They believe in monetary systems! And the point is, you're in a monetary system, where the values are largely fake! Most of the listed monetary values in the world today are totally fake! And if you keep blowing that bubble up, it's going to pop! And it came *popping time*! And that's what's happened.

"And it was going to happen about this time, and I knew it was going to happen about this time, but it happened a few days before this time! There was nothing coincidental, nothing surprising about that that—history is like that. And if you do as I do, and think as I do, in terms of physical economy and not this papier-mâché kind of economy, or an invisible papier-mâché economy which we have now—it's gone! It's doomed, it's

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National Archives

If the United States enters into an agreement with Russia, India, China, and other nations, we will have created a new international system, a Bretton Woods system like that of Franklin Roosevelt. "Under those conditions, we can survive, we can progress. And we can say, 'bye-bye,' to the British Empire!" Shown: The New York Times, forced to cover FDR's recovery program on June 17, 1933; President Roosevelt in 1933.

gone! No mystery about it. The problem is, people attach too much value to this crazy system. They depend upon it. They think it has some intrinsic value, and it doesn't. It's only paper—and it's not even paper any more! It's electronic whisps some place. So, that's what happens.

"So this thing is inevitable. What we have to do, is, presuming we carry through the Glass-Steagall reform, and everything depends on the Glass-Steagall reform—if we carry that through, then we will survive, and we will be a power, to go into Europe, and talk to nations such as Germany, and Russia, and Italy, and France—even the French'll probably agree—and we will say, 'Okay, why don't you just join our system: Resume your sovereignty as sovereign nation-states, and enter into an agreement with us, like the Roosevelt agreement at Bretton Woods. And we will create a fixed-exchange-rate system, based on this, our tradition of our

system.' And, that's the solution!

"But, see, Russia, in particular, has a stinking monetary system, right now, financial system, which is owned by the Caribbean pirates, who own Russia from afar. And the poor Russians can't get access to the money the Caribbean pirates have, and they call it 'Russian money.' And they're looting Russia for the sake of the profits of the Caribbean pirates. So, we can help them with that. We can enter into agreements with governments in Western Europe, and with Russia, and China—China will be very happy to have such an agreement—and India. And a few other countries.

"If we enter such an agreement, we've created a new international system, a Bretton Woods system like that of Franklin Roosevelt. Under those conditions, doing the kind of work I indicated, we can survive, we can progress. And we can say, 'bye-bye,' to the British Empire!"

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Documentation

Cantwell-McCain on Glass-Steagall

This press release was issued by Sen. Maria Cantwell's office, under the title "Cantwell, McCain Seek to Restore Glass-Steagall Safeguards by Separating Commercial and Investment Banking; Amendment would limit bank size and systemic threats to the whole economy."

Thursday, May 06, 2010

WASHINGTON, DC—Today, U.S. Senators Maria Cantwell (D-WA) and John McCain (R-AZ) introduced a bipartisan amendment to separate commercial and investment banking. The proposed change in the banking and financial reform legislation being debated in the Senate is also cosponsored by Senators Ted Kaufman (D-DE), Tom Harkin (D-IA), and Russell Feingold (D-WI). The amendment restores safeguards modeled after the 1933 Glass-Steagall Act that protect bank deposits from being used in Wall Street's risky speculation. The amendment is based on the Cantwell-McCain Banking Integrity Act introduced in December 2009.

"Behemoth banks are putting their money into risky, get-rich-quick Wall Street schemes instead of investing in Main Street," Senator Maria Cantwell said. "So much U.S. taxpayer-backed money is going into speculation in dark markets that it has diverted lending capital from our community banks and small businesses that depend on loans to expand and create jobs. This is stifling America and it is why there is bipartisan support for restoring the important safeguards that protected Americans for decades after the Great Depression. It's time to go back to separating commercial banking from Wall Street investment banking."

"I want to ensure that we never stick the American taxpayer with another \$700 billion—or even larger—tab to bail out the financial industry," said Senator John McCain. "If big Wall Street institutions want to take part in risky transactions—fine. But we should not allow them to do so with federally insured deposits. It is time to put a stop to the taxpayer financed excesses of Wall Street. No single financial institution should be so big that its failure would bring ruin to our economy and destroy millions of American jobs. This country would be better served if we

limit the activities of these financial institutions."

"It's no coincidence that our financial sector got completely out of line once the Glass-Steagall prohibitions were overturned in 1999. By consolidating commercial banking, investment banking and insurance into single financial companies, institutions grew so large and became so interconnected that they were 'too big to fail,'" said Senator Tom Harkin. "It is clear to me that going back to the Glass-Steagall era regulations will help end the problem of 'too big to fail' and will restore order to our financial sector."

The amendment filed today would prohibit commercial banks from affiliating in any manner with investment banks and vice versa; prevent officers, directors, and employees of a commercial bank from serving as an officer, director, or employee of an investment bank and vice versa; prohibit commercial banks from engaging in all insurance activities; and establish one year from date of enactment as the deadline for financial houses to transition and separate their commercial and investment banking operations.

Beginning in 1933, Glass-Steagall established a wall between commercial and investment banking to protect depositor money from being put at risk by Wall Street speculation. For nearly 60 years, this firewall maintained the integrity of the banking system; prevented self-dealing and other financial abuses; and limited stock market speculation. But since its repeal, banks have blended banking and brokerage, using loopholes in the Act and other statutes to market financial products like stocks, mutual funds and underwriting stocks to their consumers at the same time. When these megabanks default under the current system, taxpayers pay for the losses twice over.

The biggest banks keep getting bigger in the bailouts and the acquisitions. While there are 7,000 commercial banks in the United States, just five of them hold over 50 percent of our nations bank-owned assets. Those same five entities hold over 95 percent of bank's risk in the derivatives markets.

Under the amendment, major financial firms currently operating both commercial banks and investment houses will have to make a decision on whether to focus on commercial banking or investment banking. In most of these institutions, the investment banks and the commercial banks will both be very valuable independently and profitable for their stockholders. By separating the commercial banks from the investment banks, the amendment ends speculation with depositor money and returns investments to Main Street.

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GERMANY'S NORTH RHINE-WESTPHALIA ELECTIONS

'No Confidence' Vote Slams Chancellor Merkel's Party

by Rainer Apel

Wiesbaden, May 10—Yesterday's election for state parliament in the German state of North Rhine-Westphalia (NRW) dealt a devastating blow to Chancellor Angela Merkel's Federal coalition government, as well as to her Christian Democratic party (CDU). The vote shows that German voters are just as disgusted with incumbent legislators as are their U.S. counterparts, and that the rapidly deepening economic crisis in Europe has sparked a mass-strike process of political resistance in Germany, as it has in Greece and other nations.

The CDU had ruled NRW in a coalition with the Free Democratic Party (FDP), the same "black-yellow" coalition that currently exists on the national level. But as of 9:00 p.m., vote tallies showed the CDU with 34.3%, its main rival, the Social Democratic Party (SPD) with a nearly identical 34.4%, the Greens with 12.3%, the FDP with 6.7%, and the Left party (the Linke) with 5.5%. Altogether the ruling coalition suffered a net loss of 10.5% since the last election. The results for the LaRouche party in Germany, the BüSo, were a significant improvement, but did not reflect its potential influence in the debate.

NRW's elections are important far beyond that state, which is Germany's biggest, with 13.5 million voters—20% of the national electorate. Several times in recent years, elections there paved the way for a change of power on the national level: In 1997, the formation of a "red-green" government of Social Democrats and Greens in NRW was the prelude to the formation of the same type of coalition after the national elections in 1998,



EIRNS/Johann Castell

The lead candidate of the BüSo party in the NRW elections, Katarzyna "Kascha" Kruczkowski, organizes in Cologne, April 24. The party fielded 34 candidates, and was the only party that offered voters solutions to the crisis.

bringing the Greens into a national government for the first time. In 2005, the Social Democrats were voted out in NRW, being replaced by a CDU-led coalition, and only a few months later, the Christian Democrats formed a "Grand Coalition" with the SPD on the national level.

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The BüSo's website features a video prepared for the NRW elections. Titled "North Rhine-Westphalia: From Duisburg to Mars," it conveys the optimism of the party's campaign, stressing high-tech development and Classical culture. On the video, candidate Kascha Kruczkowski, shown against a backdrop of the state's industrial heartland, discusses what makes the BüSo unique and so vitally important for Germany today. Also shown: the BüSo campaigning in Cologne on April 21. The sign reads, "From NRW to Mars: Throw the Green Zeitgeist onto the Compost Heap."

Coalition Maneuvers Don't Mean Much

Today, with the defeat of the party of the highly unpopular incumbent Gov. Jürgen Rüttgers

(CDU), the CDU will either be replaced by a coalition led by the SPD (SPD-Greens, SPD-Greens and either the Free Democrats, or the Linke), or stay in the government in a Grand Coalition with the SPD. Rüttgers had been trying to prepare the ground for a coalition with the Greens, but crucial constituencies of the traditionally more conservative, pro-industry CDU wanted none of it.

The NRW vote also means that Merkel's coalition will no longer have a majority in the national parliament. That state has six votes in the upper house of parliament, the Bundesrat, and now the CDU has lost its majority there. The Bundesrat has veto power over most legislation passed by the other house, the Bundestag.

The various scenarios for new power constellations have one major flaw which has not gone unnoticed, naturally, by many voters, namely that the anti-industrial Greens have been given a pivotal role which, were they to enter a new NRW state government, would be a disaster for the region that has been the industrial power-



house of Germany. This state has had that status for 150 years, and still does today, in spite of all the deindustrialization that globalization and lunatic ecologism have caused.

The only way for NRW to sustain its population in the midst of this onrushing global economic depression, is through a program of global real economic development which provides the precondition for reindustrialization of Germany's productive potential. Since all the establishment parties are flirting with the Greens, reindustrialization is ruled out in these coalition maneuvers.

LaRouche Movement's Intervention

Therefore, the intervention of the BüSo (Civil Rights Solidarity Movement) with its pro-industrial program, is unique and crucial. The BüSo program, which is presented on a DVD under the title, "From Duisburg to Mars" (http://bueso.de/) tells the history of NRW in three parts: 1) industrialization in the second half of the 19th Century, and the state's development into the powerhouse of Germany as a whole; 2) industrial demolition after the two world wars, followed by rebuilding of industry in the postwar reconstruction era of the 1950s, and then deindustrialization by monetarist cost-cutters, globalizers, and ecologist radicals; and 3) the need for reindustrialization now, focussed on the development of 21st-Century frontier technologies like maglev railroad systems, space vehicles, as well as mining systems for tapping the mineral resources of the Moon and later Mars, and, naturally, systems for allowing humans to live permanently on the Moon and on other planets.

May 14, 2010 EIR World News 13 These frontier technologies also include high-temperature (pebble-bed) nuclear reactors and thermonuclear fusion reactors.

The BüSo is the only political party to address these issues, whereas the establishment parties have preferred to engage in a mud-slinging campaign against their rivals, evading any reference to the economic depression and its effects on the export-oriented industrial sectors of NRW, and, naturally, avoiding any suggestion for a real economic recovery program. All that the voters have been offered by the establishment parties, have been variants of a "green industrial revolution," which supposedly would create new and well-paid jobs. By contrast, the program of the BüSo and its 34, mostly young, candidates have caught the attention of more and more voters.



The impact of the BüSo campaign was enhanced by the energetic presence of Kesha Rogers, the LaRouche Democrat who won the Democratic Party primary in the 22nd Congressional District in Texas two months ago, and who took part in the last two weeks of campaigning in NRW. Five public events with Rogers in the cities of Bielefeld, Dortmund, Bochum, Cologne, and Aachen were well attended, and showed voters the meaning of the BüSo campaign slogan—"First Kesha, now Kascha!" Rogers won her primary under the slogan "Save NASA, Impeach Obama," and that aggressive approach can make Kascha Kruczkowski, the leader of the BüSo slate in NRW, a leading political factor in the state.

Voters attending the five BüSo campaign events with "Kesha and Kascha" also experienced something unique, when Rogers and three members of the LaRouche Youth Movement sang the beautiful Negro spiritual "Must Jesus Bear the Cross Alone?" The BüSo's commitment to a revival of a culture of Classical music that elevates the human mind, stands in striking contrast to the noisy, mind-blowing rock music, which the establishment parties usually play at their events. The BüSo is out to revive the work of the great minds of Classical culture—Nicho-



LaRouche Democrat Kesha Rogers, candidate for Congress in Texas, spent two weeks in NRW, bringing the lessons of her primary victory to the BüSo and its supporters. Here she is shown in Cologne on April 24.

las Cusa and Gottfried Leibniz in philosophy, Friedrich Schiller in poetry and drama, and Bach, Beethoven, and Mozart in music. When national BüSo chairwoman Helga Zepp-LaRouche keynoted the campaign events, she put a strong focus on this cultural dimension. No other politician in Germany is capable of doing that, at present.

The BüSo campaign's principal effort was to address the global financial-economic crash, and to get voters to look at the national and regional situation from that vantage point. The campaign occurred in the context, of course, of the acute crisis, into which the European Currency Zone has been driven by the failure of the political elites of Germany (and of Europe as a whole) to respond in a sane way to the so-called "Greek crisis," which is really a crisis of the British-centered monetarist financial system.

Voters have watched their elected politicians, especially those of the CDU, throw billions of euros of taxpayers' money into the Greek abyss created by speculators, while calling on citizens to tighten their belts, and burying all plans for "costly" repair of infrastructure such as schools, hospitals, roads, water, and power supply. Voters in NRW were extremely angry, and scenes of citizens yelling at CDU politicians at campaign booths were reported in large numbers in the past two or three weeks.

By contrast, when voters flocked around BüSo campaign booths, they were engaged in constructive discussions with the party's candidates and campaign activists, showing interest in the program for recovery. Even before the polling places opened May 9, one result of the election campaign was already clear: Whatever the outcome would be in terms of votes cast for one or the other party, the campaign of the BüSo had become the talk of the town in many large and small cities in the state. And that shows that there is a real potential for turning around the political and economic situation of Germany, even in the near future. That effect will resonate in the rest of the nation—and that is the main message sent out by these elections.

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Was the Attack on Marja a False Flag Aimed at the Encirclement of Iran?

by Ramtanu Maitra

Less than three months ago, Gen. Stanley McChrystal, commander of U.S. and international forces in Afghanistan, unleashed, amidst loud drumbeats, Operation Moshtarak. The battle of Marja was identified as the biggest, so far, of the eight-year war in Afghanistan. Highly impressionable foreign reporters stated that its outcome would determine the chances of "success" of President Obama's revamped Afghan strategy. Three months since, little is heard about Operation Moshtarak. From time to time, reports from that corner of the world assure the West that the ISAF (International Security Assistance Force) troops were doing fine in Marja, located in southern Afghanistan's Helmand province, but while some progress is visible, the area has not been fully secured.

However, what cannot be denied is that the ISAF is moving thousands of very well-equipped troops into Kandahar province—just a hop, skip, and jump away from northern Iran. It has set up a number of forward operational bases to accommodate a surge of troops close to Iran's borders. It was known at the outset that the troops would not go after the massive opium production that is now harvested in the area, but what was not known, is that the troops have been ordered *not* to engage the insurgents, who dominate the area.

Meanwhile, a war of words between Iran and the West (and Israel, of course) has sharpened. And, the talk is growing louder among some in Western corridors that, barring an attack on Iran's nuclear facilities, "everything is on the table," needed to squeeze Tehran to give up its uranium enrichment program.

Tony Blair, whose shadow falls long on the Obama Administration, made clear his views on Iran last January, at the Iraq Inquiry hearing set up under Lord Chilcot. He said on that occasion: "When I look at the way Iran today links up with terror groups ... a large part of the destabilization of the Middle East ... comes from

Iran.... My judgment—and it may be other people don't take this view, and that's for the leaders of today to make their judgment—is we don't take any risks with this issue."

Inside the United States, former U.S. Ambassador to the United Nations, neocon John Bolton, in a May 2 Washington Post op-ed, "Get Ready for Nuclear Iran," wrote: "The further pursuit of sanctions is tantamount to doing nothing. Advocating such policies only benefits Iran by providing it cover for continued progress toward its nuclear objective. It creates the comforting illusion of 'doing something.'... Speculating about regime change stopping Iran's nuclear program in time is also a distraction.... We therefore face a stark, unattractive reality. There are only two options: Iran gets nuclear weapons, or someone uses pre-emptive military force to break Iran's nuclear fuel cycle and paralyze its program, at least temporarily...."

However, within the Obama Administration, a number of senior Cabinet members, such as Defense Secretary Robert Gates, and National Security Advisor Gen. James Jones, among others, do not subscribe to this view. These individuals recognize that any attack on Iran, at a time when the United States is crippled by the financial crisis, and ongoing wars in Iraq and Afghanistan, would unleash a debacle that would be impossible to control. These individuals want Operation Moshtarak to remain confined within Afghanistan, and to lay the foundation for an "eventual" withdrawal of the majority of troops from Afghanistan.

Moshtarak was launched with the objective of taking control of major towns in southern Afghanistan, by driving the "Taliban" out and installing "good governments," which would work with the ISAF to "win the hearts and minds" of the Pushtun ethnic majority in Helmand and Kandahar provinces. At the time, journalists pointed out that Operation Moshtarak would be the

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USMC/Lance Cpl. Walter Marino

While the spotlight has been on the U.S./NATO offensive, Operation Moshtarak, in Marja, thousands of troops are being moved into nearby Kandahar province, just a stone's throw from the border with northern Iran. Here, U.S. Marines patrol in Marja, March 14.

first big show of force, since Obama ordered 30,000 more troops to Afghanistan last December. NATO and ISAF forces were under pressure to achieve decisive military gains this year to turn the tide in the war, before troops begin to withdraw next year.

The thinking was that the assault on Marja, with a dense warren of desert canals, would demonstrate McChrystal's counterinsurgency strategy, which emphasizes seizing control of population centers. The town's role as an infiltration route for fighters coming from Pakistan, and as a center of opium production, which provides much of the revenue that has fueled the insurgency, makes it particularly significant. It was also pointed out that the pacification of the area is seen as critical for reversing Taliban gains in and around Kandahar, the country's second-largest city.

Did Kandahar Offensive Succeed?

While some in the West accepted the Obama Administration's version of the stated objectives of Operation Moshtarak, Asma Nemati, a researcher working at the American University of Afghanistan, in her Kabul dispatch published in the Feb. 22 Foreign Policy magazine online, reported that some Afghans she had spoken with were wondering why Operation Moshtarak has been talked about so much. Some Afghans in Kabul,

where she was based at the time, were clueless about what was going on in a province 400 miles away. Others were wondering what the strategic importance of Marja was to Afghanistan overall, and criticized the operation, Nemati reported. Some believed the hype around Moshtarak was part of an elaborate American publicity stunt to bolster support for the Administration's troop surge, announced in late December, she noted.

Meanwhile, a new report, "Operation Moshtarak: Lessons Learned," released in May by the International Council on Security and Development (ICOS), a policy think tank, with offices in London, Brussels, and Rio de Janeiro, found that 61% of Afghans inter-

viewed feel more negative about NATO forces after Moshtarak than they did before the February military offensive in Marja. Of those interviewed, 95% believe that more young Afghans have joined the Taliban in the last year. Seventy-eight percent of the respondents were often, or always angry, and 45% of those stated they were angry at the NATO occupation, civilian casualties, and night raids. The poll was based on interviews with more than 400 Afghan men, from Marja, Lashkar Gah, and Kandahar, by the ICOS in March 2010.

Ninety-seven percent of Afghans interviewed said the operation had led to new flows of internally displaced people. Thousands of Afghans were forced to move to overcrowded refugee camps with insufficient food, medical supplies, or shelter. Aid agencies were overwhelmed and under-resourced. In addition, 68% of Afghans questioned by ICOS believed that the Taliban will return to Marja.

In an April 15 article, "McChrystal Backtracks on Troop Veto for Kandahar Shuras," Gareth Porter of Inter-Press Service (IPS) reported that the U.S. military has now officially backtracked from its earlier statement that it would seek the consent, or consultative conferences, with the local shuras (councils), to carry out the coming military occupation of Kandahar City and nearby districts. This contradicts a pledge made by

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Afghan President Hamid Karzai not to carry out the operation without such consent.

Lt. Col. Tadd Sholtis, a spokesman for General McChrystal, told IPS that local tribal elders in Kandahar could "shape the conditions" under which the influx of foreign troops operate during the operation, but would not determine whether or where NATO troops would be deployed in and around the city. Asked whether ISAF is committed to getting local approval before introducing more troops into Kandahar and surrounding districts, the spokesman said, "We're not talking about something as simple as a referendum."

At a March 29 briefing in Kabul on plans for the Kandahar operation, however, an unnamed senior U.S. military official told reporters that one of the elements of the strategy for gaining control over the Taliban stronghold is to "shura our way to success"—referring to the Islamic concept of consultative bodies. In those conferences with local tribal elders, the officials said, "The people have to ask for the operation.... We're going to have to have a situation where they invite us in."

At the end of April, NATO commanders scrapped a helicopter assault by hundreds of U.S. and Afghan troops. That decision, designed to prepare the ground for the biggest offensive of the nearly nine-yearold war, has frustrated U.S. officers on the ground, who say their local partners are not ready to lead. "It wasn't Afghan enough.... Approval was denied," a U.S. Army officer with knowledge of the plans told Reuters. "The implication is that the Afghans are in the lead. The

bottom line is we're nowhere near the stage where they can be in the lead." The assault in a rural part of Kandahar—due to take place in March, and repeatedly post-poned—would have been one of the biggest operations so far in the province, where U.S. troops are massing to carry out a major offensive beginning in June.

All this suggests that the issue of how to go ahead with the large-scale military operation scheduled to begin in June is far from resolved. It is clear that the support of the elders is hard to come by. President Karzai said NATO's Kandahar operation would not be carried out until the elders themselves were ready to support it, according to a number of press reports.

In other words, a full-fledged military operation to take control of the city of Kandahar is being side-tracked. Karzai, who hails from Kandahar, is strongly opposed to the bloodbath that is expected to follow such an operation. On May 3, speaking to reporters via video conference in Kabul from Kandahar, provincial governor Tooryalai Wesa said, "I have to say it is not a military operation. No tanks, artillery, aircraft or bombings are discussed."

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"It is very much contrary to the operations we conducted in Marja," he said, referring to the military campaign by thousands of Afghan and foreign troops in villages in neighboring Helmand province earlier this year. "As we agreed, and as President Karzai said earlier, no operation will be conducted without the agreement of Kandahar's people," Wesa said.

At the same time, all reports indicate that ISAF troops are massing in large numbers in Kandahar, the spiritual homeland of the Taliban, in what will ostensibly be the largest offensive of the war. But then, if it is not a military operation, as Governor Wesa says, one wonders why the troops are being massed in such large numbers.

The Massing of Troops

This August, when all 30,000 U.S. troops promised by President Obama are stationed in Afghanistan, foreign troop numbers, not counting the more-than-100,000 private contractors, many of whom are "unofficial" arms bearers, will reach 150,000. Reports indicate that, in fact, Kandahar, which housed 9,000 coalition troops as recently as 2007, is expected to house as many as 35,000 troops by the time the surge is complete.

With the objective of bringing such a large number of foreign troops into the area, the U.S. has also sped up building bases to house and secure them. In a Feb. 10 article, "Totally Occupied: 700 Military Bases Spread Across Afghanistan," Nick Turse of Tomdispatch.com, wrote that, according to official sources, approximately 700 bases of every size dot the Afghan countryside, and more, like the one in Shinwar, are under construction or soon will be, as part of a base-building boom that began last year.

The bases range from relatively small sites like Shinwar, to mega-bases that resemble small American towns, Turse said. One such mega-base cropped up recently in the desert land of Helmand Province. According to Capt. Jeff Boroway from the 25th Naval Construction regiment, "This place was desert at the end of January. I mean nothing. And now you've got a 443-acre (179-hectare) secure facility," he told reporters. Boroway said engineering units were rushing to finish work on the camp to accommodate the deployment of thousands of additional troops, including most of an 8,000-strong brigade of U.S. Marines.

On the other hand, the Shinwar site, located in the eastern Afghanistan bordering Pakistan, will be a small

forward operating base (FOB) that will host both Afghan troops and foreign forces. A small number of the coalition sites are mega-bases like Kandahar Airfield (KAF), which boasts one of the busiest runways in the world, and Bagram Air Base, a former Soviet facility that received a makeover, complete with Burger King and Popeyes outlets, and now serves more than 20,000 U.S. troops, in addition to thousands of coalition forces and civilian contractors.

In addition, Lance Cpl. Dwight Henderson, Regimental Combat Team 7, in a report, "Marines establish new patrol base in Southern Afghanistan," on April 19, said Marines and sailors with Weapons Company, 2nd Battalion, 2nd Marine Regiment, established a new patrol base in the area of Laki, Garmsir District, Helmand province, March 30. A platoon from Weapons Company moved into the large, concrete compound that was a former hospital, to more easily conduct patrols and operations in the more southern portion of their area of operations.

To facilitate U.S. base construction projects, the Pentagon's Defense Logistics Agency (DLA) has launched the Maintenance, Repair and Operations Uzbekistan Virtual Storefront website. From a facility located in Termez, Uzbekistan, cement, concrete, fencing, roofing, rope, sand, steel, gutters, pipe, and other construction material manufactured in countries, including Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, and Turkmenistan can be rushed to nearby Afghanistan to accelerate base-building efforts. "Having the products closer to the fight will make it easier for war-fighters by reducing logistics response and delivery time," Chet Evanitsky, the DLA's construction and equipment supply chain division chief, told the media.

While most of these bases are small, and abandoned as the troops get yanked out to assemble at larger bases, Rowan Scarborough, in a Jan. 7, 2009 article in *Human Events*, "U.S. Adds Eight Bases in Afghanistan," said the U.S. Army is building eight major operating bases in southern Afghanistan in an expansion that underscores a new, larger troop commitment to try to defeat the stubborn Taliban insurgency. The planned network of new bases shows the degree to which U.S. commanders will step up operations to hunt down bands of Taliban insurgents from multiple staging points as part of the Iraq-style troop surge.

Scarborough said two Defense Department sources

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USMC/Staff Sgt. William Greesor

A plan to set up large, forward bases in Afghanistan, to accommodate a surge of troops, close to Iran's borders, was activated in 2005. The troops had been ordered not to engage the insurgents who dominate the area. Shown: U.S. Navy Seabees build a forward operating base (FOB), in Nawa District, Helmand Province, October 2009.

reported that the company will build eight of the largest Forward Operating Bases (FOBs) in Afghanistan in the Kandahar area and other southern Afghanistan locations. This area is the birthplace of the radical Taliban movement that seized control of the country in the 1990s, and was ousted from power by the U.S. in 2001. "The earlier bases were meant to hold hundreds. These will house thousands," one source said.

A Long, Enduring Plan

While Operation Moshtarak, which followed the propaganda barage, aimed at Western audiences, about a "Taliban" takeover of southern Afghanistan, is a recent event, the plan to establish large, permanent bases in Afghanistan was set in place years before. On March 30, 2005, an *Asia Times* article, "U.S. scatters bases to control Eurasia," pointed out that Washington had decided to set up nine new bases in Afghanistan in the provinces of Helmand, Herat, Nimrouz, Balkh, Khost, and Paktia. The provinces of Helmand, Herat, and Nimrouz are all close to Iran's northern borders.

The article quoted U.S. Army spokesman Maj. Mark McCann saying that the United States was building four military bases in Afghanistan that would only be used by the Afghan National Army. On that occasion,

McCann stated, "We are building a base in Herat. It is true." At the time, the U.S. had three large operational bases inside Afghanistan; the main logistical center for the U.S.-led coalition was Bagram Air Field north of Kabul. Other key U.S.-run logistical centers in Afghanistan include Kandahar Air Field in southern Afghanistan, and Shindand Air Field in the western province of Herat. Shindand is about 100 kilometers from the border with Iran, a location that makes it controversial.

The proximity of the Shindand base to Iran is cause for concern to Tehran, says Paul Beaver, an independent defense analyst based in London. Beaver pointed out that, with U.S. ships in the Persian Gulf, and Shindand sitting next to the border of Iran, Tehran has a reason

to worry that Washington is in the process of encircling Iran.

Also in 2005, Gen. Richard Myers, then-chairman of the Joint Chiefs of Staff, told reporters in Kabul that the Department of Defense was studying the possibility of setting up permanent U.S. bases in Afghanistan. He said: "At this point we are in discussions with the Afghan government in terms of our long-term relationship, remembering that for the moment, the coalition has work to do here, the United States has work to do here, and that is where our focus is right now."

Pakistani Lt. Gen. Talat Masood (ret.), responding to Myers' statement, pointed out then, that while Pakistan will not be upset about this, Iran, Afghanistan's neighbor to the west, would be. Iran sees the United States as an enemy, recalling that President Bush had criticized it as being part of an "axis of evil." Masood said a U.S. decision to keep bases in Afghanistan could be partly out of a desire to contain Iran and monitor its forces.

That was in 2005, and things have moved much further forward in 2010. It is safe to say that, with 35,000 foreign troops soon to be in southern Afghanistan, and military bases in place, the process of encircling Iran has advanced considerably.

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Fed Judge Cancels Human Gene Patents: You Can't Own a 'Product of Nature'

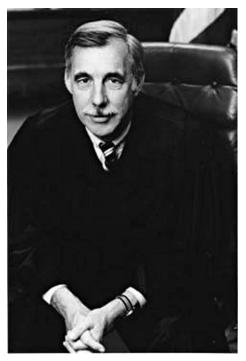
by Marcia Merry Baker

May 5 (EIRNS)—Federal District Judge Robert W. Sweet, on March 29 in New York City, issued a decision invalidating patents on human genes BRCA1 and BRCA2-associated with breast cancer—citing in his written opinion (filed April 2) that, you cannot patent a "product of nature." This ruling is a welcome salvo against a hallmark practice of globalization over the last 40 years, that of allowing private "ownership" and "intellectual property rights" control over life forms—bacteria, human animal genes, food seeds and other genetics, and even diseases. Deference to this wrongful policy was forced through, not only in the United States—where it violates the Constitution and tradition—but also internationally, through the enforcement of GATT, the WTO, IMF. World Bank, and the other institutions of globalization.

Be clear on the history: The pile-up of patents on lifeforms, is

not the result of modern advances in knowledge and skills in biology, per se—which are valuable, and would be far greater but for the wrongful patenting; it is the result of the attempted control of the means to life by elite financial and political circles, centered in London, who are behind the era of mega-companies, and "free" (imperial) trade.

At present, the Obama Administration is adamant that the patenting of life forms must continue at the service of private financial power centers, especially the food seed control cartel. Private-patenting of lifeforms will not be rolled back, was the decree of a science advisor to the Secretary of State and Agency of Interna-



Federal District Judge Robert W. Sweet's decision, invalidating patents on human genes associated with breast cancer, strikes at a hallmark practice of globalization: that of allowing private "ownership" over life forms.

tional Development, Dr. Nina V. Fedoroff, at the plenary session of the U.S. Department of Agriculture Outlook Forum in February, when questioned by this author. She cited the key free-trade-era changes in U.S. nominal law—the 1970 Plant Variety Protection Act, and a 1980 Supreme Court decision approving patenting of life forms—to justify her declaration.

Now, with Judge Sweet's ruling, and his thorough 152-page decision, this London-subservient viewpoint is called into question, even if implicitly.

The specific patents that were contested in the U.S. District Court, Southern District of New York, were awarded in the 1990s by the U.S. Patent and Trademark Office (USPTO), to the private firm Myriad Genetics Inc., based in Utah, and to its collaborator, the University of Utah Research Foundation. In May 2009, a suit to invalidate the patents was filed

by a host of plaintiffs, including scientific societies (e.g., Association for Molecular Pathology), medical associations (e.g., American College of Medical Genetics), and several private cancer patients, physicians, and other individuals. Their plea to cancel the cited patents, was made in terms of violation of law by the U.S. Patent Office, and also, violation of the U.S. Constitution.

The New York suit thus poses the question at large, of private control over life forms. At present, nearly 20% of the human genome, involving 4,000 genes, is patented, under various legalisms. Because of its BRCA1 and BRCA2 patents, Myriad is the one and

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only company in the nation, that tests for the presence of the genes that are associated with the likelihood of breast cancer. The test's cost is \$3,000 and up; most insurance, including Medicare and Medicaid, will not pay for it.

Patented Food Crop Seeds

In the category of crop genetics, the patents awarded to date—cotton, corn, soybeans, alfalfa, eggplant, sugar beets, and others—are providing vast control over seed-breeding, sales, and research. There are now only a select few mega-players worldwide: Monsanto Co., DuPont/Pioneer Hi-Bred, Dow, Cargill, Syngenta, and

Bayer CropScience. The top three—Monsanto, DuPont, and Syngenta—account for half of all sales of propriety (patented) seeds. Monsanto alone accounts for 60% of the corn and soybean seed market in the U.S., through direct sales, and trait-licensing agreements. Monsanto's patented biotech traits are in 90% of U.S. soybeans, and 80% of U.S. corn.

A suit against Monsanto was brought in 2006 by alfalfa seed growers and allies, and won in 2007, at the Federal District level in California. The ruling stayed Monsanto's sales of its brand-name herbicide resistant, bio-engineered (BE) Roundup Ready Alfalfa.

On April 27, a Supreme Court landmark was made, when the Court, for the first time ever, took oral arguments involving the question of a patented BE lifeform, Roundup Ready Alfalfa, occasioned by Monsanto appealing the 2007 judgment staying its sales of the seed. The matter of law is delimited to the issue of the fact that Monsanto started selling its BE alfalfa in 2005, before all required Federal studies were done. However, as one of the principal plaintiffs, Pat Trask, a South Dakota alfalfa seed grower, declared, at a Washington, D.C. briefing after the Supreme Court's April 27 hearing: If we allow this kind of privatized seed control to go on, "then Monsanto, not God, becomes an arbiter of nature."

A judgment is expected on the case (Monsanto v. Geertson Seed Farms, Inc.) by the end of the Supreme Court's term in June. Alfalfa, a high-nutrition fodder, is the fourth-largest crop grown in the United States, by area.



The legal victory, in 2007, in a case brought by California alfalfa seed growers, stayed Monsanto's sales of its Roundup Ready Alfalfa.

Renewed Fightback

The import in both these Federal cases, involving opposition to patent claims to lifeforms, is that there is a renewed fightback underway against the premises and powers that have dominated the last four decades, undermining the sovereign right of governments to see to the betterment of its populations. The court battles occur amidst a mass strike process of opposition to Washington and its connivance with the physical-economic breakdown taking place. The outcome of the process, will not be "decided in the courts" as such, but by the thinking guiding the leaders in the battle, is critical.

To that purpose, Judge Sweet's arguments and clarifications in his 152-page decision, are extremely valuable. Rightly, there has been quick international acclaim, which amounts to recognition of a potential resurgence of the founding principles of the United States, as a republic, not a flunky of London. An April 14 editorial in *The Hindu* of India, titled, "Landmark Judgment," wrote, "What is laudable is Judge Sweet's brilliant assessment of scientific facts to invalidate every claim of the company."

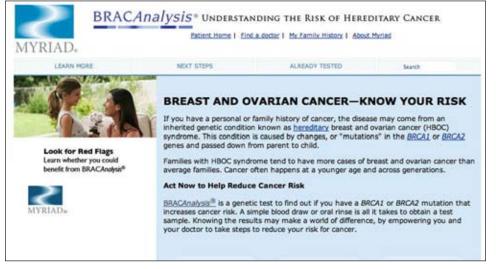
What follows are *EIR*'s summary descriptions of key points in Judge Sweet's written opinion, giving exact text quotations as noted, with page numbers from his decision.

The Case: Plaintiffs, Defendants

The case before the U.S. District Court, Southern District of New York, is that of the Association for Molecular Pathology et al., Plaintiffs, against the U.S. Patent and Trademark Office et al., Defendants. The Plaintiffs were represented by attorneys from the American Civil Liberties Union Foundation, and the Public Patent Foundation. A U.S. District Attorney represented the Patent Office (USPTO); and the Jones Day law firm represented the defendants, Myriad Genetics and Directors of the University of Utah Research Foundation.

The plaintiffs asked the court for summary judgment, to declare invalid 15 claims contained in seven patents relating to the human BRCA1 and BRCA2 (Breast Cancer Susceptibility Genes 1 and 2), on three

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Its gene patents have given Myriad Genetics Inc. sole ownership of the only U.S. test for the genes associated with breast cancer. The test costs \$3,000 and up; most insurance plans, including Medicare and Medicaid, do not cover it.

grounds, as summarized by Judge Sweet:

"(1) the Patent Act, 35 U.S.C. Section 101 (1952); (2) Article I, Section 8, Clause 8 of the U.S. Constitution, and (3) the First and Fourteenth Amendments of the Constitution, because the patent claims cover products of nature, laws of nature and/or natural phenomena, and abstract ideas or basic human knowledge or thought" (p. 1, decision).

The Patent Claims Are Invalid

The Defendants presented arguments to justify retaining their patent claims, in which they had been granted two kinds of rights: 1) for the gene itself, and 2) for what they call the "method" of comparing the cancer-associated gene with the non-cancer associated one.

Judge Sweet decided against the validity of both of their types of claims. Regarding the first category, he said that, the human genetic material in question is a product of nature, not patentable:

"While many inventive steps may be necessary to allow scientists to extract and read a gene sequence, it is undisputed that the ordering of the nucleotides is determined by nature" (p. 31, decision).

Secondly, he judged that the process of making comparisons is an intellectual act, not a patentable "method."

Sweet based his decision in both categories of patents, on how the defendants' claims violate the relevant

Patent Law 35 U.S.C. Section 101,¹ giving copious citations of Federal Court rulings and clarifications from the past.

For example, he cited several decisions from the 1920s and '30s, especially involving the condition and use of uranium, vanadium, and other elements:

"Gen. Elec. Co. v. De Forest Radio Co., 28 F. 2d 641 (3d Circ. 1928), noting that 'a patent cannot be awarded for a discovery or for a product of nature, or for a chemical element" (p. 99, decision).

Among Sweet's citations from the more recent period:

"The exclusion of products of nature as patentable subject matter under Section 101 also reflects the Supreme Court's recognition that 'phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.' *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972).' Thus, as Justice Breyer has observed, 'the reason for this exclusion is that sometimes *too much* patent protection can impede rather than "promote the Progress of Science and useful Arts," the constitutional objective of patent and copyright protection.' *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.* 548 U.S. 124, 126-27 (2006) (Breyer, J., dissenting) (quoting U.S. Const., Art. I, Section 8, cl. 8.) (emphasis in original).

"For these reasons, 'manifestations of laws of nature [are] free to all men and reserved exclusively to none.' *Funk Bros. Seed Co. v. Kalo Inoculant Col.* 333 U.S. 127, 130 (1948)."

However, Sweet, in his decision, specifically excluded taking up the Constitutional questions raised by the Plaintiffs, saying that it serves the nation best when judges refrain from interpreting the Constitution when

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^{1.} The text of the United States Code, Section 101 of Title 35 states:

[&]quot;Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title."



USDA/Lynn Betts

In strictly legal terms, Sweet's decision leaves to future determination, the question of rolling back the patent eligibility for "man-made" lifeforms, including crop seeds. Shown: a soybean farm in central Iowa.

there is no need to. He determined that the scope of Patent Act, 35 U.S.C. Section 101, was sufficient to make a judgment on the patent-eligibility of the human genes and the methods contested in the case before him.

[In strictly legal terms, Sweet's decision now leaves to future determination, the question of rolling back the patent eligibility for "man-made" lifeforms, namely crop seeds, not naturally occurring].

The Nature of the Case

Sweet described the nature of the cancer gene case, and his task, in the opening section of his decision:

"As discussed *infra* in greater detail, the challenged patent claims are directed to (1) isolated DNA containing all of portions of the BRCA1 and BRCA2 gene sequence and (2) methods for 'comparing' or 'analyzing' BRCA1 and BRCA2 gene sequences to identify the presence of mutations correlating with a predisposition to breast or ovarian cancer. Plaintiffs' challenge to the validity of these claims, and the arguments presented by the parties and amici, have presented a unique and challenging question:

"Are isolated human genes and the comparison of their sequences patentable?

"Two complicated areas of science and law are involved: molecular biology and patent law. The task is to

seek the governing principles in each and to determine the essential elements of the claimed biological compositions and processes and their relationship to the laws of nature. The resolution of the issues presented to this Court deeply concerns breast cancer patients, medical professionals, researchers, caregivers, advocacy groups, existing gene patent holders and their investors, and those seeking to advance public health."

A 'Lawyer's Trick'!

"The claims-in-suit directed to 'isolated DNA' containing human BRCA1/2 gene sequences reflect the USPTO's practice of granting patents on DNA sequences so long as those sequences are claimed in the form of 'isolated DNA.' This practice is premised on the view that DNA should be treated no differently from any other

chemical compound, and that its purification from the body, using well-known techniques, renders it patentable by transforming it into something distinctly different in character. Many, however, including scientists in the fields of molecular biology and genomics, have considered this practice a 'lawyer's trick' that circumvents the prohibitions on the direct patenting of the DNA in our bodies, but which, in practice, reaches the same result. The resolution of these motions is based upon long recognized principles of molecular biology and genetics: DNA represents the physical embodiment of biological information, distinct in its essential characteristics from any other chemical found in nature. It is concluded that DNA's existence in an 'isolated' form alters neither this fundamental quality of DNA as it exists in the body nor the information it encodes. Therefore, the patents at issue directed to 'isolated DNA' containing sequences found in nature are unsustainable as a matter of law and are deemed unpatentable subject matter under 35 U.S.C. Section 101.

"The facts relating to molecular biology are fundamental to the patents at issue and to the conclusions reached. Consequently, in the findings which follow, the discussion of molecular biology precedes the facts concerning the development, application, and description of the patents...."

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Freature

The Crisis Is Already Here: Now, Grab the Solution!

Lyndon LaRouche was the special guest on the May 5 edition of the LPAC-TV Weekly Update, hosted by EIR Economics Editor John Hoefle. The video is archived at http://larouchepac.com/node/14367.

John Hoefle: Welcome to the LaRouchePAC Weekly Report. Today is May 5,2010. I'm John Hoefle, and with me today is a special guest, Lyndon LaRouche.

Lyn, you were at a diplomatic meeting yesterday, where you delivered a very striking message.

Lyndon LaRouche: Yes. Well, it's important that I repeat that, and amplify that a bit today, in order to give it the broader attention it deserves, and acquires, in point of fact: We are now, already, in a general breakdown crisis of the international monetary-financial system. The breakdown crisis, for the moment, is centered in the Transatlantic region. The notable points, of course, are Western and Central Europe, the United States, and Brazil. What is occurring is actually a final, or terminal stage of breakdown of the existing monetary-financial system. It is not something about to happen. It is something which has already happened, and is in process.

Often, it's the case, as now, that people are still trying to forecast something which has already happened. The collapse has already happened, and the idea of going ahead with a bailout of Greece, which is an idiotic, and actually criminal venture, because the problem is not Greece: The center of the problem of the breakdown crisis in process is the British system. And that means essentially, the Rothschild-led system of the Inter-Alpha Group, whose activities are centered in Brazil, as part of this operation. And this system is now hopelessly bankrupt and is going down.

So the question is not what is going to happen. It's already happened. The question is what are we going to do about it? And the answer is, that we have to go to what is a Glass-Steagall reform of the U.S. system, immedi-



LPACTV videograb

"The question is not what is going to happen," LaRouche declared. "It's already happened. The question is what are we going to do about it? And the answer is, that we have to go to a Glass-Steagall reform of the U.S. system, immediately."

ately. Which means we have to extend that reform to include much of Europe. Because if the Transatlantic region, typified by the United States and Western and Central Europe, and also Russia—if they go down in one collision, the entire planet goes into a new dark age. And therefore, the question before us is not whether something is going to happen, or not—it is already happening! This farcical bailout of Greece, which makes no sense whatsoever, if that continues, we're on the road to a hopeless situation, a breakdown crisis. The crisis is already here: Can we stop it? Can we reverse it? That's the question now.

And several conditions are required. First of all, there is an advantageous development: The action against Goldman Sachs (or Goldman Sucks, if you prefer) is quite appropriate, because it triggered enough forces inside the United States to begin to think in terms of going to a Glass-Steagall reform. There's a piece of legislation kicking around now, in the process, as you know. And that is a necessary reform.

Impeachment: A Very Good Idea

We will not get that reform, without getting Obama, essentially, on the way out of the Presidency. As long as Obama's there, and since he's a British agent, essentially, he will sabotage everything in that direction, that the British don't want done. And therefore, it's important to think about throwing him out, in whatever the best way is to do it.

And to threaten impeachment is a very good idea: If you threaten impeachment on the basis of charges which are already existing against him, ready to be launched, then he will quit anyway, perhaps. But since he's like the Emperor Nero, he's not going to do sane things anyway. You remember, Nero performed something on his mother, which we will not mention here, then killed her; took his best friend, and put him through four attempts at murder, and the fourth succeeded, four strenuous attempts on this poor, old geezer; and then he killed

himself! And that's the profile that fits Obama. So, we don't know how he's going to react, and how his circle's going to react to this.

But the point is, as long as Obama is President, the United States is finished, because this is already the breakdown crisis, now centered in Europe, in the euro system, but which is also moving toward the United States, and also in South America through the Brazil connection, with the Rothschild connection.

So, we are at a point where the question is not, what's going to happen, but rather, what are we going to do about it? It's already happening. What's the reform? The reform is immediately to install a Glass-Steagall reform in the United States. Once that action is taken, which requires one piece of legislation, then we can turn our attention to Europe, and rescue Europe. We will rescue Europe by extending the Glass-Steagall reform to include Western and Central Europe.

The next step, in part of that process: We then have to go to China, which is key in this operation. China is prepared to defend the price relationship of Chinese goods, with respect to the dollar. Therefore, we go to China, as the partner of Russia and India, in order to put through an equivalent of a Glass-Steagall reform among those nations, including Russia.

On that basis, we're now prepared to reorganize the planet.

Now, the key thing here is, what we're going to do, by launching a Glass-Steagall reform, inside the

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United States: We are going to wipe out quadrillions of fake money and fake debt. Once we have rid the world of this mass of fake debt, which will eliminate most of Wall Street, admittedly, but we don't need Wall Street. The elimination of Wall Street is no great loss to the United States—it's a great advantage. The British system going under, similarly, with the Glass-Steagall there, an excellent idea.

By a Glass-Steagall reform extended to Europe, from the United States, as a treaty agreement, we eliminate most of the debt of Europe, that's crushing it. You eliminate a great part of this otherwise unpayable Greek debt, as a byproduct. You will eliminate the unpayable debts of Spain and Portugal and Ire-

land, and reduce the debt to the legitimate debt, by a Glass-Steagall standard.

On that basis, we can now, then, turn around, and say, we can go ahead with reforms which will rebuild a collapsing economy. That's then available to us. And that means we're going to go, largely, to infrastructure. Why infrastructure? Because we have destroyed industry. We have destroyed agriculture, and you can not get a surge of growth in industry or agriculture.

The entire Russian official government policy today, for example, is another case of this: Russia's financial system is insane. Unless they get rid of it, break from this BRIC [Brazil-Russia-India-China] connection, which is the British-Rothschild connection, they're going to go under, too. But, I think if we get the reform with the United States, with China, with Russia—these agreements—Russia will go along, because they need it. They need the reform.

Rebuilding a Destroyed World

In that case, we're now talking about what? We're talking about a world, in which we have destroyed, especially since about 1968, the productive powers of labor, in most of the world—step, by step, by step, by



Courtesy of Progress Energy

It will take one to two generations to build our way out of this crisis; the key is infrastructure: mass transportation, water system, power, especially, nuclear power. Shown: Shearon Harris nuclear power plant, New Hill, N.C.

step—we've destroyed it; we've gone down. We have to rebuild. Well, you can't rebuild by building little industries here, or little things there, or industries there. What you have to do, is go to what the government can do. Because the private businesses no longer exist, in the main. They're not there. You can't revive the dead: You have to create new birth.

Now, the way we do that, is, we go to what the public sector of economies can legitimately do, competently do, and that is, build essential infrastructure: This means mass transportation, this means power, this means water systems, that sort of thing. Government can finance these things. We're talking about things which are one-generation, two-generation maturity, in terms of investments. Government can do that in infrastructure. It actually goes for a century, but the first 50 years is crucial.

Once we get the infrastructure started, just started, immediately—as we saw under Roosevelt in the 1930s—once you start with the infrastructure program, you now are creating employment in the private sector, as an adjunct of the infrastructure program. In other words, you're building railways: Well, that involves a lot of industry. You're building a complete mass-transportation

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system, you're rebuilding water systems, you're rebuilding power systems, particularly new power systems; all these things require the private sector to be called in, to begin to produce the things which are relevant to these large infrastructure projects.

Now, we also have a problem, that, not only do we lack industries which we've destroyed, we also lack a skilled labor force. We have a young labor force which has no skills to speak of, whatsoever. So, we're going to have to go back to what we did with the CCCs [Civilian Conservation Corps] and similar programs in the 1930s. We're going to have to provide mass employment, in infrastructure, and spill that mass employment in infrastructure over into the private sector, in terms of employment.

You can not take people out of the slum, who have been living on drug habits and similar kinds of things, and suddenly make them productive workers; they're going to take drugs all the way to work and coming from work. You've got to recondition them, as we did with the CCCs. You have to get Federal programs which will take youth, who are presently useless youth, put them into situations where, with a painful process of adjustment, they begin to become productive labor. As they gain productive habits and stability in their lifestyle, they are then suited for employment in new industries.

The infrastructure development will demand the creation of the new industries. These younger people can then be absorbed, as trainees, as apprentices, into these industries, along with people who remain skilled, who will lead in the process of skills. We can then build, re-create an economy. We can do this in the United States; we can do this in Western Europe, especially in Germany, France, northern Italy, and similar places. We can rebuild.

In China, we have a rebuilding program. It's a new building program, high-power systems, transportation systems, large-scale water management systems. Similar things are required in India. Similar things are required in other nations. South Korea is ready to go, as a partner of these countries; Japan is ready to go, as a partner with these countries, in these operations. Other nations are ready to go.

The Bering Strait Keystone

So, take one typical long-term project, characteristic of the qualitative changes—or let's say, two of them.

Number 1, mass-transportation. Number 2, space science.

Mass transportation: We decide we're going to build the super-rail magnetic-levitation system of the planet. The keystone of this thing is going to be the Bering Strait railway tunnel. This will connect Eurasia to North America. We will then run the extension of the railway system, or the magnetic-levitation system, as appropriate in various areas, all the way down to the tip of South America. We're going to do the same thing, by building the rail system from the Middle East and from Europe into Africa. We're going to develop a large-scale mass-transportation system and power systems for Africa, by using this rail system as a means for doing it in the same way it was conceived of by Mendeleyev in the Trans-Siberian Railway.

It's important to emphasize that Mendeleyev designed the Trans-Siberian Railway, based on his experience, his special knowledge, in physical economy: That he actually understood how you have to organize production, in order to extract the mineral resources from the soil of a nation, and connect these production lines with a rail system of mass transportation. So, now we will have a system, where we have the Americas as one system. We have to build this rail system which connects Central America to South America. That's the big keystone project there.

We're going to connect Africa, throughout Africa, in one system, through Europe. It will come through the Asian end into Africa; it will come with tunnels and similar devices, across the Mediterranean region, as in the region of Morocco, for example. We will then have this rail system, or high-speed maglev system, going throughout all of Africa, which will open Africa for development. It will permit us to get a power investment in Africa. It means that the agricultural potential of Africa, which is one of the greatest in the world, will then begin to be realized.

And the only parts of the world, that won't be directly involved in this connection, but will be connected otherwise, are Australia and New Zealand. But we can connect them otherwise: They'll be participating, because of the importance of Australia's resources, natural resources, for the assistance of the development of Asia. For example, Australia has an immense amount of both thorium and uranium, and other minerals. These things will be much needed in terms of Asia, and therefore, Australia will have a nice little

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Bering
Strait

Bering Strait
Chokotka Constline
Big Diemede Island (Russia)
Little Diomode Island (USA)

BERING STRAIT
RAILWAY TUNNEL

Between
Wales, Alaska, USA
and
Uelen, Chukotka, Russia

J.Craig Thorpe & Cooper Consulting Co.

business going for itself, for its own development in this area.

The proposed
Bering Strait
railway-tunnel, as
envisioned in this
artist's conception
(below), connecting
Eurasia to the
Americas, is the
keystone of a
maglev rail-mass
transportation
system, that will
ultimately link the
entire globe.

So, we would then have, essentially, a world system, composed of sovereign nation-states, connected by a Glass-Steagall system and a fixed-exchange-rate system. We will go back to the Roosevelt conception of a fixed-exchange-rate system for the planet as a whole, combined with a Glass-Steagall system. Those features mean we can recover, we can stabilize the present situation. We still will have a lot of pain and shortages at the beginning, but we will make progress, and that will be the difference.

And that's the way we have to think.

But in order to do that, in the United States, we have to get rid of this President. Because as long as this President, and his immediate crew of pirates, is in there, he's going to jam up everything, and we can't do these things. The first thing is, to put this to a test: What will break the system? If we put through the Glass-Steagall re-enactment, *now*, that will break the system, the present system! And that will

start us down the road to recovery.

So, we're not looking at the danger of a collapse, the threat of a collapse: The collapse is already here! If we don't do anything, we're doomed! If we sit around and say, "We're not sure we should do this," we're doomed. So, all the people who say, "We shouldn't do this," are doomed, or they're dooming the rest of us.

And, you've got a mass of people out there, of the ordinary citizens of the United States, as in Europe—you're seeing the same thing in Europe now, as in Germany: They're disgusted, the people are *disgusted* with their own government! They're disgusted with the Presidency, they're disgusted with the Congress!

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The majority of the American people want LaRouche's solutions. They will no longer tolerate the policies that are leading to chaos and a dark age, but they need real leadership. Shown: LaRouchePAC Congressional candidate Summer Shields (left, center) campaigning in San Francisco to replace Rep. Nancy Pelosi.

They hate them. They hate the Congress more than they hate the President, because they figure the guy's too stupid to take the message, where the members of Congress, by torture, may admit that they're being attacked.

And what the mass of people out there are demanding, and about to explode over this issue: "We can't take it any more! We can't put up with this any more! We can't go this way any more!" They're ready for leadership, which will organize them, as Roosevelt organized the people in the 1930s; they're ready for it.

Get Onto the Lifeboats!

And once we start, it'll be infectious. You see the case in Greece, you see the other things, you see what's happening in Germany, for example. In Germany, there's a revival of the cause for the resumption of the former currency, the deutschmark. And that will go through, under these conditions.

France will object, because, actually the destruction of the deutschmark was initiated from France, by President Mitterrand. He was the one who practically threatened war against Germany if they tried to develop Germany, and didn't destroy it, and didn't destroy the currency: That was the terms of not destroying Germany, by war, at that point. So, Germany is very hot on

this thing, especially the patriots of Germany. They want their country back. They want their industry back, this sort of thing.

So, if the United States does this, and since the only solution for Europe, any nation in Europe, for any intelligent European, is, take the benefit of the Glass-Steagall reform from the United States; extend it immediately to Europe. Maybe the British don't like it—fine! Let them stew in their own juices. But we need that system. If we do that, then we are in a situation to organize with Russia, China, India, and other countries; once we have that combination, we have enough power, political power and economic power in the world, to control the situation on the planet as a whole! Then there's the rescue: It's the kind of rescue which is consistent with the intention of Franklin Roosevelt. And I'm a Roosevelt man, to this day! And that's the solution

So the perspective is not the collapse—that's there! The ship is sinking, the *Titanic* is sinking. Get off the ship! Get into the lifeboats, now, while you still have a chance!

So therefore, my prophecy is *not* that we're going to a crash. It's already here! If you don't do anything, you're dead. If you want to stay on the *Titanic* because you like the stateroom, you're dead. Get off the *Titanic*,

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"The green policy, which is to use a low-energy-flux-density source of power [like windmills], is a crime against humanity!" LaRouche exclaimed. You want "green"? How about green plants? You want to eliminate carbon? Green plants need carbon to exist! Shown: a windmill farmoff the Danish coast; an alfalfa field near Yreka, Calif.

get into the lifeboats, get the rescue teams going: Restart the economy. Shut this sinking ship down! And launch the new one. It's the only chance we have.

Now, some people think that's not possible. I think it's highly possible. And I think that, as usual, most

people are behind the times—except there are people out there, the majority of the U.S. population, unlike some of the creatures out there, who want this and know they need it: *They don't want this any more! They see no possibility of tolerating this any more!* And if we have any sense, and want to avoid chaos and a dark age, we're going to do what has to be done. And we need leadership which has the guts to do it. I have the guts to do it. I hope others will partake of the same quality.

Demographic Holocaust

Hoefle: Well, this really is a matter of life and death! Because you have, in the United States, for example, a population which grew, during this period of this bubble. The economy's collapsing out from under us, so you no longer have an economy that can support the existing population—which means people die! And this is the same around the world: What we're looking at, is a demographic holocaust, if we don't reverse this. And the only way to save the lives of people, is to begin this process of rebuilding; there really is no alternative to

USDA/Doug Wilson

this, if you want to avoid genocide.

LaRouche: Yes, the key problem here is the British problem. It's not the only problem in the world, but it's the most important one. The British monarchy has had, for a long time, under the influence of people such as Bertrand Russell, who's probably the most evil man of the 20th Century, a policy of reducing the world population from what was recently announced as 6.8 billion people, to reduce it to less than 2. That is the policy and motive of the British Empire. The other complement of that, is to lower the level of productivity and technology of the planet: For example, green. Green is the color of rotting crops. It's true in economics, as well as otherwise.

So therefore, the green policy, which is to use a lowenergy-flux-density source of power, is a crime against humanity! Because to sustain the present world population, on that level, requires the use of nuclear power. Your primary source of power is nuclear and thermonuclear power: Without that you can not maintain, comfortably, this population, and meet its needs. So the

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British don't *want* nuclear power! The carbon policy, cap-and-trade: Cap-and-trade is mass murder! The cap-and-trade policy ensures that a population is compelled to experience mass murder, through shortages! So those who are proposing cap-and-trade, for one reason or another, by conscious motivation or by stupidity, are mass murderers! And yet, this thing is being pushed, as from Chicago, and this kind of thing.

So thus, this is the kind of situation we face, that we *must* now do this, not merely because economies are collapsing, but because the policies of the British Empire, which controls Wall Street—Wall Street is an extension of the British Empire—these guys are going to kill the human race! They're going to commit more mass murder than Hitler ever dreamed of! And after all, Hitler got these ideas from the British in the first place, on how to do this.

So therefore, we have to realize that we have a factor among us, typically, the British Empire and people who think like that, who want to reduce the population and make people stupid, technologically stupid! Because a stupid population is not capable of resisting this kind of government they intend: Keep people stupid, unskilled, ignorant—poor, rotten culture; present popular entertainment culture, rotten culture like that. And you destroy the ability of the population to advance technologically, if you destroy that capability by cutting back: no high-energy-flux-density power; go back to green. You have people who are for a green policy, but here they want to destroy carbon—what the hell do they think "green" is? It's green plants! What does it come from? Carbon, buddy! Carbon! You say you're for green, and you want to eliminate carbon? You have to be insane, or a madman, to come up with such an idea!

So therefore, we have to change our philosophy, and recognize that the British official philosophy is something we want no part of! We can isolate that island, and similar kinds of local locations, for the sake of the rest of humanity, and let them sit there, and stew in their juices. And decide whether they want to join us, or go their own way toward Hell!

But we've got to get the world free of that empire, of that kind of imperialism which the British Empire represents, and which Wall Street represents! And which the Obama Administration represents, the same kind of garbage. Eliminate that factor!

And respond to the demands of our people, who are looking at us, the ordinary people, saying, "Will some-

body please do something, to save us from this hell?" We can do it. We can do it—it's feasible. But it's going to take a large emphasis on nuclear power, thermonuclear power, high technology, mass transportation, water systems; these kinds of infrastructure, which will then drive, and then revive all of our industry, drive our revival of our agriculture. We're going to have to get rid of this crazy control over lifeforms, by Monsanto and people like that. That's got to stop! We go back to honoring the farmer's right to breed a crop, and not be regulated by Monsanto or some other predator on this thing. Get back to sanity.

Hoefle: Put an end to the grain cartels.

LaRouche: Absolutely. The cartels go against my grain!

Hoefle: Well, you can see this assault on the United States and the dumbing us down, in part, if you look at the composition of the workforce. Over the last couple of hundred years, you can see, that in terms of manufacturing workers per capita, we're now back to where we were in the Civil War period, we've had such a decline in manufacturing. But you've had a rise in service workers. And so, now you have a problem, where "putting people back to work," is not sufficient, because we have to change the nature of what we do, if we're to build our way out of this.

LaRouche: It's like having bulls service cows—it's considered a method of production.

Goldman Sucks, and Other Financial Cannibals

Hoefle: One of the things we've been looking at recently, is the way in which the people who are running the financial system, the Brits, are actually beginning to turn on their own system, because they know it's coming down. And you see this in the case of Goldman Sachs, with the shorting of the mortgage market, that you create all these instruments and then you bet against them.

LaRouche: See, you're dealing with that sort of problem all the time. What is happening now? Look at the case of Goldman Sucks, and look at these other financial institutions of this type: What're they doing? They're practicing cannibalism against themselves. Take the history, as you know the history of this thing: Firm after firm, was once the great power. "Oh, this big

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Financial institutions, like Goldman Sachs, are practicing cannibalism against themselves—on behalf of the British imperial power. Shown: Goldman CEO Lloyd Blankfein on the hot seat, being grilled by members of the Senate Permanent Subcommittee on Investigations.

financial house is a great power, it's the infallible source of goodies and information forever. You should get a job there and be lucky." And so forth.

What happens is, these things keep dying! And they've been dying in this pattern, over a long period of time. Because this is the way it works: You get somebody to go bankrupt, by puffing them up—you build them up, and you sink them! Then you come up with a new one: You build that up, and you sink it! And this is the way you prevent any resurrection of power from within the troops, because you get them to cannibalize each other.

Take the case of Rothschild. Now Rothschild is really nothing, politically, except a tool of the British Empire, which it's been ever since the peseta crisis during the Napoleonic Wars, which is how the Rothschilds came into power, being the smartest at running the thing for the British monarchy.

So, this kind of operation: You say, "All these great financial houses, they're the great powers. It's the capitalists, the financial capitalists that are the power." Bunk! Financial capitalism is an instrument of imperial power! And you can always control the princes, like in the medieval period; they would kill the members of the royal family to cull the crop, in order to maintain control.

What you actually have, is something which is quite

ancient. It goes back to before ancient Greece, to that period, the Cult of Delphi. And if you look at the site of Delphi—the ruins are still there—and you can go up there and walk around it, like a historical visit; and you see these places where you had the temples, you had these treasuries. And each city of the Greek area had a treasury, so that this place ran the world! And since that time, you have the same kind of thing: You have cults which take the form of religious cults, which continued. For example in this case, the Cult of Delphi ran the Roman Empire—still! The last high priest of the Cult of Delphi ran the Roman Empire: Plutarch!

And you have the same kind of thing, with religious and similar kinds of organizations, which are idea organizations, and they sit there with the idea of managing the forces that are more powerful than they are, by playing them against each other.

For example, war: Virtually all the wars in European civilization were orchestrated by things like the Cult of Delphi. Practically every war that's ruined Europe, the continent of Europe, beginning with the Napoleonic Wars, has been the way the European continent has been played: by getting wars among the nations of the continent, which have ruined them, and thus, the British Empire stays in control! The British Empire does not control it by these firms. They're instruments of control. But the instruments of control are not allowed to gain independent control. And the way they do that, they keep culling the flock. This is the way: Today, Goldman Sachs, or Goldman Sucks is going down. Because it is now the time to harvest it! Harvest its organs, hmm? And that's what's happening.

Where's the power, then? If the banks as such are not the power, where does the power lie? Because the banks are now being destroyed by the world's dominant imperial power. What is that power? It's a form, like a religious cult, which manages the minds of people.

Needless Wars, Again and Again

Why do we get into war? Take the case of the United States: How was it destroyed? It was destroyed by the assassination of Kennedy. How? Because Kennedy was opposed to going into a long war in Indo-China, with the backing of MacArthur: no long wars in Asia, on the Asian mainland—the policy of the United States. What

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USMC/Cpl. Pete Thibodeau

The war in Afghanistan was never necessary. Russia, Iran, and other nations were ready to cooperate on dealing with the drug, and related problems. But "this crazy President" got us into a long war in Asia. Shown: Marines in Farah Province. Afghanistan, 2009.

did they do? They killed him. They killed the President. We went into a ten-year-long war, from which the United States, as we had known it, at the beginning of the process, never returned. If you look at the wars we went into, in Iraq: None of those wars were ever necessary!

We're going into a long war in Afghanistan, under this crazy President. That war was never necessary! We had the power at hand to deal with the drug problem and related problems. The Russians were going to cooperate, the Iranians were going to cooperate. So therefore, there was no need for this war! But what have we done? We get into wars and we destroy one another, and the British Empire comes out on top, and triumphs over us! The British monarchy, for example, which is running

this operation. Who runs the drug operations of the world? The drug operations of the world, since the last decade of the 18th Century, have been run by the British! They're still run by the British!

And therefore, it's not the bankers; it's the imperial power, the imperial conception, which is centered at religious organizations such as Oxford and Cambridge. That these places, with these ideologues, actually design the policies of manipulation in a longstanding tradition, of building up agencies, which are used as instruments of control. And when the instruments themselves tend to become too powerful, destroy them, and replace them with other instruments. Use long wars among nations which might gang up on the Empire, and destroy these powers that might gang up on the Empire, by getting them into wars against each other. By getting the United States into unnecessary wars—the same thing: Why are we going into these wars, in Afghanistan? We can win that war, very easily without fighting it: How? We've got a Russian ally. The Russians want to get rid of the drug-dealing, which is British.

And the President of the United States, who's a stooge for the British, says, "No, you can not tamper with that drug operation." We have a McChrystal clear case of this fraud: An unnecessary war! We could destroy that drug production overnight! We have the available cooperation, with one President, one hand, we can do it! The Russians would support us in it; others will support us in it. We don't have to go into an Afghanistan war!

But what's happened? We go into it? It'll ruin us, just like the Indo-China War ruined us for ten years of ruin! The United States never returned from this misery. And that's how it plays. We're played by ideology, by a kind of pagan, religious cult, going back to ancient Babylon. And that's what destroys us.

And some of us understand this. But the problem I get with all these people who should understand this, and so, sort of understand it, they say, "You're right. But, you know—you're wrong, too. Because we have to go to this war. We'll try to avoid future wars like this, but this one, we're going to have to fight."

And you don't need to fight it. You can win the game by other means. And the whole trick, is to understand that point, that the use—as Bismarck said in the 1890s, after he'd been dumped—he said, we're headed for a general warfare, in Europe, in the continent of Europe, which is going to be a new Seven Years War. And it was: The Napoleonic Wars were a Seven Years War,

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We need the nation-state as an institution, but we cannot solve our problems by warfare any longer: Nuclear warfare is unthinkable. Shown: an H-bomb explosion, Operation Ivy, 1952.

that destroyed continental Europe.

Wars, and wars again, and again, of these types! And similar kinds of operations, playing one nation against another, one people against another.

We in the United States, probably are the best approximation, historically, of the remedy for this—if we come to our senses in what we're supposed to be: In the sense that we hate war. When Roosevelt said, "We hate war," he meant it. That war, itself, is a disease. There are cases where you do have to defend a nation, true. You do have to deal with problems. But you *don't get into long wars!* The wars of independence, that's one thing. But wars among established nation-states is wrong! And that's really what's killing us, that kind of tradition.

We are manipulated by people who induce us to think that these games are the games that they have to play. And we have a dangerous idiot, a maniac, actually, as President of the United States, and we really have to remove him from office, and remove that whole crew around him. We have to *get that crew out!*

Yes, you get the normal U.S. Presidency, as an extended institution: I know that Presidency. I've had some experience with it over a long time. That Presidency, under present circumstances, properly informed, will tend to react appropriately, probably the best reac-

tion of any nation in the world. But we have to have a leader-ship. And just eliminate this President—send him out to pasture someplace. Watch him carefully, because he might commit suicide; we don't want him to do that. We want him to be around—"We saved you from this"—we want him around as something we can point to that way: "We saved you from this." And we saved him from himself.

And so, that's where we are. We just have to recognize this factor, which is what I concentrate on. You've got to look at the *ideas*, the nature of the human mind—how it works, and how it doesn't work. And all the manipulations are really about that.

World Government vs. the Nation-State

Hoefle: You see it all the time, in the claims that "if we don't destroy this nation, or this group, they're going to destroy us." And it's all just nonsense. Because, really the thing to do, is for us to work with our adversaries, to reach common ground, harmony of interests. And then, together, we can all build the modern world.

And it's so obvious: the idea that we have to restrict other nations from getting certain technologies, that they can't have nuclear power, because it might lead to nuclear weapons; that they should have "sustainable technology"; and the whole green policy—this is really all just a reflection of the British push for genocide, and to keep the world back in their medieval era, and to stop us from having the kind of progress that this nation was founded to foster.

LaRouche: Essentially, there never really was a credible case for nuclear warfare. Because, nuclear warfare destroys its own proclaimed interest. When nuclear power was developed, beginning toward the end of the 19th Century and the beginning of the 20th Century, we had entered into a system of power, which, if used as a weapon, could virtually destroy the planet. So, what that meant was, at the time that World War I and World War II were launched, we had already

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reached the point that the capability for warfare by using the most advanced level of technology available for warfare, was a losing cause. You could never win that kind of war: You could only destroy humanity.

And so, we got to the point, that it's no longer advisable to have that.

Now, you get the idea, for example, of world government, which is the current theme: The whole idea of the euro system was world government, to eliminate the nation-state, eliminating the nation-state is the current policy of these guys. That doesn't eliminate warfare; that just establishes an empire which will conduct warfare, and organize warfare among its subjects, as a way of controlling them.

So the point is, what the signal is, for the development of nuclear power, and similar kinds of technology—it signals that the time had come, where we do need the nation-state as an institution, a sovereign nation-state. But we can not solve our problems by warfare, by advanced warfare. Police actions, yes, of a certain type are possible, and necessary; but to get into nuclear warfare and similar things, is unthinkable.

So, the signal is given to us, that our progress as mankind had brought us to a point that certain bad habits were no longer to be allowed. And if you have a good government of the United States, getting us through this mess, now, I think we can say that warfare, of the type we know from previous centuries, can be effectively outlawed. Not necessarily police actions or emergency actions, like putting out fires; but it has to be in the nature of putting out fires, *not* perpetual warfare, not prolonged warfare, like that which the President is proposing to support now.

So, there are deeper questions here. There are deeper intellectual questions. What I address, immediately on the surface, is the things you've got to look at, right now. But I also do not deny, there are deeper considerations, of deeper reforms. But in order to get to those deeper reforms, we have to take certain emergency actions, now, to prevent the planet from destroying itself, now! And we're at the point that if we don't take these measures, we *will* destroy ourselves, and send humanity into a dark age for a long time to come!

So therefore, we must take these emergency actions. And having taken those emergency actions, of what I've indicated today, then you have to add to that, the development of a deeper understanding, by a deeper education of our people.

Look: I've raised this repeatedly, recently, on this

question of space technology. We've now reached the point, where we, as in the Basement, are now going beyond what was done in establishing the Periodic Table, to inverting it. The Periodic Table, for most people, involved planets and vacancies in space, between the planetary orbits. That's no longer true, because space is not empty. It's full of all kinds of cosmic radiation, and if you try to fly through one planet to the next area, you're not going through empty space. You're going through electromagnetic space, very highly organized, very complicated—and we in the Basement are having fun, working with this, and discovering things about it. It's going to take us a couple of generations before we've solved the problems we've marked out now, but we're going to have a lot of fun doing that. So, we're going into that.

Then it poses another question: If we can do this, what about the future of humanity? I mean, people live, and they say, as human beings, they have a purpose in life. And their purpose in life includes awareness of the fact that they are going to die, that everybody's going to die. And they say, "Well, what's the purpose of living then? Is it just something you do, because you're an animal, and it happens to you? Or, is there some purpose in living, a purpose which outlives your dying? Or, is being stuck in a grave just a fake? Are you just being told that there's a mission, a purpose in your life, that you just terminated?

Or is there a higher mission for humanity, in the fact that you lived?

Well, when you consider the fact that the Solar System is a temporary arrangement, on the global scale and collective scale of events, and that probably 2 billion or 5 billion years from now, maybe earlier, Earth will be pretty much uninhabitable—it may be *gone*, with the kind of things that may happen. Well, what's the purpose of mankind? When somebody's going into a grave, what can you say, the meaning of their life has been—the *future* meaning of their life has been? How can you answer that question?

Well, if you say that mankind is a special kind of creature, which is designed to master the challenges of development of the universe; and if necessary, we will be living on other planets, and in other places, as mankind. And the discoveries we have made, and the advances we have made, will pile, one on top of the other, generation after generation, as over three generations of a normal life, a normal life today! And we'll make progress, we'll make progress, we'll make progress. Hu-

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In a few billion years, Earth (as seen here, from the Moon, December 1968) will be pretty much uninhabitable—it may even be gone! So, we have to begin now, as a mission of mankind, to learn to master the challenges of development of the universe.

manity will be here! Humanity will be more powerful than it is now. It will have a bigger place in the universe than it has now. And we will take things, like a threat to mankind's life on Earth, today, and say, "Well, yes, that's probably true. But we're not going to worry about that, because long before that point is reached, we will have made discoveries which enable mankind to go to a higher level of existence."

And therefore, we have to instill in people a culture based on this idea of cosmic radiation, a culture in which they realize there is a future for humanity in a changing universe. And that mankind's development is an important part of that universe, and *there will always have been a meaning, for our having lived now.*

That's the higher point we've got to get to.

Mankind's Future in a Changing Universe

Hoefle: Yes, the idea that you want to maintain some status quo and fixed position is deadly, because the universe doesn't work that way. But that if you orient towards change and towards progress, and to-

wards accelerating the rate of progress—

LaRouche: Think about, with our best people working on some of these things, when you think about the thrill of going through meeting after meeting, discussion of a program, and in many of these meetings you make steps forward, which is an insight into the universe and its development, which is more advantageous than before, more exciting than before—it's only a little step, but it reminds you that the universe is there, that it's your universe, and that you have the power to make things better in that universe, and that you're in the process of making discoveries which will lead to that. And that when the doors are opened to us, again and again, to realize we make a

new discovery, which has this characteristic, we realize that this discovery is feasible—we prove that it's feasible—then we want to get out there and do that!

Like this cosmic radiation question we're dealing with now; it's really inspiring! Because, we can see more clearly than ever before, what the future of mankind in the universe is, if, from a practical standpoint, here on Earth, we can see that our living *means something* for future generations of humanity—provided we manage our affairs decently, right now.

Hoefle: Yes, and this is not some expense that we have to decide whether we can afford: It's the future of mankind. We have no choice.

LaRouche: Go back to the 1970s, in the beginning of that: We recognized at that point, in an estimate made, that for every penny we spent on the space program, we got 10 cents worth of progress. And what we did in that period, we turned around, especially under the Carter Administration, and we began to destroy

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that! And that's what's happened to us.

Hoefle: We lived on that progress for quite a while. And that's played out.

LaRouche: So, we have to go back. So, the question is, to understand creativity, in its origins in what we call Classical culture, not so-called mathematical science. And that the progress in physical science, as an expression of this power of creativity, is the thing that distinguishes mankind from a beast. And then, you go to simply one thing, and someone says, "What's the universe going to look like in X number of billion years?" And you say, "I don't know, but I know that we embody *now*, the power of advancing discoveries, which will ensure that, whatever is going to happen X billion years from now, it will be good!"

Hoefle: That's an inspiring way to look at the world. We talk about increasing the optimism in people, who see that their world is collapsing around them. There's not only a way out; there's a beautiful way towards progress, a whole new renaissance: It's ours for the taking!

LaRouche: We have to think about our people out there. Because, as a person in a position of political leadership, which I've been, up and down, over some decades, you realize that there's a certain element of despair in our population, because they do not have a clear vision of the future, of a real future. They don't have any confidence in a belief in the future.

They cling desperately to the hope that here is a future! They hope that "things are going to work out for us"! That kind of thing. A family in desperation: "We hope that it's going to work out, somehow, for us." But they don't have a positive sense of the power to make something happen, for us. That there's a way of working, a way of thinking, a way of progress, which means there always will be, "an opportunity for us."

And the problem lies largely with what's typified by our educational system. We routinize things, we discourage people from making actual discoveries; we destroy Classical culture; and we become stupid, like grimy animals, instead of Classical thinkers. We destroy physical science—we now have mathematics instead of science, and we calculate everything and know nothing.

And so, the problem is, we've come into a period of despair, and we're at a low point. But the good side

about a low point, is that you know it's a low point, and you know there's nowhere to go but up. And, we're at the point where our American citizens, and those around the world in many places, know *there's no way to go but up!* And therefore, if you can present *up*, in a credible form, and show them some examples which will convince them that *up* is working, they're going to change their attitude, and you're going to have a renaissance, in the United States, in particular.

It's out there. It's stubborn. It's difficult. But you've got to *prove* yourself first, with them. You've got to prove to the American people, the average American, *that there is hope*, that there's a solid reason for hope—it's not just pie-in-the-sky—it's real. That we can do concrete things, *which are going to make it better!* And that's what I'm concerned about.

Beyond that there's a whole philosophy for this business, which most people don't know. But we have to do, is operate on the basis of what people *can* know, and *can* understand: We can make things better. And if we don't, we're going to Hell, right now.

Hoefle: I think that's clear. It's happening all around us. The politicians, the financial class are all trying to deny it, but they're all scared to death. And ordinary people are living it, so they're not confused about this. So the real issue is, what are we going to do about it? And you've identified it: We have to get rid of Obama. We have to get rid of this British system. We have to go back to being a sovereign nation-state: And this really begins with each one of us thinking about these things, and understanding that that's what we have to do. We need a qualitative shift in the thinking in the population.

LaRouche: That's what makes me happy when I get up every morning, as I approach my 88th birthday! It's: Do something with your life! Okay—I'll do that!

Hoefle: Do you have anything else you want to discuss?

LaRouche: No, I just thought we'd get out two messages: One is the nature of the crisis, that it has a solution, that it's practical, it's immediate, it's comprehensible. And beyond that, there's a future for humanity, which requires a little deeper thinking. And establishing that "little deeper thinking" is extremely important, to ensure that if we get through this mess, people are going to be able to *think*, to get us through the next one.

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Science

Onward to Mars: The Triumph Of the Weak Forces

by Oyang Teng

Because of the limitations of our sense organs, we are conscious only of a narrow sliver of the electromagnetic spectrum, mostly in the range of visible light and infrared radiation. While other organisms are adapted to sense different regions of the spectrum, we rely on the use of our extended "technological sense organs" to gain access to the full range of radiation penetrating the terrestrial environment from the Sun and more distant cosmic sources, as well as their interaction with the atmosphere and electromagnetic fields of the Earth.

With this expanded sense apparatus provided by instrumentation, we can "see" not merely discrete objects existing in space, but an active continuum extending within and between all such seemingly separate objects, composed of both the presumed particles of cosmic rays, as well as the various, intersecting electromagnetic wave-phenomena.

In this way, we continually overcome the very real limitations of our physiology, though we remain susceptible to artificial limitations in our thinking—particularly when we allow a naïve interpretation of our basic sense perceptions to dominate our picture of the physical world, whose characteristics in the very large and the very small are revealed by the general phenomena of cosmic radiation.

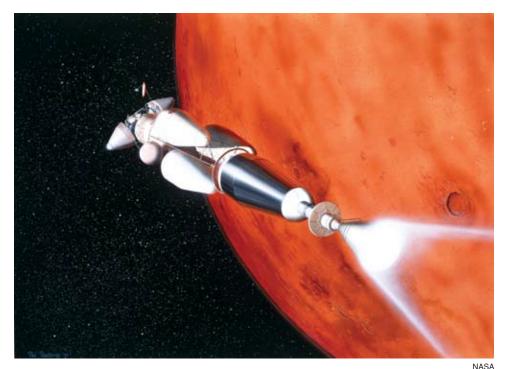
The Russian biogeochemist Vladimir Vernadsky believed that the pervasive action of the continual range of the unseen cosmic radiations permeating all of space was so significant, that not only the Biosphere—including its transformation by human action into the Noösphere—but even the distribution and character of the chemical elements in the crust, could only be understood as manifestations of cosmic processes.

In *The Biosphere*, Vernadsky wrote that living organisms are "the fruit of extended, complex processes, and are an essential part of a harmonious cosmic mechanism, in which it is known that fixed laws apply and chance does not exist."

Like Edgar Allan Poe's "Purloined Letter," the evidence of the "harmonious cosmic mechanism" is all around us. The vast experimental data on cosmic radiation and its connection to cycles of climate, biodiversity, and mass extinctions are substantial, albeit preliminary, hints at the effects of biological regulation on an astrophysical scale. A rich material-energetic connection binds the Earth with the Solar System and the entire Milky Way galaxy.

Just as important as this *connection*, is the material-energetic *distinction* manifested between non-living, living, and cognitive processes. As the highest expression of material-energetic transformation, both the Biosphere as a whole, as well as individual organisms (the specific expression of what Vernadsky called living

^{1.} Sky Shields, "Kesha Rogers Victory Launches the Rebirth of a Mars Colonization Policy!" http://www.larouchepac.com/node/13802



Confronting the challenges of a manned Mars mission today offers the most lawful means for deepening our undertanding of the relationship of electromagnetism to life. Shown: An artist's concept of a nuclear thermal rocket arriving in Mars vicinity, about to insert the transfer vehicle into orbit.

matter) provide natural instruments of the most exquisite sensitivity for registering the fundamental properties of material and energetic phenomena. Rather than attempting to build the universe up from its presumed smallest, inorganic parts, we must build downwards from cognitive and living processes. This approach will necessarily lead to, among other things, an expansion of the periodic table of the elements.²

A False Dichotomy

Unfortunately, the much-hyped historical division between the mechanistic and vitalistic outlook, has ingrained a false dichotomy in contemporary thought. For example, although the mechanist reduces all processes, including biological ones, to movements of discrete particles of matter, and the vitalist locates causality in some agency acting outside those material parts, typically in some unique form of "energy," both accept the same fundamental assumption regarding the existence of discrete particles of matter as such. Despite the fact that

few people today would claim to be either true mechanists or true vitalists, modern science is still shackled by a crude materialism, continued, for example, in the form of the compromise known as the wave-particle duality.

How does scientific thought distinguish the efficient existence of discrete, whole processes from the physical continua in which they participate? For example, the Earth's Biosphere as a whole represents a singularity within the constant biogenic migration of atoms throughout the galaxy, just as individual organisms represent singularities within the process of biogenic migration through the Biosphere.3 Do these singularities represent unique manifestations of physical space-time, as

Vernadsky hypothesized?

If so, it makes clear the revolutionary implications of interplanetary spaceflight at accelerations sufficient to produce an artificial gravitational field, as contained in the Moon-Mars colonization proposal of Lyndon La-Rouche. The consideration of *living processes* within accelerated reference frames amidst the dense radiation fields of cosmic space goes to the heart of the fundamental questions at the root of a true, Unified Field Theory.⁴ While the theoretical questions involved are fascinating in themselves, human progress depends on their answer by direct experiment—which a rapid development of Helium-3-powered fusion rockets could easily make possible within this century, and perhaps even within decades.

However, there already exists a vast record of experimental evidence pointing to the unique physical

^{2.} Peter Martinson, "Toward a New Periodic Table of Cosmic Radiation." http://www.larouchepub.com/eiw/public/2010/eirv37n16-20100 423/eirv37n16-20100423_030-toward_a_new_periodic_table_of_c.pdf

^{3.} Shields, op. cit.

^{4.} Sky Shields, "The Significance of Biological Research in Space for the Development of a Unified Field Theory," Submission to the National Research Council's Decadal Survey for Biological and Physical Sciences in Space, October 2009. http://archive.larouchepac.com/node/13015

space-time attributes of living organisms, including the biological significance of electromagnetic radiation.

Aside from more energetic biochemical reactions, organisms are highly sensitive to forces operating at apparently much lower orders of magnitude. Such weak forces prominently include low-intensity electromagnetic radiation, producing so-called "non-thermal" effects, that is, operating below those intensities capable of heating or noticeably disrupting living tissue. These effects have been extensively documented, despite historical opposition to the orthodox view of the organism as nothing more than a biochemical machine governed by point-to-point interactions in the small. Typical of such prejudice, is the Linear No Threshold theory, declaring any amount of ionizing radiation to be biologically damaging, despite the overwhelming evidence for the benefits of low-dose radiation.

Vernadsky's definition of an individual organism as inseparable in principle from the entire Biosphere, and, by extension, from the cosmic processes which produced it, demands a new understanding of the organism as, essentially, a uniquely organized electromagnetic process. However, this should not imply the New Age vitalism of "life energies" or similar mysticism. Similarly, some investigators in the field of bioelectromagnetism, professing to reject the limitations of a traditional mechanistic view, have relied instead on a cybernetic interpretation of self-organizing phenomena in life, despite the fact that the living processes they study are in principle irreducible to cybernetic concepts such as feedback loops and information theory, derived entirely from the operation of machines.

The Body Electric

As we shall see, confronting the challenges of a manned Mars mission today offers the most lawful means for deepening our understanding of the relationship of electromagnetism to life, a subject of investigation which goes at least as far back as the famous 18th-Century experiments by Luigi Galvani on the electrical stimulation of frog legs. The field of study now includes everything from the bioelectric organs used by sharks to hunt their prey, to the nature of electrical regulation of the human brain and nervous system, to the internal magnetic compasses of birds and fish. One of the most dramatic manifestations of electromagnetic regulation in organisms is the phenomenon of regeneration, the recreation of fully functional body parts which are lost due to injury, the study of which led scientists like Robert



Luigi Galvani's 18th-Century experiments on the electrical stimulation of frog legs opened up a field of study about the relationship of electromagnetism to life. One of the most dramatic manifestations of electromagnetic regulation in organisms is the phenomenon of regenerations of body parts . (See p.

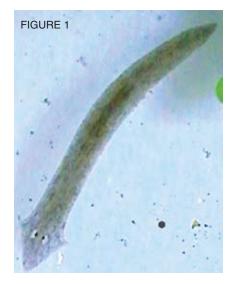
Becker⁵ to begin the systematic investigation of the relationship between electromagnetism and living systems.

Measurements made in the 1830s first established that small electrical currents are produced around injured tissue in animals. Where does this electricity come from? The discovery of the nerve action potential not long afterwards seemed to solve the mystery, by attributing bioelectrical potentials to the differences in ion concentrations across cell membranes. However, later experiments demonstrated that, while the emergence of direct electrical currents depended on the presence of peripheral nerve tissue, they were not merely secondary effects of the action potential. These direct currents exhibit very distinct behavior during regeneration, a capacity which becomes more prevalent in organisms the lower down the evolutionary ladder one goes.

For example, the planarian (**Figure 1**), a species of flatworm with a primitive nervous system, can regenerate whole organisms from almost any piece of itself that is cut off! Experiments showed that the head-tail axis of the planarian was determined by electric poles established by internal currents, and that artificially reversing the direction of current could produce a head where a tail would normally be found, and vice versa.

However, it was the study of salamanders (**Figure 2**) which first revealed the highly specific behavior of the currents of regeneration. In amputated salamander

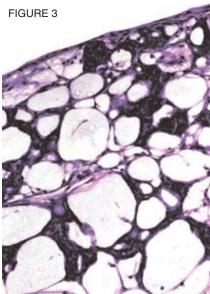
^{5.} Robert O. Becker and Gary Seldon, *The Body Electric: Electromagnetism and the Foundation of Life* (New York: William Morrow and Company, 1985)





creative commons/Scott Carmazine





HHS/National Toxicology Program

The planarian (Figure 1), a species of flatworm, can regenerate whole organisms from almost any piece of itself that is cut off; in amputated salamander limbs (Figure 2), a reversal in polarity is accompanied by the formation of a mass of cells at the stump tip, called the blastema (Figure 3), from which the new limb eventually forms; the sea star (Figure 4) is growing new legs after the old ones were lost.

limbs, the injury current was found to reverse direction a short time after injury, going from positive to highly negative. This reversal in polarity, combined with an increase in its magnitude, is accompanied by the formation of a mass of cells at the stump tip, called the blastema (**Figure 3**), from which the new limb eventually forms (**Figure 4**). As regeneration proceeds, the magnitude of the polarity slowly diminishes, eventually returning to zero. In non-regenerating animals like frogs and even rats, partial regeneration can be induced by

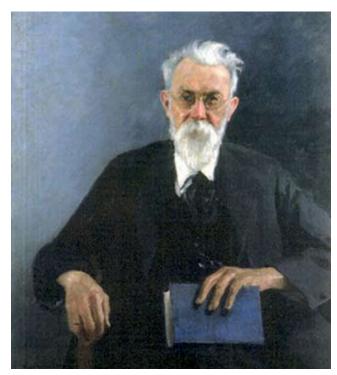
mimicking these highly specific polarity and magnitude changes with applied electric current.

The blastema itself turns out to be adult cells that have de-differentiated into a "totipotent" state, capable of re-differentiating into the needed new types of cells required by the regenerating limb. So, in addition to the question of the origin of the electrical currents, we must ask: How is it that such currents are capable of initiating the process of blastema formation inducing specific cells to de-differentiate, and how do they help to determine the form of the regenerated body part? "All the experiments led to one unifying conclusion: The overall structure, shape, the pattern, of any animal is as real a part of its body as are its cells, heart, limbs, or teeth."6 What role does electricity play in "remembering" the whole organism, even when the physical parts disappear?

In humans, the closest analogue to regeneration

(as distinct from wound healing) is the repair of bone fractures, which is accompanied by the formation of a blastema, and the characteristic polarity and magnitude reversals of the injury current, in regenerating limbs, and which has been found to be accelerated through the application of pulsed electromagnetic fields. The electromagnetic control system for the body as a whole extends from the brain throughout the nervous system

^{6.} Becker, op. cit.



In The Biosphere, the Rrussian biogeochemist Vladimir Vernadsky wrote that living organisms are "the fruit of extended, complex processes, and are an essential part of a harmonious cosmic mechanism, in which it is known that fixed laws apply and chance does not exist."

and, among other things, regulates the overall activity and sensitivity of the brain's neurons—though the seemingly unlimited capacity for the brain to reorganize itself, generally termed neuroplasticity, seems to defy any simply biological or bioelectric explanation.

Then again, explanations for many of the most basic processes of biology have proven to be elusive. For example, the formation of the blastema in regeneration is strikingly similar to embryogenesis, the intricate and highly coordinated processes governing the action by which a full organism develops from a single, undifferentiated germ cell.⁷

It is now known that weak electrical currents play a significant role in the formation of the embryo, and just as in regeneration, exhibit highly specific forms of behavior.8 Experiments on chick embryos showed that artificially manipulating the current in one part of the embryo leads to significant changes in the whole, indicating that the electric field's primary function is not limited to governing local cell migrations, but rather, helping to direct differentiation throughout the entire embryo. The pioneering experiments of Hans Driesch at the end of the 19th Century had already established that an individual cell's fate is dependent on its relationship to every other cell in the developing embryo, a seeming total dependence of the part on some pre-existing whole. Alexander Spemann's work, not long afterwards, showed that the interplay between part and whole was more complex, as certain groups of embryonic cells, which he called "organizers," could determine the fate of neighboring cells.

What means do cells possess to interpret their position within the whole, so important for differentiation? Northwestern University researcher Günter Albrecht-Bühler has shown that cells can emit and detect light pulses in the far infrared range, a kind of cellular "sight" which causes different types of cells to respond in different ways to the same signal. Other experiments established that different cell types also respond in distinctive ways to an electric field. Combined with Alexander Gurwitsch's 1920s discovery of mitogenetic radiation in the ultraviolet range, a "biophotonic" communication process governing mitosis, there appears to be a highly differentiated electromagnetic communication and control system already evident in the earliest stages of an organism's life.

In the same chick embryo experiments, different, asymmetric electric fields were produced by different parts of the developing embryo. When the internal field of one, but not the other, was artificially disrupted, a pseudoembryo developed, possessing the correct, basic external bodily form, but whose internal tissue was an undifferentiated mess. An analogous situation occurred in the formation of pseudolimbs in experiments on artificial regeneration. In these cases, the external form of the organism was not simply the end result of internal tissue differentiation, but seemed to have an independent existence, closely related to the action of the electrical fields. Again, how are these fields generated? And how do they help any given cell know how, or whether, to differentiate?

^{7.} There also appears to be an interesting relationship between regeneration and cancer. Becker reports on the work of Meryl Rose, who demonstrated in 1948 that salamanders infected with cancerous growths could be cured by amputating a limb and inducing regeneration, implying that "regeneration's guidance system could control cancer," and underscoring that "the state of the *entire* nervous system can affect cancer."

^{8.} Colin Lowry, "The Electric Embryo: How Electric Fields Mold the Embryo's Growth Pattern and Shape," 21st Century Science & Technology, Spring 1999, pp. 56-70.

The Biological Field

The fact that organisms can generate unique fields that play such a significant role in morphology, as during embryogenesis and regeneration, lends strong support to the biological field theory of Gurwitsch, who developed the idea in conjunction with studies of the even weaker mitogenetic radiation detected during cell mitosis. While recog-

nizing the necessity for an "invariant law" to describe the coordinated action of individual cells within the whole organism, he was careful not to limit the biological field to any particular energetic manifestation, but left open the possibility that it could be expressed by any of the known physical field phenomena, or yet undiscovered physical processes.

How might the direct bioelectrical currents be a manifestation of this biological field? Becker drew on the work of Albert Szent-Gyorgyi to hypothesize that these currents operated by a process analogous to semiconduction in solid-state materials. The highly ordered

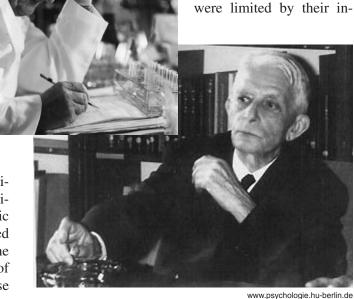
internal structure within and between cells could facilitate the movement of free electrons. Gurwitsch similarly proposed that the primary work of metabolic energy involved the maintenance of highly ordered "non-equilibrium molecular constellations" within the protoplasm-protein complex of cells, and that some of the mitogenetic radiation was connected with these structures. This may indicate one possible link between the highly quantized effects of mitogenetic radiation, and the direct current system operating throughout the whole organism.

Unlike Gurwitsch, others saw in the field concept a way to reduce biological processes to strictly physical ones, that the only difference between the living and non-living "is to be found in all probability in more complex fields and more complex molecular structure,"9

rather than in the unbridgeable distinction of separate, but interacting, phase-spaces. In this sense, the concept of field itself has been reduced to supposedly "real" particles of inorganic matter surrounded by fields, "a remnant of old materialistic conceptions.... As a matter of fact, insofar as 'particles' are known to be fields and field-structures, they fill the volume of a macroscopic object completely, and to this extent the object is a continuum. It is only as a field-continuum that it coheres."¹⁰

Wolfgang Köhler, one of the founders of ge-

stalt psychology, recognized that the very concept of discrete particles of matter was nothing more than an artifact of a naïve interpretation of vision. As a result, the precepts of both biology and physics



The work of Alexander Gurwitsch (top), Albert Szant-Gyorgyi (middle), and Wolfgang Köhler advanced our understanding of the role of electromagnetic factors in biological life.

ability to deal with the ontological reality of functional, self-organizing wholes—the gestalt phenomena of human mental activity.

In biology, the controversy has centered around the problem of whether life processes can be ex-

^{9.} H.S. Burr and F.S.C. Northrop, "The Electro-Dynamic Theory of Life," The Quarterly Review of Biology, Vol. 10, No. 3 (September 1935), pp. 322-333.

^{10.} Wolfgang Köhler, The Place of Value in a World of Facts (New York: Liveright, 1938).

plained physio-chemically or whether "vital" forces must be postulated. Indeed, the properties of life processes with which biology is concerned are not unlike the psychical phenomena responsible for the gestalt problem in psychology. This does not mean, however, that the vitalists' doctrine in biology recommends itself as particularly fruitful, for their answer precludes the possibility of success in a search for physical gestalts. The biologists have of course made some attempts at discovering analogies in physics, but thus far little more than vague comparisons with crystal formations has been achieved.... The closest approach between general biology and psychology occurs in the theory of nervous functions, particularly in the doctrine of the physical basis of consciousness. Here we have an immediate correspondence between mental and physical processes, and the demand seems inescapable that at this point organic functions be thought of as participating in and exhibiting essentially gestalt characteristics.¹¹

Because the thought and language of physics, consequently carried over into biology, had been based on mechanistic assumptions, a new conceptual foundation for these sciences would have to be built up from the language governing cognitive processes—an approach consistent with Vernadsky's discovery of the subsuming characteristic of the Noösphere over both the biotic and abiotic.

According to the machine conceptions, order in nature can only be imposed by certain fixed constraints, a necessary corollary to the idea at the root of the second law of statistical thermodynamics: that natural processes inherently tend toward disorder. It is true that within any given boundary conditions for a given system, there is a definite tendency toward an equilibrium state describable by the second law. However, the principle of direction in that system can also be attributed to strictly physical (what Max Planck called "dynamical"), rather than statistical, principles, such as the system's tendency to reduce its total potential.¹² The

machine conception fails even as a beginning point in reasoning. Within certain boundary conditions, which themselves cannot be defined by the second law, even inorganic systems have the capacity for regulation purely through the interaction of the physical forces inherent in the system.

The array of these physical forces active in biological processes is not a subset of, but rather *subsumes* those found in inorganic systems, and appears to include not only chemical and electrodynamic phenomena, but everything from laser-like biophoton emissions, to nuclear transmutation and superconductivity, processes whose abiotic expression may represent merely "limiting conditions" of their more universal manifestation in life. These processes act to reshape the topological boundary conditions represented by any given physical state of an organism, as in the case of the electric fields governing limb regeneration.

In a machine, the distinction between process and structure is unambiguous; for example, hot gases are conducted through the rigid chamber walls of a car engine. In an organism, the energetic flow required for metabolism literally builds, and constantly maintains, the structure of the organism. Moreover, this energetic flow is part of a continuous process extending from terrestrial, to solar, to cosmic space, posing the question: Are there any strictly inorganic systems for which the second law has universal significance?

Leaving the Womb

The existence of continual, periodically varying, and interpenetrating electromagnetic fields forms an invisible part of the terrestrial environment that is as real as the oceans, mountains, and atmosphere, though we may forget about such radiations in the same way a deep-sea fish forgets about water. Sources of this radiation include the Earth's magnetic and electric fields, each of which exhibits diurnal and periodic variations in conjunction with the activity of the Sun, as well as larger astronomical cycles; natural changes in the atmosphere, such as thunderstorms; cosmic background radiation such as radio and gamma rays; and man-made sources.

In many ways, the evolution of life on Earth has been bound up with the evolution of the electromagnetic fields of the planet, as through the creation of the atmosphere by which the electric fields of the planet are maintained, or the more extreme case of magnetic field reversals, whose cause remains a mystery, but which

^{11.} Wolfgang Köhler, "Physical Gestalten," from Willis D. Ellis, *A Source Book of Gestalt Psychology* (London: Kegan Paul, Trench, Trubner and Co. 1938).

^{12.} Köhler, "On the Problem of Regulation," from Mary Henle, *The Selected Papers of Wolgang Köhler* (New York: Liveright, 1971).



Mark Dowman & Mike Stovall; Eagle Engineering, Inc.

Interplanetary travel requires that we learn to "see" the invisible part of the terrestrial environment, which is as real as the oceans, mountains, and atmosphere. Shown: an artist's conception of an astronaut, in a special spacesuit, working on the Moon.

have historically coincided with mass extinctions. More interesting is the possibility that the magnetic field itself is either a product of, or at least conditioned in some way by the action of living processes, possibly through the motion of conducting currents in the oceans.¹³

A vast body of experimental work has documented widely varying influences of environmental electromagnetic fields on the behavior and internal vital activity of organisms, including all the known plant, animal, and human biorhythms. Such fields act in conjunction with those produced by the organism itself. However, the very broad measurable parameters of electromagnetic radiation, including its frequency spectrum and modulation, intensity, and orientation, and the fact that organisms can be sensitive to extremely slight variations in any one of these, make the correlation of specific effects with specific forms and qualities of radiation difficult to determine. Add to that, the "corpuscular" cosmic rays and their secondary atmospheric by-products, and the potential functional relationships of various radiations and life appear almost infinitely complex.

Ultimately, determining the specific forms of "resonance" between organisms and the energetic phenomena of their environment will depend on learning more about the way organisms exhibit such high degrees of selectivity, one of the clearest expressions of the unique physical space-time of living matter. At the nuclear

scale, this includes not only what specific chemical elements an organism will utilize, but also which isotopes. At the molecular scale, this includes not only the elemental and isotopic composition of molecules, but also their *structure*, discovered by Louis Pasteur, as the presence of a principle of dissymmetry, reflected in the ability of left- or right-handed molecules to rotate polarized light (electromagnetic radiation).¹⁴

Bioenergetic phenomena, in general, should be considered in light of Pasteur's and Pierre Curie's work on the principle of dissymmetry, which Vernadsky believed was one of the most important avenues for scientific exploration into the physical space-time manifestation of directionality in living processes.

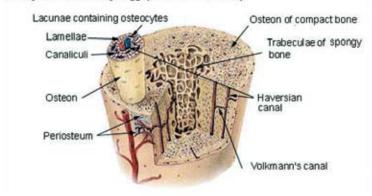
In general, the cyclical character of the relationship of organisms to energetic phenomena must reflect that of organisms to matter: They are utilized and transformed by the organism as part of the continual process of the biogenic migration of matter-energy through the Biosphere, in its evolution to higher states of development. Defining this selectivity with respect to electromagnetic radiation may help to actually redefine the electromagnetic spectrum itself, with which "Living systems may be playing an unimaginably huge concert ... creating a completely new category of phenomena

^{13.} Gregory Ryskin, "Secular variations of the Earth's magnetic field: induced by the ocean flow?" *New Journal of Physics*, June 2009.

^{14.} A recent experiment detected a similar effect for a beam of electrons, with interesting implications for our discussion here. See "Chiral Asymmetry: The Quantum Physics of Handedenss," in Mark P. Silverman, *Quantum Superposition: Counterintuitve Consequences Coherence, Entanglement, and Interference* (Berlin: Springer, 2008).

FIGURE 5

Compact Bone & Spongy (Cancellous Bone)



National Cancer Institute SEER program

Bone loss in astronauts in space has long been recognized as a major problem; the relationship of ionizing radiation, which is more abundant outside the protection of Earth's magnetic field, to the rate of both fracture healing and bone loss in reduced gravity environments is being studied, although primarily in Earth-bound laboratory conditions.

outside classical electrodynamics."15

Perhaps we won't fully appreciate the subtle, but crucial, nature of our dependence on an appropriate electromagnetic "diet," until we are forced to create it ourselves from scratch—beginning with the first lunar bases, and then, en route to and on the surface of Mars.

One example, related to the overall bioelectromagnetic control system first revealed by regeneration, suffices to demonstrate that frontier research in space is no luxury, but rather, an absolute necessity.

Bone loss in astronauts in space has long been recognized as a major problem, and it is one that appears closely related to osteoporosis on Earth (**Figure 5**). However, it cannot be fully accounted for by the mechanical "unloading" of bone stress due to microgravity, and undoubtedly involves an electromagnetic component. Becker proposed one possible means by which bones might respond to external electromagnetic fields in space.

Bones are able to reshape themselves according to mechanical stress, creating more growth in areas that bear greater compression loads, and compensating by eliminating bone material in other areas. This self-regulating system of growth and loss is governed by electrical signals, and the piezoelectric property of bone may

15. Fritz-Albert Popp, "Electromagnetism and Living Systems," from Mae Wan-Ho, Fritz-Albert Popp, Ulrich Warnke, *Bioelectrodynamics and Biocommunication* (Singapore: World Scientific, 1994).

allow it to generate the necessary electrical currents by mechanical stress. Human bone is an intricate structure composed of a matrix that includes tiny apatite minerals of calcium phosphate bound to interwoven collagen fibers, as well as trace elements like copper. Becker found that the trace atoms of copper might act as a kind of electromagnetic "peg," holding the collagen and apatite together, which could be loosened through a disruption of the body's internal electric fields.

Space osteoporosis may result from unnatural currents induced in bone by a spacecraft's rapid motion through the Earth's magnetic field, with a polarity reversal every half orbit, or, it may be a direct effect of the field reversal. This abnormality, which may change the activity of bone cells directly, would be superimposed on abnormal responses of bone's nat-

ural electrical system, which is almost certainly affected by weightlessness. The unfamiliar external field reversals could also weaken the copper pegs, at the same time that the bones are in a constant state of "rebound" from their Earthly weightinduced potentials, producing a signal that says, "No weight, no bones needed." We know that the more even distribution of blood caused by weightlessness registers in the heart as an excess; as a result, fluid and ions, including calcium, are withdrawn from the blood. However, the effect probably isn't due to weightlessness alone, for the Skylab astronauts did rigorous exercise, which would have supplied plentiful stresses to their bones. They worked out so hard that their muscles grew, but decalcification still reached 6.8 percent on the twelve-week mission.¹⁶

Such possible effects, which point to the more general electromagnetic properties of biological regulation, can only be tested by experimenting with artificial electromagnetic fields on astronauts in orbit. In addition, current space biomedical research indicates that bone fracture healing is impeded in reduced gravity conditions. The relationship of ionizing radiation, which is more abundant outside the protection of Earth's magnetic field, to the rate of both fracture healing and

^{16.} Becker, op. cit.

bone loss in reduced gravity environments is being studied as well, though primarily in Earth-bound laboratory conditions.

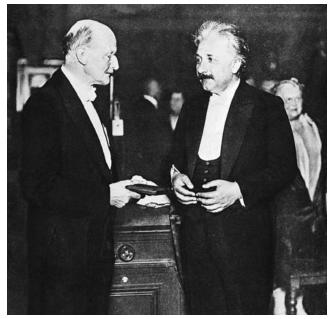
Again, these relationships can only properly be investigated outside of the pervasive electromagnetic and gravitational fields of the Earth. Far beyond the specific effects on bone and other organic tissue, such studies could lead to a new understanding of the broader relationship between ionizing radiation, electromagnetism, and gravitation.

Indeed, radioactive decay itself, a property of the inner structure of atoms once thought immutable, and a source of ionizing radiation, has been shown in some cases to correlate with astrophysical cycles.¹⁷ This further underscores that the fundamental properties of even inorganic matter cannot be studied as the isolated phenomena of "particle physics," and calls to mind Vernadsky's emphasis on the role of cosmic processes in shaping the inherent character of all matter. Here lies the true value of a science-driver program for space exploration, in forcing the combination of fusion and nuclear research, with astrophysics, biology, and physical chemistry, to allow seemingly paradoxical observations to be compared and analyzed across a wide range of experimental domains. This becomes crucial as we confront the prospect of supporting human life outside the "womb" of the Earth.

A New Causality

In a sense, we are faced today with the same complex of paradoxes that arose with the simultaneous emergence of atomic science, relativity, and quantum physics, in the first decades of the 20th Century. Seemingly continuous processes, such as energetic phenomena, appeared to be organized in the very small as discrete processes. Likewise, discrete phenomena, such as matter, could be represented by continuous processes.

Max Planck and Albert Einstein called for the development of a new concept of causality, rather than the statistical indeterminacy imposed by the quantum mechanists. In this respect, it is worth recalling the words of Planck's student Köhler, that "Max Planck once told me that he expected our approach [in gestalt psychology] to clarify a difficult issue which had just



Max Planck and Albert Einstein called for the development of a new concept of causality, rather than the statistical indeterminacy imposed by the quantum mechanists. Here, Planck presents Albert Einstein with the Max-Planck medal, Berlin, June 28, 1929

arisen in quantum physics if not the concept of the quantum itself." ¹⁸

Vernadsky, at the same time, recognized that, for the truths of science to be universal, the standpoint of the "naturalist" had to be adopted, in order to study the full scope of physical phenomena and their expression in all three universal experimental domains of the abiotic, biotic, and noetic.

The basis for this new science of dynamics, as La-Rouche has called it, will rest on a mobilization of the scientific and economic means necessary to secure an interplanetary future for mankind, including a full mastery of the entire electromagnetic spectrum and its use to sustain human life throughout the Solar System. This approach will define the meaning of science for the next century, if we have the wisdom to let that knowledge guide our actions in the present.

The author can be reached at oyangt@gmail.com.

For additional references: http://larouchepac.com/node/14423

^{17.} Jere H. Jenkins, Ephraim Fischbach, et al., "Evidence for Correlations Between Nuclear Decay Rates and Earth-Sun Distance," *Astroparticle Physics*, Vol. 32, No. 1, August 2009. http://arxiv.org/PS_cache/arxiv/pdf/0808/0808.3283v1.pdf

^{18.} Wolfgang Köhler, "Gestalt Psychology Today," Address of the President at the sixty-seventh Annual Convention of the American Psychological Association, Cincinnati, Ohio, Sept. 6, 1959. http://psychclassics.yorku.ca/Kohler/today.htm

Editorial

We Can Defeat Fascism Again!

On May 8, in Moscow, the Presidents of Russia and China led a huge international celebration of the 65th anniversary of the victory over Hitler's fascism. While U.S. soldiers participated in the parade, the abstention of the U.S. President was a glaring one. Worse was the fact that President Obama was actually addressing the American people on that day, with an encomium to the Hitler health policy which he has just rammed through.

Ironical as well, was the fact that, on the very same weekend, the "leaders" of Western Europe and the United States were devising new fascist austerity schemes for Europe, in the name of bailing out the bankrupt global monetarist system which has ruled the world since world War II.

Yet, one can say, without exaggeration, that the world stands at the brink of reconstituting a new anti-fascist alliance, this time organized to crush the intellectual author of the Hitler regime and today's fascist austerity drive: the British Empire. Such an alliance would be in the form of the Four Power agreement proposed by Lyndon LaRouche, and comprised of the United States, Russia, China, and India. A treaty agreement among those four nations, establishing a fixedexchange-rate system and launching long-term great infrastructure projects for global development, would provide the basis for doing what Franklin Roosevelt—the author of victory, who died before Hitler was defeated—had planned to do, in order to wipe out empires, and establish the basis for lasting peace.

How can one be so optimistic? The answer lies in the dynamic now sweeping the world, especially in the United States.

As Lyndon LaRouche developed at length in his May 8 webcast, the mass strike process which erupted in the United States in 2009, has now reached a new phase, where certain members of the U.S. Senate and House of Representatives, have brooked their party leaderships, and stepped forward to present a patriotic solution to the devastating threat now facing the population. In stark contrast to the rest of the Congress, Senators John McCain, Maria Cantwell, and Russ Feingold, among others, have decided to demand the reimplementation of FDR's Glass-Steagall Law, as a line of defense of the people of the United States, against the depradations of Wall Street, and a first step toward restarting the economy according to the principles established in the Preamble to the U.S. Constitution.

Such leadership inside the institutions of government has been precisely what has been missing over the last months, to bring about a victory over British puppet Obama's fascist program. As the American people got more and more enraged, one so-called leading opponent of Obama's Hitler health program, for example, capitulated to bribery or threats. While the LaRouche movement escalated its efforts, and gained support, it still stood outside the institutions of government, which can act decisively.

Victory, of course, is not assured, but, as La-Rouche pointed out, popular support for the Glass-Steagall measure is massive. If the measure is forced onto the floor, Obama will be forced to capitulate, or to take measures against the bill that will hasten his own political demise. If the measure is passed, it creates the conditions for extending a lifeline to Europe, to defend itself from the British financial yoke as well.

Once we force through Glass-Steagall in the U.S. we also create the conditions for a global alliance with Russia, China, and India—the new anti-fascist alliance which will save us from Hell.

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- BCAT.TV/BCAT Click BCAT-2 4th Fri: 10 am (Eastern Time)
- LAROUCHEPUB.COM Click
- LaRouche's Writings. (Avail. 24/7) LA36.ORG Click on The LaRouche Connection. Select desired show.
- MNN.ORG Click Watch Ch.57 Fri: 2:30 a.m. (Eastern Time)
- QUOTE-UNQUOTE.COM Click on Ch.27. Tue. 6 pm (Mtn.)
- SCAN-TV.ORG Click Scan on the Web (Pacific Time). Ch.23: Wed. 7 am Ch 77: Mon 11 am
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INTERNATIONAL

THE PHILIPPINES

MANILA Ch.3: Tue 9:30 pm

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UNIONTOWN

GY Ch.2: Wed, Thu, Fri: 6 am

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CALIFORNIA

- CONTRA COSTA
- CC Ch.26: 2nd Tue 7 pm COSTA MESA
- TW Ch.35: Thu 5:30 pm
- LANCASTER/PALMDALE TW Ch.36: Sun 1 pm
- **ORANGE COUNTY** TW Ch.95/97/98: Mon 3 pm
- SAN FRANCISCO CC Ch.29: 2nd & 4th Sat 9 pm

COLORADO

DENVER CC Ch.56 Sun 10 am

CONNECTICUT

- GROTON CC Ch.12: Mon 5 pm NEW HAVEN CC Ch.27: Mon &
- Wed: 6 am; Sat: 6 pm **NEWTOWN CH Ch.21:**
- Mon 12:30 pm; Tue: 6 pm NORWICH CC Ch.14: Tue 8 pm
- SEYMOUR CC Ch.10: Tue 10 pm

DISTRICT OF COLUMBIA

WASHINGTON CC Ch.95 & RCN Ch.10: Irregular

FLORIDA

ESCAMBIA COUNTY CX Ch.4: Last Sat 4:30 pm

- **CHICAGO** CC./RCN/WOW Ch.21: Irregular
- PEORIA COUNTY IN Ch.22: Sun 7:30 pm
- QUAD CITIES MC Ch.19: Thu 11 pm
- **ROCKFORD** CC Ch.17 Wed 9 pm

IOWA

QUAD CITIES MC Ch.19: Thu 11 pm

KENTUCKY

- BOONE/KENTON COUNTIES IN Ch.21: Sun & Tue: Midnight
- JEFFERSON COUNTY IN Ch.98: Fri 2-2:30 pm

LOUISIANA

ORLEANS PARISH CX Ch.78: Sun 11 pm; Mon 5 pm; Tue 4 pm; Thu 12:30 pm; Fri 12:30

MAINE

PORTLAND TW Ch.2: Tue 10 pm; Thu 1 am; Sat Noon

MARYLAND

- ANNE ARUNDEL CC Ch.99; FIOS Ch.42: Tue & Thu: 10 am; Fri & Sat: midnight
- P.G. COUNTY CC Ch.76 & FIOS Ch.42: Mon 10:30 pm, Thu 11:30

MASSACHUSETTS

- CAMBRIDGE CC Ch.10: Tue 2:30 pm; Fri 10:30 am
- FRANKLIN COUNTY (NE) CC Ch.17: Sun 8 pm; Wed 9 pm; Sat 4 pm
- GREAT FALLS CC Ch.17: Irregular
- QUINCY CC Ch.8: Pop-ins.
- WALPOLE CC Ch.8: Tue 1 pm

MICHIGAN

- BYRON CENTER CC Ch.25: Mon 1 & 6 pm
- KENT COUNTY
- CC Ch.25: Mon 6:30 am KENT COUNTY (South)
- CC Ch.25: Wed 9:30 am LAKE ORION
- CC Ch.10: Irregular
- LANSING CC Ch.16: Fri Noon
- LIVONIA BH Ch.12: Thu 3 pm
- MT. PLEASANT CH Ch.3:
- SHELBY TWP CC Ch.20, WOW Ch.18, UV Ch.99: Mon 11 pm
- WAYNE COUNTY

CC Ch.16/18: Mon 6-8 pm

MINNESOTA

- ALBANY AMTC Ch.13: Tue & Thu: 7:30 pm
- CAMBRIDGE
- US Ch.10: Wed 6 pm
- **COLD SPRING** US Ch. 10: Wed 6 pm
- COLUMBIA HEIGHTS
- CC Ch.15: Tue 9 pm DULUTH CH Ch.16: Irregular.
- Ch,29: Wed Midnight; Fri 1 pm MARSHALL Knology Ch.67: & CH
- Ch.35/8: Sat. 8:30 am MINNEAPOLIS
- CC Ch.16: Tue 11 pm
- MINNEAPOLIS (N. Burbs) CC Ch.15: Thu 11 am & 6 pm
- NEW ULM CC Ch.14 & NUT Ch.3: Sun 6 am, Tue 9 pm
- **PROCTOR**
- MC Ch.7: Tue after 5 pm.
- ST. CLOUD CH Ch.12: Mon 5 pm
- ST. CROIX VALLEY
- CC Ch.14: Thu 1 & 7 pm; Fri 9 am ST. PAUL CC Ch.15: Wed 9:30 pm
- ST.PUAL (N.Burbs) CC Ch.21: Mon 7 pm, Tue 3 am & 11 am

- ST. PAUL (S&W Burbs) CC Ch.15: Mon, Wed, Fri 9 am
- SAULK CENTRE
- SCTV Ch.19: Sat 5 pm
- WASHINGTON COUNTY (South) CC Ch.14: Thu 8 pm

NEVADA

- **BOULDER CITY**
- CH Ch.2: 2x/day: am & pm WASHOE COUNTY CH Ch.16: Thu 9 pm

NEW HAMPSHIRE

- CHESTERFIELD CC Ch.8: Wed 8 pm
- MANCHESTER CC Ch.23: Thu 4:30 pm

NEW JERSEY

- BERGEN CTY TW Ch.572: Mon & Thu 11 am; Wed & Fri 10:30 pm
- MERCER COUNTY CC Trenton Ch.26: Irregular Windsors Ch.27: Irregular MONTVALE/MAHWAH
- CV Ch.76: Mon 5 pm
- PISCATAWAY FIOS TV Ch.40, CV Ch.15: Thu 11:30 pm UNION CC Ch.26: Irregular

NEW MEXICO

- BERNALILLO COUNTY CC Ch.27: Tue 2 pm
- LOS ALAMOS
- CC Ch.8: Wed 10 pm SANTA FE
- CC Ch.16: Thu 9 pm; Sat 6:30 pm
- SILVER CITY CC Ch.17: Daily 8-10 pm
- TAOS CC Ch.2: Sat: 10 pm

NEW YORK

- ALBANY TW Ch.18: Wed 5 pm.
- **BETHLEHEM**
- TW Ch.18: Tue 6 am BRONX CV Ch.70: Wed 7:30 am
- BROOKLYN 4th Friday: CV Ch.67: 10-10:30 am TW Ch.34: 10-10:30 am RCN Ch.82:10-10:30 am FIOS Ch.42:10-10:30 am
- BUFFALO TW Ch.20: Wed & Fri 10:30-11pm
- CHEMUNG/STEUBEN TW Ch.1/99: Tue 7:30 pm
- **ERIE COUNTY** TW Ch.20: Thu 10:35 pm
- IRONDEQUOIT
- TW Ch.15: Sun 10 am JEFFERSON/LEWIS COUNTIES
- TW Ch.99: Irregular MANHATTAN TW, RCN Ch.57/85, Verizon FIOS-TV Ch.35:
- Fri 2:30 am ONEIDA COUNTY TW Ch.99: Thu 8 or 9 pm
- PENFIELD TW Ch.15: Sun & Tue
- QUEENS: 4th Sat monthly 2 pm TW Ch.56, RCN Ch.85, Verizon FIOS-TV Ch.36
- QUEENSBURY TW Ch.18: Mon 7 pm
- ROCHESTER
- TW Ch.15: Irregular
- ROCKLAND CV Ch.76: Mon 6 pm

- **SCHENECTADY**
 - TW Ch.16: Fri 1 pm; Sat 1:30 am
- STATEN ISLAND TW Ch.35: Tue 8:30 am & Midnight
- TRI-LAKES
- TW Ch.2: Sun 7 am, 1 pm, 8 pm
- WEBSTER TW Ch.12: Wed 9 pm
- WEST SENECA TW Ch.20: Thu 10:30 pm

NORTH CAROLINA

- HICKORY CH Ch.6: Tue 10 pm
- MECKLENBURG COUNTY TW Ch.22: Fri 12:30 am

OHIO

- AMHERST
- TW Ch.95: Daily Noon & 2 pm
- **OBERLIN Cable Co-Op**

Ch.9: Thu 8 pm PENNSYLVANIA

PITTSBURGH CC Ch.21: Irregular

RHODE ISLAND

- BRISTOL, BARRINGTON, WARREN
- Full Channel Ch.49: Tue: 10 am EAST PROVIDENCE
- CX Ch.18; FIOS Ch.24: Tue: 6 pm STATEWIDE RI INTERCONNECT

CX Ch.13; FIOS Ch.32 Tue 10 am **TEXAS**

- HOUSTON CC Ch.17 & TV Max
- Ch.95: Wed 5:30 pm; Sat 9 am KINGWOOD CB Ch.98:

Wed 5:30 pm; Sat 9 am **VERMONT**

- BRATTLEBORO CC & SVC Ch.8:
- Mon 6 pm, Tue 4:30 pm, Wed 8 pm GREATER FALLS CC Ch.10: Mon/Wed/Fri 1 pm

VIRGINIA

- ALBEMARLE COUNTY
- CC Ch.13: Sun 4 am; Fri 3 pm ARLINGTON CC Ch.69 &
- FIOS Ch.38: Tue 9 am CHESTERFIELD COUNTY
- CC Ch.17; FIOS Ch.27: Mon 1 pm FAIRFAX CX & FIOS Ch.10: 1st & 2nd Wed 1 pm; Fri 10 am; Sun 4 am. FIOS Ch.41: Wed 6 pm LOUDOUN COUNTY CC Ch.98 &
- FIOS Ch.41: Wed 6 pm
- ROANOKE COUNTY

CX Ch.78: Tue 7 pm; Thu 2 pm WASHINGTON

- KING COUNT CC Ch.77: Mon Noon
- BS Ch.23: Mon Noon TRI CITIES CH Ch.13/99: Mon 7

pm; Thu 9 pm

- WISCONSIN MARATHON COUNTY
- CH Ch.98: Thu 9:30 pm; Fri Noon MUSKEGO TW Ch.14: Sun 7 am, Mon & Thu:

5:30 pm SUPERIOR CH & MC Ch.7: Tue after 5 pm.

WYOMING GILLETTE BR Ch.31: Tue 7

MSO Codes: AS=Astound; BD=Beld; BR=Bresnan; BH=BrightHouse; BS = Broadstripe; CV=Cablevision; CB=Cebridge; CH=Charter; CC=Comcast; CX=Cox; GY=Galaxy; IN=Insight; MC=MediaCom; NUT=New Ulm Telecom; SVC=Southern Vermont Cable; TW=TimeWarner; US=US Cable; UV=AT&T U-Verse; FIOS=Verizon FIOS-TV.

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