

EIR

Executive Intelligence Review

April 19, 2019 Vol. 46 No. 15

www.larouchepub.com \$10.00

The Space Age Is Here: Revolutionize Our Economy



Editor-in-Chief and Founder:

Lyndon H. LaRouche, Jr.

Editorial Board: *Lyndon H. LaRouche, Jr. , Helga Zepp-LaRouche, Robert Ingraham, Tony Papert, Gerald Rose, Dennis Small, William Wertz*

Co-Editors: *Robert Ingraham, Tony Papert*

Technology: *Marsha Freeman*

Transcriptions: *Katherine Notley*

Ebooks: *Richard Burden*

Graphics: *Alan Yue*

Photos: *Stuart Lewis*

Circulation Manager: *Stanley Ezrol*

INTELLIGENCE DIRECTORS

Economics: *Marcia Merry Baker, Paul Gallagher*

History: *Anton Chaitkin*

Ibero-America: *Dennis Small*

United States: *Debra Freeman*

INTERNATIONAL BUREAUS

Berlin: *Rainer Apel*

Copenhagen: *Tom Gillesberg*

Lima: *Sara Madueño*

Melbourne: *Robert Barwick*

Mexico City: *Gerardo Castilleja Chávez*

New Delhi: *Ramtanu Maitra*

Paris: *Christine Bierre*

Stockholm: *Ulf Sandmark*

United Nations, N.Y.C.: *Leni Rubinstein*

Washington, D.C.: *William Jones*

Wiesbaden: *Göran Haglund*

ON THE WEB

e-mail: eirms@larouchepub.com

www.larouchepub.com

www.executiveintelligencecencereview.com

www.larouchepub.com/eiw

Webmaster: *John Sigerson*

Assistant Webmaster: *George Hollis*

Editor, Arabic-language edition: *Hussein Askary*

EIR (ISSN 0273-6314) is published weekly

(50 issues), by *EIR News Service, Inc.*,

P.O. Box 17390, Washington, D.C. 20041-0390.

(571) 293-0935

European Headquarters: E.I.R. GmbH, Postfach

Bahnstrasse 9a, D-65205, Wiesbaden, Germany

Tel: 49-611-73650

Homepage: <http://www.eir.de>

e-mail: info@eir.de

Director: Georg Neudecker

Montreal, Canada: 514-461-1557

eir@eircanada.ca

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 City: EIR, Sor Juana Inés de la Cruz 242-2

Col. Agricultura C.P. 11360

Delegación M. Hidalgo, México D.F.

Tel. (5525) 5318-2301

eirmexico@gmail.com

Copyright: ©2019 EIR News Service. All rights reserved. Reproduction in whole or in part without permission strictly prohibited.

Canada Post Publication Sales Agreement
#40683579

Postmaster: Send all address changes to *EIR*, P.O. Box 17390, Washington, D.C. 20041-0390.

Signed articles in *EIR* represent the views of the authors, and not necessarily those of the Editorial Board.

The Space Age Is Here: Revolutionize Our Economy

EDITORIAL

The Three Men: London Is in Coverup Mode

April 11—As far as is known, there are just three men who have conclusive evidence that the Russians did *not* hack the Democratic National Committee (DNC) in 2016, and are willing to put it forward. Even after the collapse of the “Russia collusion” hoax, when Mueller’s investigation was unable to find any collusion, the still-surviving lie that Russia hacked the DNC and gave the hacked data to WikiLeaks, is still central to London’s intention to pit the United States against Russia.

One of the three is William Binney, the former National Security Agency (NSA) Technical Director, who has marshalled all the known forensic evidence to show that the data was taken from the DNC’s own network rather than through the internet, so it was an insider “leak” or the like, rather than a hack. The then CIA Director, Mike Pompeo, met with Binney at President Trump’s request in 2017, but Pompeo never followed up on that interview, and continued to insist that Russia had hacked the DNC. Binney was never interviewed by investigators subsequently, or asked to testify before Congress.

Binney’s remains the only known investigation based on forensic evidence, in large part because the FBI inexplicably failed to impound the DNC servers after the alleged hack, as President Trump has often pointed out.

The second witness is former British Ambassador, Craig Murray, a friend of WikiLeaks founder Julian Assange. Murray told the *London Guardian* on Dec. 10, 2016, that the CIA claim that Russia hacked the DNC

emails was “bullshit. . . . I know who leaked them.” He added, “I’ve met the person who leaked them, and they are certainly not Russian, and it’s an insider. It’s a leak, not a hack; the two are different things.” Murray still maintains this today, but has never been called to testify to investigators or to Congress.

The third is Assange himself, who told then Representative Dana Rohrabacher (R-CA) a year ago, “I have physical proof that the Russians did not give me this.” Rohrabacher wanted to discuss this with President Trump, but was sidelined. And neither Congress nor investigators have interviewed Assange either. Assange went on to tell the Congressman, “I have physical proof that I would be very happy to provide once I can leave the Ecuadorian embassy without being arrested.”

But wait—wasn’t he just dragged out of that embassy by British police and arrested this morning? Couldn’t this have something to do with it?

Indeed it does. After the collapse of Russiagate and the beginning of Attorney General William Barr’s ongoing investigation of that hoax and its origins, London has been in deep coverup mode. Even though the United States has asked that Assange be extradited to face a hokey conspiracy charge in the Eastern District of Virginia, the operation to force him out of asylum in the Ecuadorian embassy has British, not U.S. fingerprints all over it. Still, many U.S. hard-liners are passionate against Assange; at a minimum, London hopes to muddy the waters to keep the truth from coming out. Let’s get it out!

Bill Binney: Look at the Evidence To Investigate the Mueller Hoax Crimes

These are selected excerpts from the discussion between William Binney and LaRouche PAC's Jason Ross, broadcast on LaRouche PAC TV on April 11, 2019. Mr. Binney is the former Technical Director for the National Security Agency (NSA), who resigned from the Agency in 2001 after serving more than thirty years. The discussion occurred immediately following the arrest of Julian Assange in London, at the Ecuadorian Embassy, based on a previously sealed indictment from March 2018 filed in the U.S. District Court of Eastern Virginia, charging him with conspiring with Bradley Manning—now Chelsea Manning—to provide secret documents for release through WikiLeaks. The full video, which has received more than 94,000 views as of 7:30 pm Monday, April 15, is available [here](#).



William Binney

LPAC-TV

Jason Ross: Bill Binney is quite aware of WikiLeaks' history and he is an expert on matters of intelligence and on matters surrounding the Russiagate controversy that has been engulfing the United States over the past two years. I don't think that these events are entirely unrelated.

Mr. Binney, please tell us what your view is, of the arrest of Julian Assange today in London.

William Binney: This is a very bad precedent. It's all fabrication. They're not going to give him due process when he gets here. The message is, to everybody else in the world, "Either you con-

form to what we tell you to do, or we'll do this to you."

Attorney General Barr

Ross: Let me put this in context. We've seen the release of the report by Special Counsel Robert Mueller, concluding that the Trump campaign had not colluded with Russia in the election; although it did include, as a tacit assumption, Russian hacking of the Democratic National Committee, as an attempt by the Russian government to throw the election to Donald Trump, an assertion that was not challenged by Attorney General Barr in his summary of Mueller's findings.

Now, despite this, Barr has stated that he is concerned and planning to investigate what was going on with Russiagate.

Attorney General Barr told the Senate Appropriations subcommittee, April 10, 2019: "I think spying on a political campaign is a big deal. The generation I grew up in, the Vietnam War period ... people were all concerned about spying on anti-war people. ... There were a lot of rules put in place to make sure that there's an adequate basis before our law enforcement agencies get involved in political surveillance. I'm not suggesting that those rules were violated, but I think it's important



C-SPAN

Attorney General William Barr

to look at that. And I'm not just talking about the FBI, necessarily, but intelligence agencies more broadly."

Sen. Jeanne Shaheen replied to Barr: "So, you're not suggesting, though, that spying occurred?"

Barr answered, "I think spying did occur. Yes. I think spying did occur."

We need to get at what was involved in creating this investigation in the first place, and the improprieties there. The central theme, though, is going to have to be taking apart the "Russian hack" myth.

Now you've been very outspoken. You are one of very few people, including Julian Assange, who is able to speak with a certain level of expertise and knowledge about whether Russia had attacked the election. What implication do you think it has on getting to the bottom of Russiagate, if Julian Assange is arrested? What effect do you think this arrest has on the ability to get to the bottom of this matter?

Get to the Truth

Binney: I don't think his arrest will have any effect on the ability to do an investigation in this matter. All they have to do is investigate the NSA data bases and look at the published data that WikiLeaks posted on the DNC and Podesta. The evidence is already there; the forensic evidence that it was not a hack is very clear, and demonstrable in a court of law. So, let's have at it. Let's go into a court of law, and let's demonstrate this for everybody to see. The point is, that there's no evidence whatsoever, that anything that WikiLeaks published is in any way connected with a hack or the Russians.

Ross: At a certain point, maybe some months after the inauguration of President Trump, President Trump had asked then CIA Director Mike Pompeo to meet with you regarding your views on this matter. Pompeo, a few months before he met with you, in a speech to the Center for Strategic and International Studies (CSIS), said that WikiLeaks was a "non-state, hostile intelligence service" and in that speech Pompeo said that "WikiLeaks is abetted and aided by the Russians."

The Basic Forensic Evidence

Binney: There's no evidence that the Russians are enabling any of that. The question is, what is the basic evidence? And nobody has it. In Deputy Attorney General Rod Rosenstein's indictment of some Russians, he listed GRU [Russian military foreign-intelligence service] agents.

Well, I looked at that, some people assume that that



was NSA data. I said it can't be NSA data because NSA data is classified. If there's any NSA data published anywhere, it's redacted, publicly; you can't expose,—otherwise, Rosenstein is guilty of Title 18 criminal codes for violating the Espionage Act, as well as violating protection of classified material.

So, that's not from NSA. I assumed that that was CrowdStrike or from some other third party doing an investigation of what was left of the DNC servers. The FBI cannot show continuous control of the DNC servers because they never had them! So, in a court of law, that would be dismissed as unreliable evidence, kind of like hearsay. The FBI has to seize evidence, maintain control of it, so they can use it in a court of law as the basic evidence. But they never did that, and they never had that! So, they're only getting whatever somebody tells them from a third party, some commercial company.

The whole thing is basically a fabrication. Nobody wants to look at it, and they want to profess whatever they want. But I think the Russians are doing discovery now in court, in that case—that's going to be great, because now they're going to 'fess up to what they've been doing.

Look at DCLeaks and Guccifer 2.0—with Guccifer 2.0 we can easily prove a fabrication, in a court of law. Let's do that, so that everybody knows, "yeah, that's the fabrication." Rosenstein, in using that as the part of his indictments—claims that Guccifer 2.0 is a Russian,

working for the Russians. The timestamps we got on the data, inside the data, show somebody on the East Coast, somebody in Central Time, and somebody in the West Coast of the United States—nothing in Russia! Where the hell are they getting this from? The only answer is that they’re just manufacturing this; it’s outright lies.

Ross: We’ve been [calling](#) on Trump to declassify the documents regarding the origin of this investigation. Where did the Steele dossier come from? What was the British role, with George Papadopoulos, Carter Page, and others?

They Who Wish to See No Evidence

We have heard that President Trump is attacking the press, that his calling CNN “fake news” is a *terrible* assault on press freedoms and the First Amendment. How do you think Trump calling CNN “fake news” stacks up with the arrest of Julian Assange, as far as an attack on the free press?

Binney: Well, certainly the arrest of Julian Assange is attack on the free press, that’s a direct attack. Calling the “fake news” fake—that’s simply telling the truth. We need to tell the truth, and we’re not getting the truth yet about Assange. We need to get to the bottom of how this Russiagate started.

It should begin with declassifying all the information presented to the FISA Court by the FBI, and the NSA, and the CIA, and the Director of National Intelligence, to get the warrant to spy on somebody in the Trump campaign. The President can declassify anything he wants. If he wants it declassified, he can go ahead and do that.

Nobody in the U.S. government, the House, the Senate, intelligence committees, the judiciary committees, any of the investigations, has ever wanted to talk about the forensic evidence that we found! Both in the Guccifer 2.0 data and also in the documented, posted WikiLeaks DNC data. Nobody wants to talk about that, because it doesn’t fit into this narrative that they manufactured about Russiagate.

Ross: What was the origin of the FISA warrants? Where is the evidence for the Russia hack? You’ve written a number of articles, with the Veteran Intelligence Professionals for Sanity (VIPS), with other colleagues, and done various interviews about the lack of proof on this. And in fact, doing your own forensic work, you’ve



CC/Romy Marquez

Craig Murray, former British Ambassador to Uzbekistan.

shown that the Guccifer 2.0 story doesn’t hold—and, by looking directly at the files released by WikiLeaks, that there is more evidence of a copy than of an internet-based hack. Julian Assange said repeatedly that this was not a state actor, who gave him these files.

They Who Know Who Did It

Binney: Craig Murray, a former British ambassador said that he met somebody at the American University campus who was involved in a transfer of data to WikiLeaks. So, that is not a hack; that’s evidence of somebody—like we found using the File Allocation Table (FAT) file format—downloading to some kind of portable device, a thumb drive, or a CD ROM of some sort, and physically transferring data, before WikiLeaks posted it.

Ross: Assange would have firsthand knowledge; Craig Murray claims firsthand knowledge; and you, who have provided forensic evidence and analysis. Were you approached by the Mueller investigation, to get your insights?

Binney: Nope! Nope! That’s the whole point. Nobody wants to know what we found.

Also, I would add, I’m not alone in this. There are a number of people in VIPS, about five or six of us, and some others helping us externally. There are about ten of us here, technical people doing this. So, the forensics part of it is pretty clear—and nobody’s challenged it, at all. No one has challenged it anywhere. We published it; we show the data that was out there. You can do your own evaluation. We’re open to peer review; the problem is, we can’t find any peers!

Cover This Week

*Precision
welding.*



Creative Commons CC0

THE SPACE AGE IS HERE: REVOLUTIONIZE OUR ECONOMY

2 EDITORIAL

The Three Men: London Is in Coverup Mode

3 LPAC TV INTERVIEW

**Bill Binney: Look at the Evidence
To Investigate the Mueller Hoax Crimes**

I. A Hamiltonian Economic Recovery

**7 What Is America's National Credit? Can We
Use It for Real Economic Growth?**

Review by Paul Gallagher

12 UTTER FRAUD OF GREEN NEW DEAL

**What Today's Democrats Could Learn from
JFK and Lyndon LaRouche**

by Harley Schlanger

II. The Universe Is Knowable

**16 China Is Taking Bold
Steps on the Path to
Fusion Power**

by Marsha Freeman

**23 Mankind's True Potential
in Space? First Image of
'Black Hole' Environment
Teases Imagination**

by Benjamin Deniston

III. LaRouche's Plan

**27 A DESIGN FOR LEGISLATION
Saving the U.S. Economy**

by Lyndon H. LaRouche, Jr.

November 10, 2006

**The Jan. 27, 1989 Jailing of Lyndon LaRouche
Defined an Era, Which Now Must End**

[Sign](https://lpac.co/exonerate) the Petition to Exonerate LaRouche at lpac.co/exonerate

I. A Hamiltonian Economic Recovery

What Is America's National Credit? Can We Use It for Real Economic Growth?

Review by Paul Gallagher

PART 2 OF A TWO-PART SERIES.

A Resource of War—The Credit of the Government Made Immediately Available: History of the Legal Tender Paper Money Issued During the Great Rebellion, Being a Loan without Interest and a National Currency

By Elbridge Gerry Spaulding
252 pages, paperback, \$14.95
London: Forgotten Books, 2018 (First published in Buffalo, New York, 1869)

April 5—With the enactment of the Legal Tender Act of 1862 and the Banking Acts of 1863 and 1864, the United States had a national paper currency for the first time in a generation—over \$600 million created as a war emergency action. Being a debt of the nation to its people, the new currency helped the Union borrow nearly five times that much to fight the Civil War. That nearly \$3 billion in new national credit made available, was backed in turn by about \$600 million in new, broad-based taxation. As Ways and Means Chairman Elbridge G. Spaulding explained (see [Part 1](#)), the new taxes essentially paid ordinary (non-war) government expenses and the *interest* on the new debt during the war.

The debt itself, the principal, was held by patriotic citizens and institutions who had taken it for a 20-

year period and could use the “Greenback” portion of the debt as money. We have seen that the tremendous U.S. economic expansion, which actually began during the Civil War, made the next generation’s repayment of the debt, with much greater tax revenue, easy.

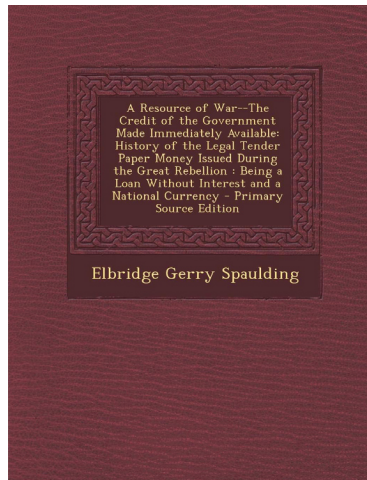
This was Treasury Secretary Alexander Hamilton’s principle that a public debt is a public blessing, if invested to advance new productive capacity, new invention, new productivity, *and* if the means for its future payment were assured. It was stated in his 1791 “Report on the Public Debt” to Congress. The Treasury’s making credit available by printing legal tender paper currency, was a successful innovation of the Lincoln Republicans.

The principle is still valid now.

Reorganizing Banking

Chairman Spaulding and other followers of Alexander Hamilton’s economics—that is to say, virtually all Lincoln Republicans—thought that a national paper currency for all uses should issue through a national bank—not from the government, the Treasury. Not only would such a bank avoid excessive printing of new money to pay ordinary government bills; it could—essentially—take that currency back from private banks around the country which engaged in usury or pure speculation.

The Congressional debates recounted in Spaulding’s book show that it was a great leap for these Lincoln Republicans, including Spaulding, to legislate

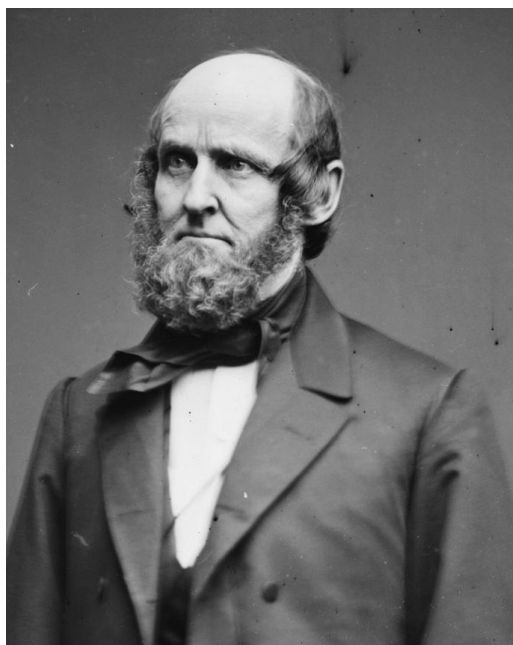


printing of the new legal tender paper currency directly by the Treasury. In fact, Secretary Salmon Chase's stated reason for declining to issue a firm statement supporting the legislation when Spaulding needed it, was the lack of a national Bank to control it.

The private banks, particularly those of New York, Boston and Philadelphia, were of great concern: They were state-chartered, poorly capitalized, and engaged in speculations ranging from mild to wild. Those Republicans who opposed issuing a legal tender currency argued that the Union government should, instead, borrow by issuing bonds directly "on the market"—i.e., to those banks—while imposing very large new taxes to pay them off.

The Congressional debates recorded in the book make clear that Spaulding—a banker himself—, Speaker Thaddeus Stevens, and other Republicans understood that bank speculation would cut a worse and worse discount off the government's bonds with every new borrowing, effectively squandering huge new tax revenues on banks, not soldiers. Spaulding was unusual in *also* forecasting that the Civil War could be lengthy, and absorb spending on an unheard-of scale: The private banks were nowhere near being able to fund the debt required.

Here the "Glass-Steagall principle" of bank regulation emerged for the first time. The Lincoln Administration's Banking Acts—which took effect on January 1, 1863 and January 1, 1864—effectively compelled banks to acquire Federal charters, which required that they buy Treasury bonds *and hold them as*



Mathew Brady

Elbridge G. Spaulding

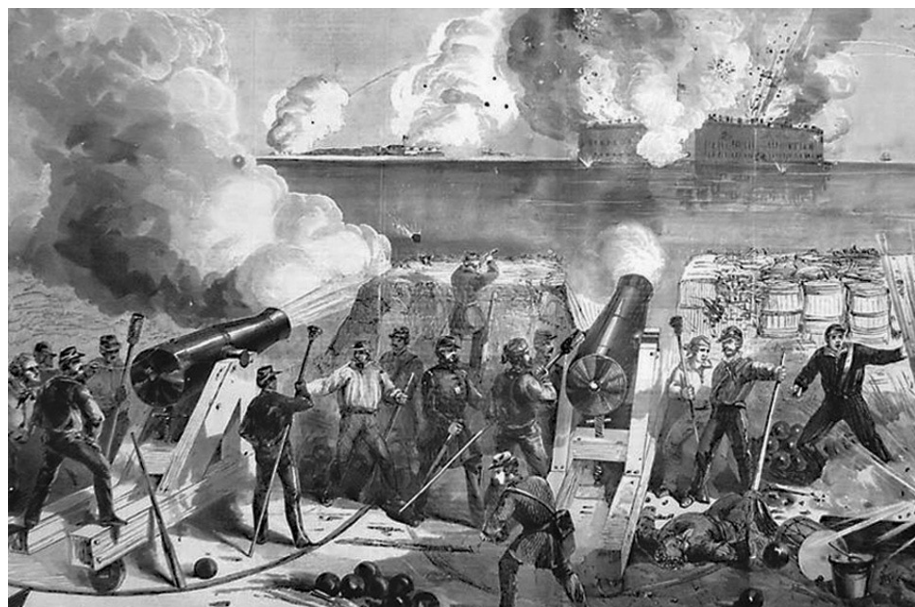
their own capital reserve, and allowed them to issue Treasury notes as their own currency. *And*, they prohibited chartered banks from securities speculation and broker-dealing.

No attempt to make the nation's credit available on a large scale for national purposes, can work without such Glass-Steagall break-up and regulation of private banks.

To Carry the Nation Rapidly Forward

Given the success of Greenbacks under such conditions, no one can claim that the United States Treasury today cannot issue even trillions in new Treasury notes (Greenbacks) to "make the national credit available" for building a new economic infrastructure or other crucial purposes. If done properly, it will set off neither runaway inflation nor other economically damaging effects, and will be for the government "a debt to future generations," as Lyndon LaRouche often said.

Second, Chairman Spaulding's example has in



LoC

Illustration showing Confederate artillerists firing on Fort Sumter in April 1861.

common with our present time, the *magnitude* of the value required—then, to fight the war; now, to build a new, high-technology basic economic infrastructure while replacing much of the deteriorated old one. What is that magnitude?

Note that the approximately \$600 million of new currency issued by the Union government during the Civil War—Greenbacks and new “national bank currency”—was nearly double the *total* amount of currency in circulation in the United States, including the slave states, before the war. Congressman Spaulding noted a New York State Appeals Court decision in early 1864 on the legality of the Greenbacks as legal tender:

We take note of the fact that to maintain armies and provide a navy for the prosecution of the war, more money is needed annually than all the specie within the United States, and that a resort by the government to the *use of its own credit*, was not only a matter of necessity, but the result has demonstrated that it was a measure of prudence and wisdom.

[Moreover], The facilities [including money] for carrying on the business of the country, as they existed before the war, were still necessary to carry on that business, and could not safely be withdrawn from it [to spend on the war]; and a new currency, national in character, and to some extent a new financial system, must be *created* to meet the new and enlarged demands of the war.

As in the case of Union’s need for currency in the Civil War years compared to the total currency in circulation before that war, America’s current need for investment in new infrastructure, manufacturing invention and productivity is huge compared to its currency in circulation. It is not huge compared to what the real economic activity of the country *could be*. But that is exactly the reason these investments are urgent.

All realistic estimates of the national credit that must be mobilized for basic economic infrastructure

investments, are in the multiple trillions. The relatively conservative American Society of Civil Engineers creates annual “report cards” which do not deal with *new* infrastructure technologies like nuclear desalination and propulsion, high-speed and mag-lev rail, or fusion technologies, but only with restoring and upgrading the nation’s *existing* basic economic infrastructure. Yet the Society estimates \$2.4 trillion must be invested in just five years, a very short time in economic terms. Other serious evaluations, which incorporate from 50 to 100 significant projects—and not even the most ambitious ones—are in the \$3-5 trillion range, up to \$8 trillion by one of China’s state inves-



A Civil War One Dollar “Greenback” Note from 1862.

tors who wished to invest in infrastructure renewal in America.

The Shadow of a Magnitude

Compare, to the magnitude of these needed investments of any “crash program” to rebuild America’s real economic mind and muscle, the dollar currency in the U.S. economy—in circulation, in checking accounts, in time savings accounts of various types, or in the capital reserves of banks. It totals about \$3.9 trillion (according to the Federal Reserve), including the Fed’s money-printing in its “quantitative easing” and bank bailout programs.

And just as E.G. Spaulding pointed out regarding the Civil War, currency cannot be withdrawn wholesale from its current uses, into an entirely new campaign to renew the national economic infrastructure.

Nearly three times that much dollar money supply exists *outside* the United States—the result of our

having lost control of the creation of dollars to the London-centered “offshore” financial system from the 1960s on.

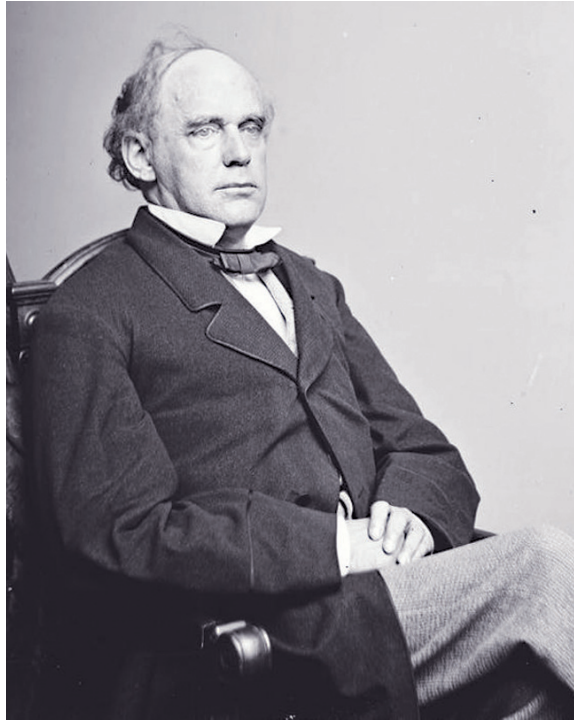
So to fund the great new “war” on deindustrialization, obsolescence, infrastructure breakdown and disaster: either create a national bank or credit institution that can succeed in bringing significant overseas dollar-based liquid assets back to the United States, combining them with domestic assets, and directing them into the most productive investments; or, let the Treasury print very large issues of new Treasury notes, and so direct them.

And there is no economic reason why the Treasury could not or should not do this, to move the most transformative and productive projects forward immediately. As Chairman Spaulding wrote then, they “will carry the nation so rapidly forward in power and resources, that nothing need prevent the government from paying the last dollar of the debt incurred” from the economic progress of the next generations.

Directing the Credit

As soon as Congress had authorized—with President Lincoln’s signature on February 25, 1862—the Treasury’s printing of the Greenback currency as legal tender, the government had masses of war bills waiting to be paid with it, to soldiers, contractors, shipbuilders, arms companies, teamsters, and so on. There was no difficulty in directing where this new national credit would go; it would go to fund mobilizing and fighting the war.

Moreover, Chairman Spaulding was confident that the great majority of the Greenbacks could be quickly *borrowed again* from the public, if 20-year Treasury bonds with 6% interest were offered in exchange for Greenbacks; and he was proven correct. This was called, in the Act, “funding” the Greenbacks; the “loan



Salmon P. Chase, Secretary of the Treasury.

without interest” (Greenbacks) was interchangeable with a “loan with interest” (the bonds). Obviously this enabled the Union government to spend the funds a second time, and in a still more directed manner. This time it committed itself to pay interest, and repay the principle if demanded—in 20 years.

In addition to \$440 million in Greenbacks, under President Lincoln’s and Secretary Chase’s plan, Treasury bonds in larger denominations were issued to banks, which bought and held them as capital in order to obtain Federal charters—the nation’s first national banking system. Another \$200 mil-

lion in new currency, called by Spaulding “bank currency,” was issued later in the war by Treasury, through these banks, which were under a “Glass-Steagall” principle of regulation: barred from securities broker-dealing and speculation.

This currency kept expanding after the Civil War as credit for the extraordinary infrastructural, industrial and productivity expansion over the next generation.

And other forms of new credit were issued, down to short-term government promissory notes—in total, \$2.8 billion, Spaulding computes.

On the new taxes: “Enough money was realized from these sources to pay the ordinary expenses of the government and all the interest on the war debt. . . .” But just \$300 million of the \$2.8 billion war debt *principal* was repaid by 1868. The ensuing industry/technology boom paid it—easily.

Thus the new national credit *multiplied* the \$600 million in new taxes by five times.

Those elected officials and organizations today, who are proposing to enact new taxes and just spend the revenue on new infrastructure, are *ignoring the credit of the nation, made available successfully in previous crises*. Consequently their proposals fall far short of the urgent need.

Some in the 1862 Congress, including some of Lincoln's party, so feared issuing a legal tender paper currency, as to propose taxing for the entire cost of war, borrowing some on Wall Street with whatever "haircuts" Wall Street would impose. That \$2-3 billion in war taxation would have crushed the Union's economy. Fortunately for the nation, Spaulding and others who understood "the credit of the nation," prevailed.

Direction by the Fed—To Wall Street

The Federal Reserve Bank, which prints America's currency now, directs its issuance of that currency very precisely—to the largest private banks, for the purpose of building their capital reserves and their liquidity, even far in excess of what is required by regulation. These banks, unfettered by any Glass-Steagall regulations, use their excess reserves as the basis for speculation. The Fed has printed more than \$4 trillion in new currency since the 2008 crash, *directed to this purpose*—even including the reserves and liquidity of London and European banks!

The chair and governors of the Fed, a "reserve bank" for banks, say this is their charter's mandate. It is of no use to the U.S. physical economy. This is what Fed supporters call its "independence" from the Federal government's purposes.

If the Fed were instructed by Congress to issue trillions in currency for any sort of infrastructure investments, it would fight this, to keep using its control of currency to control interest rates and to feed liquidity reserves to money-center banks. And the Fed would still be run by major bankers, bank traders and academic economists, with no expertise in investing credit in productive, high-technology new infrastructure.

Worse, the technologies it would be funding in some "Green New Deal" are low-energy-density, expensive facilities which can litter the land anywhere and will lower the technological level of the economy. It would be lending the new Federal Reserve notes to hundreds of state and community banks newly created for the haphazard "greening" of locales, lowering productivity of industry and agriculture. Unsupported by productivity increases or tax revenue, this new \$2 trillion could trigger rapid inflation.

As LaRouche warned, "disaster would ensue" from Fed control of such a chaotic currency issuance. Worse,

the promoters want to reduce the human population to "save the planet."

A National Credit Institution

Congress and the President have to direct the issuance of national credit to those investments which cause the greatest increase in productivity in the economy—in new basic infrastructure and in revolutionary technologies like plasma processes, fourth-generation fission, and fusion. This must include protective infrastructure particularly against storm and flood—productivity increase emphatically includes ending the senseless, repeated loss of many lives and tens of billions in wealth from flooding rivers that could be managed and storm surges that could be stopped by new infrastructure.

The Treasury now can issue new credit and currency to agencies or authorities specifically tasked with carrying out missions of new infrastructure or crash programs of science and technology research and development. A new Reconstruction Finance Corporation modelled on President Franklin Roosevelt's RFC can organize this process.

But Lincoln's Administration combined the direct issuance of Treasury credit as new Greenback notes, with the issuance of Treasury notes through a system of Federally chartered commercial banks, *essentially capitalized with Treasury bonds*.

A new Bank of the United States can be created by Congress, capitalized both by the Treasury and by private holders of Treasury securities. A key advantage: It can bring back into new infrastructural investment some of the dollar-based liquid assets held overseas—recall that three-quarters of dollar holdings are abroad.

That Bank can be the instrument to multiply many times the tax revenue assigned to it to pay interest or dividends on the long-term capital subscribed or loaned to it. It will enable the issuance of new currency on a large, but controlled, scale through this Bank. It will operate as a large commercial bank, funding projects and technologies, including in partnership with other major nations' national credit institutions. Therefore it must be run by directors and staff experienced in scientific and construction projects as well as in banking. And it must operate in cooperation with private banks under Glass-Steagall regulation.

UTTER FRAUD OF GREEN NEW DEAL

What Today's Democrats Could Learn from JFK and Lyndon LaRouche

by Harley Schlanger

April 12—After more than two years of fueling expectations that Special Counsel Robert Mueller would produce evidence from the “Russiagate” investigation which would lead to the impeachment of President Trump, Democrats were stunned when the report was finally released last month. The vindication of Trump took away what they foolishly believed to be their ticket to the White House in 2020, if not sooner. This left them with only two main issues: an anti-Russia, anti-China strategic policy, allying themselves with anti-Trump Republicans, in a repeat of Hillary Clinton’s pro-war stance, which was rejected by voters in 2016; and an anti-growth message tailored to fit the fraudulent claims of “man-made climate change,” an issue which continues to register little voter support, according to polling data.

While some, such as House Committee chairs Adam Schiff (D-Calif.) and Jerrold Nadler (D-N.Y.), continue a fishing expedition against Trump, a group of Congressional Democrats have concluded that a fight against “climate change” should be the lead issue for the 2020 campaign. Led by insurgent freshmen centered around Rep. Alexandria Ocasio-Cortez, they have rallied behind the adoption of a “Green New Deal” (GND), attempting to link a radical escalation against the physical economy of the U.S.—shutting down nuclear power plants and eliminating the use of fossil fuels—to the still-resonant memories of Franklin Roosevelt’s anti-Depression New Deal.



CC/GreenNewDeal/Presser

Rep. Alexandria Ocasio-Cortez

In truth, it is not FDR who is their model. Instead, the prescriptions of the “Green New Deal” may be found in the Malthusian agenda of Prince Philip, the Duke of Edinburgh, combined with the anti-American monetarism of John Maynard Keynes.

For this Democratic game-plan to succeed, they are relying on the acceptance of Fake Science by the American population, a phony narrative which reduces the factors which define the Earth’s climate to the effects of human activity. Further, following the lead of Green parties in Europe, and the anti-science “environmental” policies of governments there, such as

those of Chancellor Angela Merkel in Germany and President Emmanuel Macron in France, they would commit the United States to an austerity regime that would also mandate massive deindustrialization. The idea that a transformation to “clean” energy and the “infrastructure” jobs derived from that transformation would lead to economic justice—as Ocasio-Cortez asserts—is an insane fantasy, which is derided by some members of her own party, as well as by labor union officials already reeling from the massive loss of manufacturing jobs since 2000.

By putting all their eggs in the GND basket, not only are these Democrats disgracing the FDR tradition, but they are adopting a policy which requires acceptance of an apocalyptic-style cult message, one insisting that if their policy—as ill-defined as it is—is not implemented

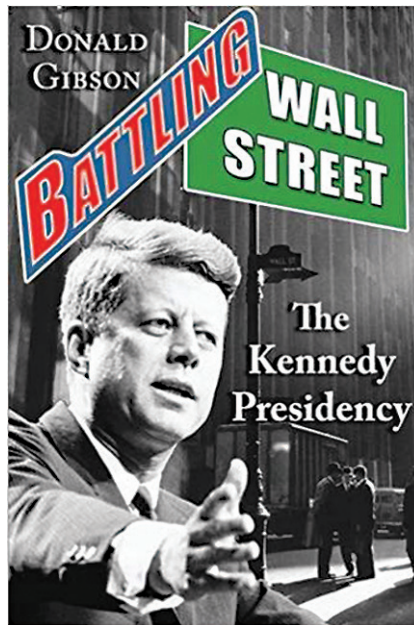
immediately, the world will end in twelve years!

The Example of John F. Kennedy

If there are still Democrats serious about dealing with economic inequality and supporting a sound energy policy based on real science, it would serve them well to study a book published twenty-five years ago, *Battling Wall Street: The Kennedy Presidency*.¹ The author, Donald Gibson, drew many of the same conclusions from looking at the Kennedy presidency that Lyndon LaRouche reached, which are at the heart of LaRouche's lifelong battle to restore the American system, and which were inspired by FDR's New Deal.

Gibson easily dispenses with the mythology spawned by Kennedy's enemies in the "Eastern Establishment," that he was a "Keynesian," who had a mixed and often confusing approach to economic policy. Instead, he provides compelling evidence that Kennedy (JFK) was a committed Hamiltonian, whose policies "were in spirit and even in detail thoroughly Hamiltonian." Throughout his lamentably short presidency, JFK was engaged in restoring what Gibson identifies as Alexander Hamilton's "one overriding goal—to develop the United States as a productive, manufacturing economy," and to extend this system to the newly-independent former colonial nations in Africa and Asia.²

With the U.S. slowly emerging from a serious recession, Kennedy entered the White House with the intention "to shift the U.S. away from the path it had taken during much of the twentieth century, that of becoming the successor to England and other colonial powers in



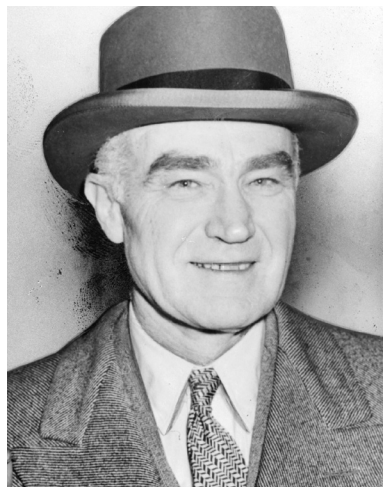
the domination of weaker nations."³ To accomplish this, he "went against the prevailing economic doctrine with the definite purpose of increasing the nation's productive powers," with an emphasis on achieving scientific and technological breakthroughs. During the campaign, JFK promised "to expand the Nation's investment in physical and human resources, and in science and technology."⁴

Gibson then details how this commitment by JFK provoked fierce opposition, coming from Wall Street bankers and law firms, and the media they controlled, but also within his administration. The fourth chapter of his book details the

role of those whom he identifies as the Eastern Establishment, which he correctly describes as U.S. financial firms tied to the Rockefellers and the Morgan interests, making clear the connection of these interests to Great Britain.

The Morgan banking house, for example, has links to the Royal family, Barings Bank, the Astors and others, and is basically a British institution operating on U.S. soil. Henry Luce, a Yale University Skull and Bonesman with close ties to the British and Dutch royal families, and multiple links to the Morgan interests, deployed his media empire against JFK's policies, attacking him in *Fortune* magazine for his "dirigist" policies (that is, Hamiltonian credit policies, which favored production over speculation), while decrying JFK's failure to push "economic freedom" (that is, the British free market/free trade model).

Most significant in this chapter is Gibson's precise and detailed identification of the anti-JFK financial and media establishment with the British Empire. For example, he writes of the role the British Royal Institute of International Affairs played in creat-



Phil Stanziola

Publisher Henry Luce, in 1953.

1. Donald Gibson, *Battling Wall Street: The Kennedy Presidency*. New York: Sheridan Square Press, 1994.

2. *Ibid.*, p. 103-4.

3. *Ibid.*, p. 42.

4. *Ibid.*, p. 6.

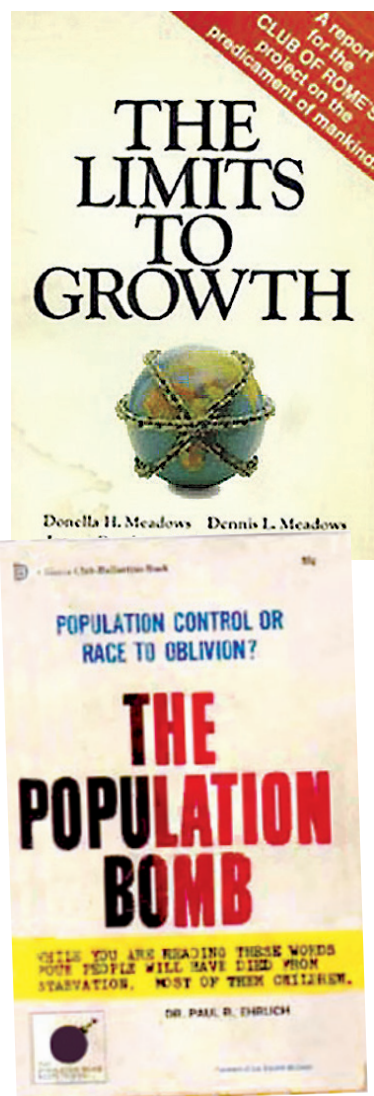
ing the New York Council on Foreign Relations, “as part of an effort to link England’s upper class and its foreign policy interests to those of the U.S.” He adds that many in the Eastern Establishment hierarchy, “most emphatically those in and around Morgan interests, were—and still are—involved in a special relationship with the British establishment.”⁵

It is highly likely that the British, unable to prevent JFK from unleashing waves of scientific and cultural optimism through his program—both within the United States and worldwide—deployed the Murder, Inc. assassins run by British intelligence, which had killed American presidents before.

Green New Deal = British Genocide

The most fascinating section of this book, and most relevant for dissecting the origin of today’s GND, is Gibson’s chapter, “Long-Term Changes,” in which he focuses on the relationship between those Anglo-American interests which opposed JFK’s anti-colonial, American system economic policies, and the launching of the Malthusian population control movement following his assassination. The sponsors of this pro-genocide movement came from the same financial institutions and think tanks which opposed Kennedy’s successful pro-growth economic policies. The familiar names are all there: the Rockefellers and their associates such as John J. McCloy; the Morgan bankers; and the bankers’ funds and organizations, such as the Population Council, the 1965 Population Crisis Committee (now called Population Action International) and the Aspen Institute, all of which promote the hoax of an overpopulated world squabbling over scarce raw materials.

The networks identified by Gibson are the same as those operating ever since, pitching the same lies which underlie the GND. For example, the 1972 study, *Limits*



Two popularized scare “studies” funded by the new Malthusians.

to Growth, commissioned by the oligarchical Club of Rome, used computer simulations—which have all proven to be wrong—to reach the conclusion, “The world has cancer and the cancer is man.” Such now disproven “studies,” including Paul Ehrlich’s 1968 book, *Population Bomb*, have been used to frighten college students to accept the idea that scientific and technological progress is evil.

An attack on Kennedy for his anti-colonial, pro-development foreign policy as one which “fed the universal lust for industrialization and growth” was echoed by former President Barack Obama in 2013, who told young people in Johannesburg, South Africa, that their desire for an American-style standard of living is unattainable, as it would cause the planet to boil over! It is in this spirit that Ocasio-Cortez and her allies suggest, without recognizing the logical absurdity of it, that the human race should stop procreating in order to survive!

In his critique of those who fall for the lies of the phony environmentalists, Gibson writes that the revival of Malthusianism “takes what might be reasonable concerns over issues such as air and water quality and embeds them in an ideology deeply hostile to economic progress.”⁶ Those who fall for those lies then become the cheerleaders

for the anti-science policies that result in an escalating increase in the death rate, and then blame that increase on overpopulation.

Kennedy Refuted Malthus

The portrait of JFK which emerges in Gibson’s book is that of a staunch anti-Malthusian, who believed that advances in science and technology, applied to the physical economy, are the keys to the future. Directly refuting Thomas Malthus, JFK said, in a speech delivered to the National Academy of Sciences exactly one month before his assassination,

5. Ibid., pp. 73-6.

6. Ibid., p. 87.



DoE

President Kennedy visiting the Hanford nuclear power plant in 1963.

Malthus argued . . . that man, by using up all his available resources, would forever press on the limits of subsistence, thus condemning humanity to an indefinite future of misery and poverty. We can now begin to hope and, I believe, know that Malthus was expressing not a law of nature. The truth or falsity of his prediction will depend now, with the tools we have, on our own actions, now and in the years to come.

Kennedy had an optimistic assessment of the future of nuclear power, which he expressed when visiting the Hanford, Washington nuclear site in September 1963. In attacking the idea of scarce resources, he said that through scientific and technological progress, as in the use of nuclear power, and new technologies to develop new kinds of coal and oil from shale, “we put science to work in improving our environment and making this country a better place in which to live.”

This optimism was also expressed in a 1961 message to Congress:

The history of our economy has been one of rising productivity, based on improvement in skills, advances in technology, and a growing supply of more efficient tools and equipment.

This rise has been reflected in rising wages and standard of living for our workers, as well as a healthy rate of growth for the economy as a whole.

The JFK presented by Professor Gibson would be completely comfortable with the advanced scientific and economic views of Lyndon LaRouche, as expressed in LaRouche’s explication of his anti-Malthusian conception of Potential Relative Population Density, and in his use of the concept of energy flux-density, which explains how the rising productivity he desired can be

achieved.

As LaRouche repeatedly emphasized, the enemy of progress since the time of the American Revolution has been the British Empire. As a fellow veteran of World War II, who had been profoundly influenced by President Franklin Roosevelt, John F. Kennedy shared with LaRouche a contempt for the methods by which that Empire maintained its control, at the expense of not only its colonial subjects, but its own population. Gibson points out that Kennedy said his own opposition to colonialism came from his identification with “Ireland’s long subjugation to England.”⁷

It is this American outlook, shared by JFK and LaRouche, and not the pessimistic submission to false theories promoted by oligarchic financiers, desperately trying to prop up their collapsing empire, which provides a basis for bipartisan cooperation today. It is one of the great ironies of present history that President Trump, who has espoused support for the American system, is moving in the tradition of JFK, through his rejection of the climate cult theories, as well as his embrace of a new Moon-Mars mission, while his Democratic opponents are being led around by the nose by the historic enemies of the nation.

7. Ibid., p. 39.

II. The Universe is Knowable

China Is Taking Bold Steps on the Path to Fusion Power

by Marsha Freeman

April 15—In December 2018, China broke ground on a new facility for developing and testing components for its multi-decade science and technology program to develop fusion energy. The Comprehensive Research Facilities project is one of the interim steps toward demonstrating commercial fusion energy in an operating power plant by about 2050. This DEMO reactor will lay the basis for China's industrial mass production of fusion power plants.

Developing fusion energy is an urgent necessity. From a practical standpoint, to bring the world's growing population up to a standard of living in which the majority of economic activity is a creative intervention into nature, and every child has the opportunity to become a genius, requires that energy use per capita be orders of magnitude higher than is available today to billions of people.

The crucial role of fusion energy was developed by economist Lyndon LaRouche, who called for the United States to “Adopt a Fusion-Driver ‘Crash Program’ ” in his June 2014 [Four Laws](#). LaRouche elaborated the steps to reorient the U.S. economy to immediate investment in economic infrastructure, crash programs in fusion, and also space exploration, as “science drivers” for the economy:

The essential distinction of man from all lower forms of life, hence, in practice, is that it presents the means for the perfection of the specifically affirmative aims and needs of human individual and social life.

That affirmation of the aims and needs of humanity cannot be provided by the low energy-flux dense “renewables” such as wind and solar, which were widely used centuries ago. They cannot support modern civilization. The so-called “Green New Deal,” by eliminating fossil fuels as the basic source of energy for the vast majority of the world's popula-

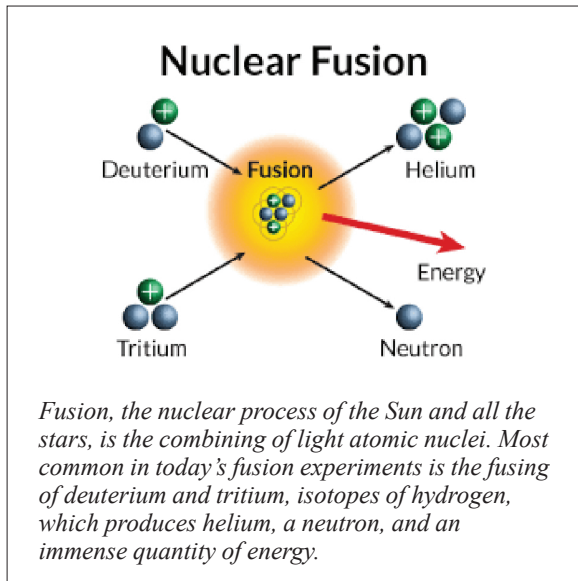


Institute of Plasma Physics, Chinese Academy of Sciences

Artist's depiction of the Comprehensive Research Facilities in Support of the China Fusion Engineering Test Reactor.

tion, would create a “carrying capacity” for the Earth of a population size comparable to the Middle Ages, before the use of fossil fuels, when windmills dotted the countryside. The Earth's population did not reach one billion until approximately 1800. What will happen to the more than 6 billion “extra” people alive today, if we were to return to the technological level of the Middle Ages?

Juxtaposed to the current propaganda barrage that resources are limited, and therefore “the world has too many people,” China's accomplishment of uplifting



hundreds of millions of its people out of abject poverty is stunning. To provide a fruitful future, China has chosen, in the short term, to accelerate its deployment of nuclear fission power plants, with an array of advanced fission technologies, such as high-temperature and fast reactors. For the longer term, the goal is the development of fusion energy.

Besides generating electricity, fusion and plasma technologies will revolutionize industry, chemistry, and materials processing with tools such as the "plasma torch."

As humanity moves out from its ancestral home, fusion becomes a prerequisite for the industrial development of the Moon. In order to provide a livable environment on the airless, radiation-saturated Moon, we will have to create an Earth-like environment. Plasma-based and directed-energy mining, materials processing, and manufacturing will add to the power demand. Energy consumption per capita to live and work on the Moon will be orders of magnitude higher than that of today's highest standard of living on the Earth.

The move from the Moon to Mars cannot be done safely without fusion. Exposing our explorers to as much as six months of microgravity and high levels of radiation using slow chemical propulsion should not even be seriously considered.

Nuclear fission propulsion can shorten the trip to a few weeks. But even that becomes unacceptable; fusion propulsion could get crews to Mars in a matter of days.

At the same time that fusion propulsion will enable humanity to travel into deep space, the study of plasma science in laboratories on Earth will provide insight into plasma processes in the universe. The stars, including the Sun, are the first-order fusion machines. The study of heliophysics and astrophysics will add insight to scientists' fusion experiments on Earth, and vice versa.

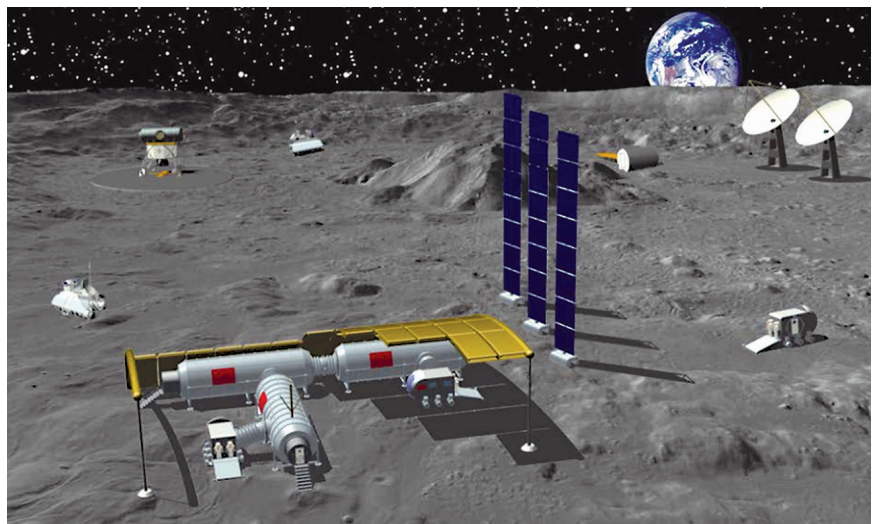
LaRouche summarizes: "A Fusion economy, is the presently urgent next step, and standard, for man's gains of power within the Solar system, and, later, beyond."

China's Fusion Program

China's fusion program is making steady progress, not because it is stealing intellectual property from the U.S., but because it comes under the economic umbrella of that country's Five-Year Plans, which lay out both the overall direction and specific development goals for the nation. The major science and technology projects, such as the Comprehensive Research Facilities in Support of the China Fusion Engineering Test Reactor (CFETR), are included as "mega-science projects" in the current 13th Five Year Plan.

In an interview with this writer in 2014,¹ Dr. Yuanxi Wan, a pioneer in fusion research in China, said that

1. Marsha Freeman, "Asian Nations Forge Ahead in Fusion." *EIR*, January 16, 2015. Pp. 39-40.



China Aerospace Science and Technology Corp.

China's stated intention is to build a manned scientific base on the Moon. One of the purposes is to mine helium-3 as a fuel for fusion power on Earth and the Moon and for fusion propulsion that will take mankind everywhere in our Solar System.



Institute of Plasma Physics, Chinese Academy of Sciences

Xi Jinping gets a briefing on the EAST Superconducting Tokamak at the Institute of Plasma Physics in Hefei China by then Director Yuanxi Wan on April 19, 2011.

when President Xi Jinping visited the Institute of Plasma Physics in Hefei, he told the scientists, “You are doing very important work for the future of human beings.” President Xi, Dr. Wan said, “observed that in the last 200 years, America ‘developed very quickly because the American government encouraged people to invent something.’” Dr. Wan said that President Xi “doesn’t like to take care of small things. He likes [big projects like] the New Silk Road.”

The accusation that China is making economic progress only by stealing from the U.S., which has been used to justify banning the export of American advanced technology to China and banning cooperation in civilian space programs, is wearing thin. If China is poised to advance beyond the U.S. in fusion and lunar exploration, it is because China has advanced, while the United States has stood still.

Four decades ago, following impressive progress in fusion experiments in the 1970s, the U.S. Congress passed, and President Jimmy Carter signed into [law](#), the Magnetic Fusion Energy Engineering Act of 1980. The law called for an “Apollo-style” program to develop commercial fusion power, with the interim steps of an Engineering Test Reactor by 1990, and “the operation of a magnetic fusion demonstration plant at the turn of the twenty-first century...” It noted that, “Acceleration of the current magnetic fusion program will require a doubling within seven years of the present funding level...”

That funding never materialized, and today the U.S. magnetic fusion energy budget, in real dollars, is approximately one third of what it was when the Act was passed. Promising experiments have been shuttered

and U.S. scientists told to go elsewhere, including to China, to continue their fusion research.

China, on the other hand, understands that their fusion and lunar exploration programs are key science drivers for its economy and, being long-term projects, are at the frontier of science and therefore require consistent government support.

Superconducting Tokamak—EAST

The Chinese fusion energy program got a later

start than those in the Soviet Union and the U.S. In an interview with this author in December 2010,² Dr. Wan, who has been a leader in fusion research for more than 35 years at the Institute of Plasma Physics of the Chinese Academy of Sciences, related that when he graduated from Beijing University, China was in the throes of the Cultural Revolution. He “got a chance,” he said, to go to a mountain area near Tibet. “I became a farmer, and it lasted more than three years.”

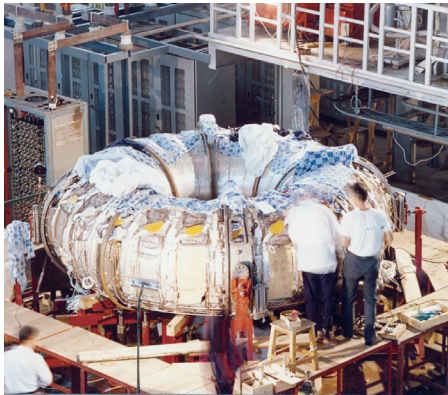
In 1973, Dr. Wan moved to Hefei, the capital city of Anhui Province, where a new division of the Beijing Institute of Physics was being founded. He was part of a group to set up the new Institute for Plasma Physics.

In discussing the opportunities for Chinese scientists to travel abroad and visit advanced fusion facilities in other countries, Dr. Wan said, “My personal opinion is that former Chairman Deng Xiaoping, the Chairman of our government, made the very important decision to open the door of China.”

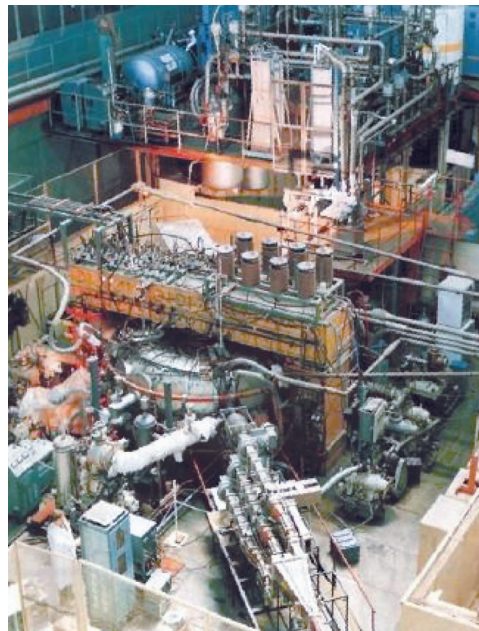
At that time, China built a small tokamak at the Institute in Beijing, and a series of small tokamaks in Hefei.

Dr. Wan is known as the “mastermind of EAST,” China’s Experimental Advanced Superconducting Tokamak, at the Institute of Plasma Physics. By the early 1990s, he related, scientists knew that for fusion to become a reality, machines would have to produce the fusion reaction for more than a few seconds. A power reactor would have to operate in a “steady state,” able

2. Marsha Freeman, “China’s Ambitious Path to Fusion Power.” *EIR*, March 11, 2011. Pp. 47-56.



Institute of Plasma Physics, Chinese Academy of Sciences
After receiving the discarded T-7 tokamak from the Soviet Union, engineers at the Hefei Plasma Physics Institute disassembled the machine (above) and rebuilt it as HT-7 (right).



Institute of Plasma Physics, Chinese Academy of Sciences

to run continuously. “Our Institute said, we must make a contribution to this final purpose.” Having decided upon the technology by which they could make a contribution, they asked themselves, “What kind of technical path can we take to a superconducting tokamak?”

The first tokamak in the world to incorporate superconducting magnets was the T-7 at Russia’s famed Kurchatov Institute. When the Soviet Union collapsed, Dr. Wan related, “everything was stopped, including some fusion research. This machine [the T-7] was in the garbage. So we discussed this with the Kurchatov Insti-

tute, and we shipped this machine to our Institute.” At the time, “China did not have enough money to support fusion research,” so in the workshops the scientists took apart the device, “cleaned every component” and in 1994 “reassembled all of the equipment.”

The renamed HT-7 tokamak (“H” for Hefei) entered service the following year, making China the fourth country in the world after Russia, France, and Japan, with a tokamak incorporating superconducting magnets. HT-7 carried out nearly 20 rounds of experiments,

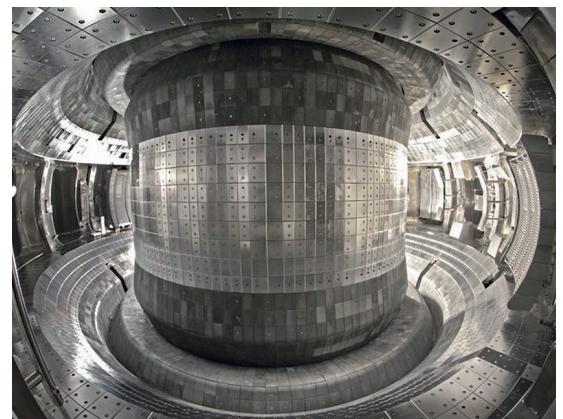
until it was retired in 2013. The Institute of Plasma Physics explained at that time, that most importantly, the refurbished and upgraded Russian tokamak had “nourished three generations of Chinese fusion scientists.”

While progress was being made on other machines, the Hefei scientists decided that they would make their contribution to the development of a steady-state operation of a tokamak, by designing a fully superconducting magnet tokamak. After being chosen above competing science and technology projects, EAST was approved by the central government in 1997 and received special budget support for construction. The first plasma discharge was in 2006.

EAST has recently reached a new mile-



Institute of Plasma Physics, Chinese Academy of Sciences



Institute of Plasma Physics, Chinese Academy of Sciences

Two views of the EAST Tokamak fusion reactor. Above is the core plasma chamber.

stone. In November, the Chinese Academy of Sciences reported that EAST had achieved an electron temperature of over 100 million degrees in its core plasma, or seven times greater than the interior of the Sun. To achieve that milestone, four months of experiments were carried out, and four kinds of heating power were used.

In a public release issued November 13, 2018, the Chinese Academy of Sciences reported that, “Since it began operating in 2006, EAST has become a fully open test facility where the world fusion community can conduct steady-state operations and ITER-related physics research.” Experiments continue on the EAST tokamak, focused on areas of research that will be applicable to ITER, the International Thermonuclear Experimental Reactor, now under construction in France.

But there are numerous challenges to be overcome in applying knowledge gained with the EAST and ITER machines constructed for experimental research, to the development of commercial fusion power plants connected to the electric grid.

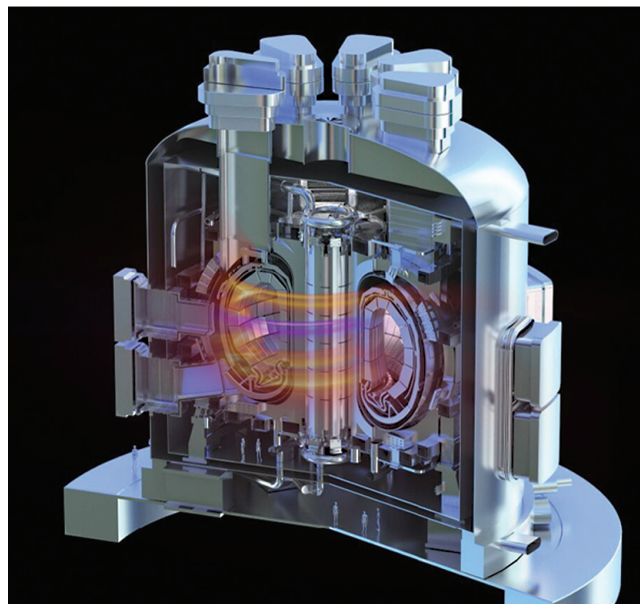
The Next Steps

China is one of the partners in ITER, along with Russia, the U.S., Japan, Europe, South Korea, and India. ITER will be the largest tokamak in the world, with the goal of producing 500 megawatts of fusion power for 400 to 600 seconds. According to the current schedule, ITER will see its first plasma experiment in 2025.

Dr. Wan and other fusion scientists are confident that ITER will be a success, so they do not see any reason to wait for results from ITER to proceed with a demonstration power plant. Although China is committed to cooperation with the international community, it recognizes that a strong domestic program is necessary, both to make important contributions to the global effort, and to ensure that for its own future, fusion is developed as quickly as possible.

This requires tackling the outstanding challenges in both the science and the technology of fusion.

Ten years ago, the Department of Nuclear Science and Technology was established at the University of Science and Technology in Hefei. Dr. Wan, appointed as the Dean of the Department, was asked by China’s Ministry of Science and Technology (MOST) to head a national design group to create a road map leading to the next machine for fusion research, the China Fusion Engineering Test Reactor (CFETR).



Institute of Plasma Physics, Chinese Academy of Sciences

The Comprehensive Research Facilities in Support of the China Fusion Engineering Test Reactor, seen in this artist's drawing, will be in operation in five years, to test fabrication techniques for major fusion experiment components, such as superconducting magnets.

“Just two weeks ago,” Dr. Wan told this writer in 2014, “more than 200 scientists and engineers got together to summarize our progress [on] the engineering conceptual design for CFETR,” which has been going through continuing iterations. They planned to prepare a more detailed design to be presented to the government, and define additional key R&D requirements.

The goal of the Engineering Test Reactor is to “close the gap” between ITER and the DEMO commercial fusion power plant. This is a large step. Design work on the CFETR began in 2015, and in a presentation the following year, Dr. Wan reported that the design team hoped a construction “proposal could be evaluated and approved in about five years.” The plan has been to build the Engineering Test Reactor to operate in the late 2020s.

But it became clear that there was also a gap between ITER/EAST and the Engineering Test Reactor. An R&D program to develop the technologies for the test reactor was needed.

The CFETR project was divided into two phases. In phase one, steady state operation will be a key issue, with a “modest” amount of fusion power produced, of up to 200 MW. In the second phase, the aim is for DEMO-scale power of over 1 gigawatt, with steady-state operation.

And so ground was broken in December to build the Comprehensive Research Facilities in Support of the China Fusion Engineering Test Reactor (CFETR), to help fill the technology gaps.

The Research Facilities involves ten Chinese fusion institutes and universities under the leadership of the Institute of Plasma Physics, which describes the Research Facilities, when completed, as “a comprehensive research platform” that will test reactor-scalable superconducting magnets, reactor heating systems, remote handling and diagnostic technology, and “provide strong support for cutting-edge cross-disciplinary fields, such as energy, information, health, and so on.” It is the first project in the future Hefei National Comprehensive Science Center, which will have other science and technology research facilities.

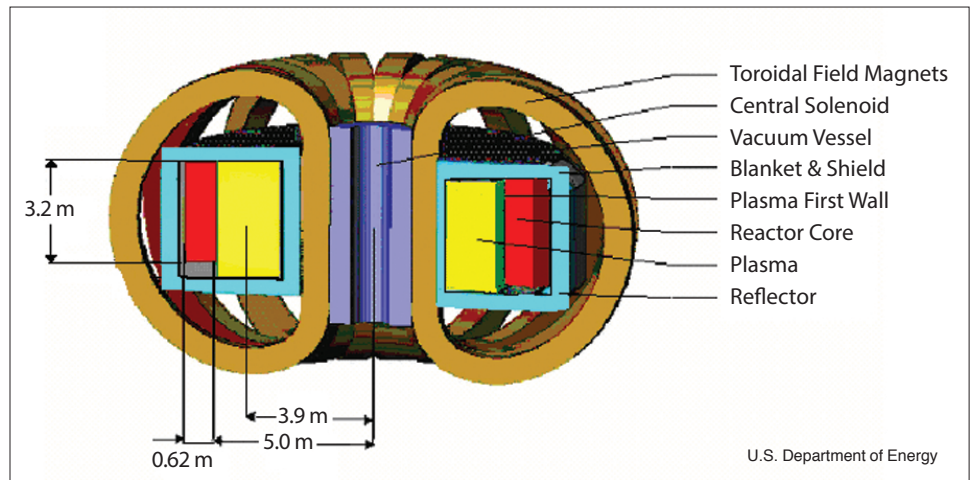
The plan is to have the Comprehensive Research Facilities in Support of the China Fusion Engineering Test Reactor up and running in five years. The general manager of the project, Academician Li Jiangang said that there will be tremendous difficulties in the construction and operation of the Engineering Test Reactor, so it is critical to build this large test platform before its construction is started.

A Different Path to Fusion

There is another pathway that China is considering on its way to fusion power. Professor Yican Wu’s prepared presentation for the 2017 Fusion Power Associates meeting featured a chart with two possibilities for the next big step for fusion: A tokamak fusion test reactor and a fission/fusion hybrid test reactor.

When asked in 2010 about the hybrid as a possible interim step to fusion, Dr. Wan said:

China must develop fission power stations as rapidly as possible. Right now about 70 percent of our energy comes from coal. It is terrible [in terms of pollution]. It is the highest percentage



Interest in developing fission-fusion hybrid reactors as an interim step to pure fusion reactors has increased recently. This concept was included in a report on a workshop on hybrid concepts held at Argonne National Laboratory in 2009.

in the world. The government and the public support the rapid development of nuclear power stations. [But in a typical fission plant], you can only use about 1 percent of the uranium so, very quickly there will be a shortage of uranium—in less than 100 years. So that is one problem. The second problem is the waste, which is increasing very quickly, year by year.

If the tokamak is successful, you can use the fusion neutrons to irradiate uranium-238 into plutonium-239 for fission fuel. Also, you can use the neutron source to transmute the waste. To do this, you don’t need a pure fusion power reactor, which still has the materials problem. If you use the hybrid concept, you can use a little pure fusion in a cold plasma. . . . You can breed fission material, and treat the fission waste.³

This benefits both technologies, Dr. Wan said. “For fusion, you can promote the development of fusion technology, of materials development, so you can get an early application for fusion, while you take care of breeding the fuel and transmute the waste from fission.”

In 1953, Dr. Edward Teller and a team from the Lawrence Livermore National Laboratory in

3. According to reports published in August 2015 by the *China Daily Mail*, *Russia Today* and *Science and Technology Daily* (the official newspaper of the Chinese Ministry of Science and Technology), China has set a target date of 2030 for an operational hybrid reactor.

California produced the first proposal in the United States for a hybrid reactor, using a deuterium-tritium fusion reactor's neutrons to produce fissile plutonium from uranium-238.⁴ But at that early stage, the scientists were uncertain that creating controlled fusion was going to be successful.

Dramatic results in fusion experiments in the 1970s raised the potential for hybrid development. Fusion researchers at the Princeton Plasma Physics Laboratory estimated in the late 1970s that a crash program based on the tokamak machine design could produce a model demonstration hybrid reactor by 1985.

However, the hybrid and other advanced nuclear programs were not pursued in the United States during or since the 1980s, due to both an “environmental movement” with its anti-nuclear, anti-human “Green New Deal,” and failed economic policies that prevent substantial investment in long-term, potentially revolutionary breakthroughs in science and technology.

Regardless of which pathway China takes to full-scale development of fusion power, it will get there. China's scientists have interwoven fusion's long-term potential with another great project before mankind: the exploration of space.

Just below the surface of the Moon lies helium-3, the perfect fuel for fusion, deposited in the regolith over eons by the solar wind.

China—which earlier this year became the first nation to land a spacecraft on the far side of the Moon—plans to establish a lunar base for scientific exploration and to exploit the Moon's resources. Through the use of lunar helium-3 for fusion fuel, the economy of the Earth will be integrated with its celestial neighbor. In the course of living on the Moon, mankind will develop fusion and new technologies to enable humans to further explore our Solar System and beyond.

An International Crash Program

In a 1985 [paper](#), recently republished in *EIR*,⁵ Lyndon LaRouche writes:

4. Dr. John Schoonover, “The Fusion-Fission Hybrid Reactor.” *Fusion*, January 1979. Pp. 18-26.

5. Lyndon H. LaRouche, Jr., “Private Initiative for Colonizing the

The best way to achieve breakthroughs in each and all of the kinds of applications of technological progress over the coming fifty years or so, is to create a mission-oriented, crash-program task-force, assigned to developing all of the technologies required for beginning the permanent colonization of Mars by some preassigned target-date, such as 2010 A.D. In other words, develop all of the technologies required for the Strategic Defense Initiative, as a by-product of a Moon-Mars-colonization mission-assignment. . . .

Let us henceforth define scientific progress as an ordered succession of ever-more-ambitious grand-scale mission-assignments. Let “science” be defined in such a task-oriented way during each generation. Let “science” signify both the current grand-scale crash-program mission-assignment in progress and the work of defining the successor to such a mission-assignment.

The recent directive by President Donald Trump to NASA to return U.S. astronauts to the Moon by 2024, and to establish a permanent presence no more than five years after that, with the explicit, stated intention that this is a precursor of manned exploration and colonization of Mars, defines what could—and must—become a crash program approach toward manned space exploration. This, in turn, will redefine and refocus both the urgency and the role of fusion energy development for the human race as a whole. As defined by LaRouche, scientific progress is to be pursued not by a timetable dictated by budgetary constraints, nor as separate specialized arenas of individual programs—but rather by the driving necessity of a “grand-scale crash-program mission-assignment,” such as was carried out in the 1961-1969 John F. Kennedy Apollo Program.

Such a mission-assignment requires, in turn, the co-operation and the pooled resources of China, the United States, Russia and all other willing partners to accomplish this goal. It will define other, successive urgent goals. It will also place the rapid development of fusion power—as an “Apollo-style” crash program—on the necessary international footing.

“Moon and Mars” written in June 1985 and republished in *EIR*, April 5, 2019. Pp. 8-19.

Mankind's True Potential in Space?

First Image of 'Black Hole' Environment Teases Imagination

by Benjamin Deniston

April 12—The Event Horizon Telescope (EHT) Collaboration, on April 10, [released](#) the first ever image of the environment immediately surrounding a supermassive black hole candidate, 6.5 billion times more massive than our Sun, located at the center of galaxy M87, 55 million light-years from Earth. This finding provides the first direct visual-observational evidence of the existence of an event horizon—a physical boundary condition separating a yet mysterious physical regime where the gravitational conditions are so intense that even light cannot escape.

This first image of such an anomalous physical regime provides a critical reminder to mankind: There is still so much to discover and understand about our Universe, that we need to get off this small planet to continue to explore, and expand our understanding—and President Trump's Moon-Mars program provides a historic opportunity to take the next steps in fulfilling our shared, uniquely human destiny.

No one knows what actually happens within such yet mysterious regimes beyond the event horizon, but now, we do know that their existence isn't mere mathematical speculation—they are physical reality. This environment immediately surrounding the event horizon, is the most extreme expression of Albert Einstein's General Relativity that mankind has ever investigated—with gravitational spacetime conditions so intense that light can orbit the event horizon, as if the light were a satellite orbiting a

planet. According to the scientists from the National Science Foundation, who presented the first EHT images on April 10, the unique characteristics of this environment surrounding the event horizon at the center of M87 correspond beautifully to what was predicted based on Einstein's theory.

The first EHT images are the product of an incredible international initiative, involving hundreds of scientists, dozens of institutions, and ten radio telescopes

located at eight sites around the world, whose data is assembled and cross-correlated by computer, to achieve very long baseline interferometry. And the EHT is just getting started. Additional telescopes are being brought into the project, and with them the EHT will move to observations at slightly higher radio frequencies—the combined, added capabilities will contribute to sharper images of two main observational targets, the event horizon at the center of M87, and the event horizon at the center of our own Milky Way Galaxy, Sagittarius A* (Sgr A*). Scientists involved are also noting



First-ever picture of a supermassive black hole candidate's environment. The center of galaxy Messier 87 as imaged by the Event Horizon Telescope in April 2017.

that the addition of space-based satellites would be the next step, to further increase the potential of the EHT.

These supermassive phenomena at the centers of galaxies represent critical anomalies. Not only is the physical regime beyond the event horizon a mystery, no one is exactly sure how or why these supermassive phenomena form at the centers of galaxies. Every galaxy seems to have one, and their mass scales up systemati-

cally in correspondence with the size of their host galaxy—a relationship no one can explain. They can be “active”—becoming the most energetic astronomical phenomena out there, shining brighter than their entire host galaxy and emitting coherent and structured jets of plasma, which can be larger than the galaxy.

The EHT is helping to open the door to many fascinating anomalies, but this is just the beginning. Mankind’s future requires the continued pursuit of fundamental questions, and this pursuit requires initiatives like President Trump’s Moon-Mars program.

LaRouche’s View

Lyndon LaRouche [addressed](#) this beautifully in his own outline for a 40-year perspective of a Moon-Mars colonization program, “The Science and Technology Needed to Colonize Mars,” published in the November-December, 1986 issue of *Fusion* magazine.

Here is a section of that paper, subtitled “The Scientific Objectives.”

The astronomers are the first to tell us why we must go some distance away from Earth’s orbit. The Earth’s atmosphere prevents us from observing the full spectrum of radiation from the stars and galaxies, and we have reached near to the limit of what we can discover about our larger universe by Earth-based observatories. We can do a little better with telescopes and radio telescopes in near-Earth orbit, but for many important measurements, the area in the vicinity of the Earth’s orbit is a very dirty and noisy place. We must be able to measure the full range of the spectrum of electromagnetic radiation in space, from the very long wave to the very, very short: from every distant star, galaxy, and other phenomenon to be observed.

Building observatories as far out as Mars orbit, and beyond, will make young astronomers very happy, but our purpose for spending these many billions of dollars is obviously not merely to give astronomers some special sort of personal pleasure. The point is, with aid of such observatories, our astrophysicists will be able to answer many questions very important for life



Making the combined efforts of the SDI and a Moon-Mars Mission the 'science driver' for the nation will not only take us into space, but will give us a bonanza of new wealth.

Except where noted, illustrations here are paintings by Carter B. Ennart depicting a manned Mars mission as conceptualized by space scientist Jim French.

The Science and Technology Needed to Colonize Mars

by Lyndon H. LaRouche, Jr.

36 November-December 1986 FUSION

Rarely mentioned in news media accounts so far, forces around President Ronald Reagan are now working industriously to elaborate what could be seen by future generations as the crowning achievement of Mr. Reagan's Presidency: the commitment of the United States to establishing a permanent colonization of the planet Mars, 40 years from now.

Such a mission-assignment for the United States is fully feasible today, on the condition that we recognize that about 40 years of step-by-step work will be needed to bring us to the point that we can build the first self-sustainable Earth-like artificial environment under "domes" on Mars. We are presently developing each and all of the new technologies needed to accomplish that, although it will require about 40 years of scientific development and engineering to bring us to the point of applying those technologies to this specific task.

It is also economically feasible. For every penny spent on the research and development work of the NASA-manned landing on the Moon, we gained between 10 and 20 cents of income, perhaps even more, from the application of those technologies to our civilian economy. Civilian use of new technologies we shall be developing in connection with the Mars-colonization mission, will increase the average productivity of labor by at least tenfold over the coming

Fusion

Lyndon LaRouche’s 1986 outline for a 40-year perspective of a Moon-Mars colonization program.

on Earth, questions which cannot be answered without information from such complexes of space-based scientific observatories.

As physical science progresses, what was accepted as the best physics yesterday seems to break down around the edges. Usually, when this first occurs, the physicists mumble the ugliest curse word in their scientific vocabularies: “anomalous.” At first, they look at the embarrassing experimental results suspiciously, thinking someone must have played a mean prank upon them. Sooner or later, some physicists warn: “It’s no good calling these embarrassing experimental results ‘anomalies.’ We have to face scientific facts; there is something wrong with our existing scientific textbooks.”

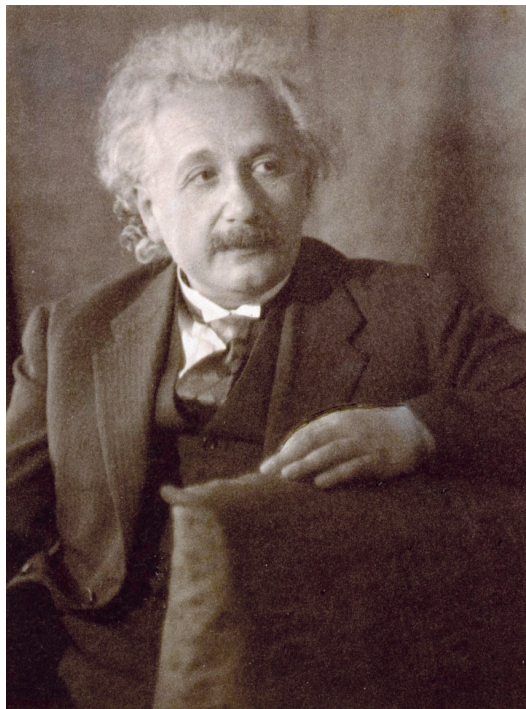
The history of “anomalies” is the history of fundamental progress in science. Modern sci-

ence began with the work of Nicholas of Cusa. In 1440, Cusa published a book, *On Learned Ignorance* (*De Docta Ignorantia*) which accomplished, chiefly, two things. Cusa presented a discovery which modern science calls the Principle of Least Action, and which mathematicians refer to as the isoperimetric theorem. Cusa proved that geometry, as then taught, contained a fundamental error, and that this error had a bad effect on our thinking about physics. In the same book, Cusa presented a way of thinking about physics which set the stage for the later work of such leading figures as Leonardo da Vinci, Johannes Kepler, and Gottfried Leibniz. Every step of fundamental progress in experimental science since has centered around discovering mistakes, called “anomalies,” in generally accepted scientific doctrines.

By about the middle of the 19th century, with the work of Karl Gauss and his collaborators, science developed a more effective way of looking at this problem of “anomalies.” It was established as a rule, that to settle any fundamental principle of physics, we must move away from the everyday scale of experimental work, and study the way in which the universe behaves at its extremes, the very, very large and the very, very small. In other words, we cannot say that any physics principle is true experimentally, until we have proven that principle by means of astronomical observations and also on the size-scale of molecules, atoms, and subatomic behavior.

It has also been recognized, off and on, since the work of Leonardo da Vinci, that we must also prove principles of nature in a third region of physical experiments and observation: living processes. Today’s progress in optical biophysics is reminding us of that, once more.

In brief: The practical importance of astro-



LoC

Albert Einstein

physics for life on Earth is that without the special kind of knowledge of laws of the universe we gain from astrophysics, we are blocked in scientific progress on the scale of everyday practice. Astrophysics, microphysics, and optical biophysics, are the frontiers of all scientific progress on Earth today.

To explore the behavior of the stars and galaxies, we must measure the full range of radiation from those sources. We must measure not only the visible light, but also microwaves and radio frequencies, the very large infrared spectrum, the ultraviolet, the X-ray region, and so forth. The farther from the Sun we make those observations, the better. What we are searching for is “anomalies” in our present textbooks’ physics. We are searching for the kind of evidence, which compared with work in microphysics and optical biophysics, will enable us not only to uncover those “anomalies,” but to solve them.

The rate at which science progresses on the surface of the Earth depends very much on these kinds of coordinated investigations.

A considerable amount of benefit can be gained from unmanned observational stations placed in various locations around our solar system. More and more, we are faced with the fact that there must also be manned laboratories and manned observatories in space, as well.

So far, most of our space exploration has been based on these kinds of objectives. This will continue to be a large part of man’s work and life in space for the foreseeable decades ahead.

Once we move to place observatories and space laboratories at interplanetary distances, the idea of permanent colonies in space pops up. Once we think of putting a few dozen scientists and technicians at interplanetary distances, we

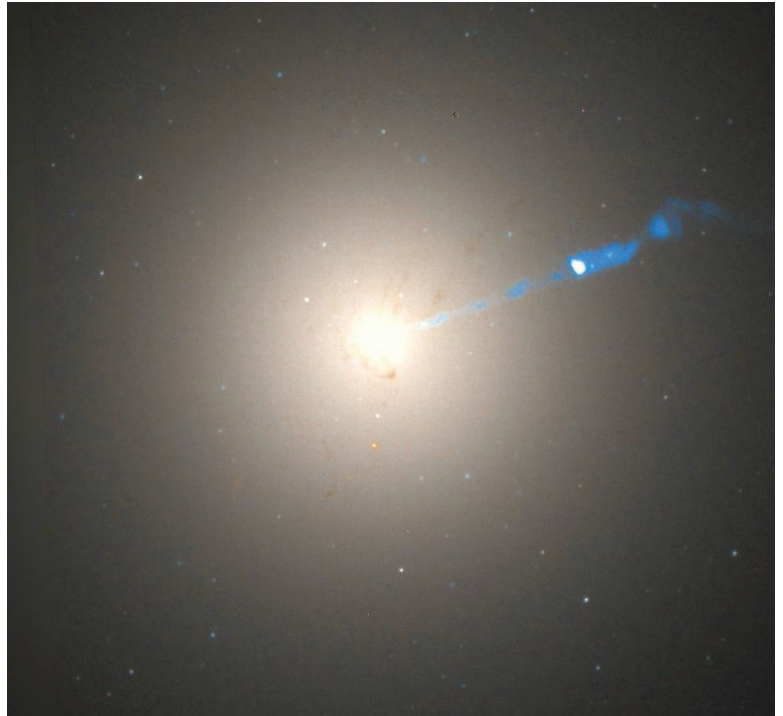
are already raising the question of space colonization.

The logic of the problem is simple enough. To support a few dozen scientists and technicians in the “front line” missions of research in space, we must have a much larger number of people there to maintain the life-support systems on which those scientists and technicians depend. As soon as one has sketched the table of organization for the persons necessary simply to maintain those life-support systems, we realize that once we have decided to put a few dozen scientists and technicians into front-line space missions, we might as well put a few hundred such scientists and technicians out there. The size of the life-support staff needed to sustain a few dozen scientists, would actually support hundreds with relatively little more effort.

Once we have decided to put observatories and laboratories a significant part of the distance toward Mars-orbit, we see it is much better to go all the distance, and take advantage of the fact that Mars is the most convenient place to establish a logistical base for the more remote stations.

Once that point is settled in our minds, we must estimate the minimum population on Mars necessary to maintain all functions indispensable to life support on that planet. Even with continued logistical support from the industrial base on the Moon, we are in the range of a city-sized population in our initial Mars colony. We must stop thinking in terms of the word base, as we might say “Antarctica base”; the word we must use is permanent colony, a chiefly self-sustaining, permanent colony on Mars.

We might look at the project in this way. Think of it as recruiting several thousand scientists, and supporting research technicians, to staff the major U.S. laboratory in space research. However, instead of establishing this university-like research center in the middle of Arizona, we place it on Mars. To provide the goods and services the scientific teams and their families require, we de-



NASA
Galaxy Messier 87, a supergiant elliptical galaxy in the constellation Virgo, as imaged by the Hubble Space Telescope in 2009, showing a blue plasma jet.

velop a small city around the research center, analogous to the case of Los Alamos.

This population is composed of human beings, not robots, and also not fellows clomping around in space suits in some Hollywood science fiction sort of space opera. Without a human ecosystem, many of them would go mad, or nearly so. Building an atmosphere on Mars so that the colonists could bicycle or hitchhike around the planet’s highways, might be a bit farfetched for the foreseeable future; cities and farms in Earth-like artificial environments, under large domes, is the more likely prospect for the foreseeable future. Within such domes, human activity and environment must be as Earthlike as possible. Think of a similar center placed in the middle of the Sahara Desert: pretty bleak and unlivable outside the oasis under the air-conditioned dome.

For further reading on this topic, see this author’s article, “Singularities and Supermassive Black Holes,” in the July 17, 2015 issue of *EIR*, https://larouchepub.com/eiw/public/2015/eirv42n28-20150717/50-53_4228.pdf

III. LaRouche's Plan

November 10, 2006

A DESIGN FOR LEGISLATION

Saving the U.S. Economy

by Lyndon H. LaRouche, Jr.

First published in EIR, on November 24, 2006.

The saying goes: "Do not speak of the rope in the house of the hanged."

It might also be said: "Do not speak of the onrushing, global, financial breakdown in the presence of members of the Houses of Congress."

Nevertheless, the time has come to speak, urgently, of what had been often treated, until now, as unspeakable truths.

Now, the most recent equivalent of the 1929 "Hoover Crash" had already occurred nearly two decades ago, as the October 1987 Wall Street stock-market crash. The doses of hyperinflationary floods of financial derivatives' bubbling, under the predatory reign of Federal Reserve Chairman Alan Greenspan, as combined with the gains from picking the bones of the former Soviet bloc chicken, put off both the official and popular reckoning with the financial reality of the 1987 crash, but only temporarily. Greenspan's reign transformed what had been a "cyclical" form of economic depression within customary former investment markets, into what has now become the rumble of the global breakdown-crisis which looms immediately ahead today. The time of reckoning has arrived. This presently onrushing global monetary breakdown-crisis can not be reformed on its own terms; the present global system must be quickly, entirely replaced. As long as the attempt were made to save that infinitely unpayable mass of the fraudulent financial derivatives

associated with the global "carry trade," efforts which might seek to do no more than reform the present system in its own terms, would ensure the planet's collapse into a prolonged, genocidal "new dark age." This would be a collapse comparable to Europe's Fourteenth-Century "New Dark Age," but, this time, on a global scale.

Nonetheless, there is a way to escape from this onrushing catastrophe. In the meantime, the danger is, that the longer the temporary postponement of the general collapse, the worse the collapse, and the more difficult, and more delayed the recovery.

In this circumstance, what each citizen will do, what he or she could do, to force the needed, drastic, sweeping reforms in national, and also global economic policy, will determine whether or not this nation, even this present civilization, will have a future. The time is now. There are things that can be, and must be done, and done now.

As President Franklin Roosevelt understood for his time, the intent embedded in the crafting of our national Constitution, is also the key to the solution of this present crisis.

*The available solution lies in the fact, that the design of the U.S. Federal Constitution is unique in its providing us, still today, **the constitutional foundation for a successful "Hamiltonian" method for keeping the U.S. economy "alive," virtually without a break in continuity, during a transition from the, presently, hopelessly bankrupt, current world mone-***

tary-financial system, to the needed replacement by a monetary system premised on principles of a new design. The present economic crisis is worse than what U.S. President Franklin D. Roosevelt faced, and conquered; but, the constitutional resources available to the U.S.A. today, are the same, in principle, as then, and can be equally effective as a method for conquering the more difficult challenge, the relatively great ruin of today.

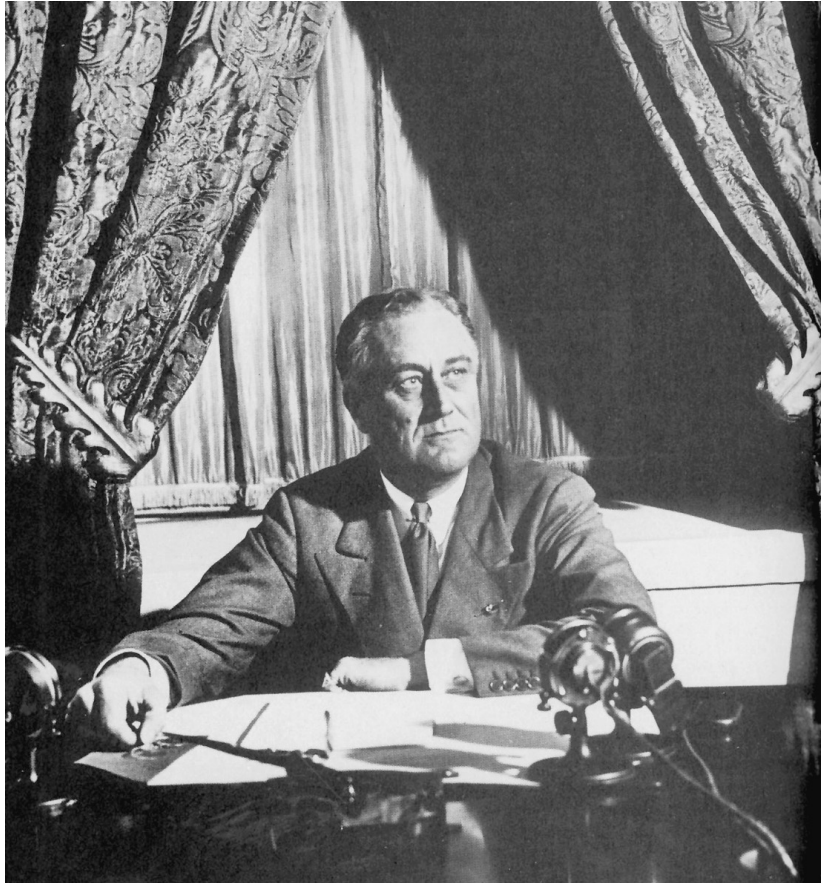
Since the presently inevitable general crash of the present world monetary-financial system is now onrushing, and impending for some time in the weeks or months immediately ahead, it is most urgent that relevant legislation be prepared now, so that the U.S.A. and its partners in this reform might be prepared to act promptly, efficiently, and in time to prevent a terminal breakdown of the world system.

To launch such reforms, the principles governing both the present crisis and the needed reforms, must be understood as matters of principle. This means a broad and deep-going change from presently prevailing assumptions within the body of the Congress; putting aside, only momentarily, the larger issue of the crucial importance of the U.S. in determining the fate of the world during the immediate period ahead today, the survival of our nation itself depends, immediately, upon that change in the way of thinking.

“Change,” means, that what must be recognized as a precondition for a successful effort to save the economy, demands acceptance of the following point of principle:

The U.S.A., with its unique Federal Constitution and its history, is, therefore, situated, historically, to provide the initiative for the very special measures of reform which are absolutely required, if we are to mobilize the larger world to save the itself from a presently threatened plunge into a global “new dark age.”

The following elements of this present report introduce the needed view of the kind of actions which



As President Franklin Delano Roosevelt understood for his time, the U.S. Constitution provides the tools for solving a nation-threatening crisis. Here, FDR gives his first fireside chat.

the newly elected U.S. Congress must take into account, if our own nation and others, are to be rescued from the threat of the worst economic crisis in modern history.

The needed reform can not be a mish-mash of political compromises. Science, not opinion, not pragmatism, must reign in matters as crucial as these. Assemble the virtual parachute as science prescribes, not according to a compromise among preferences. It is a matter of fact, that you may, of course, prefer to compromise; but you would do so only on the condition that you agree, decently, to accept the doom your attempted compromising of the reality of our nation's existence, would, thus, bring upon yourselves.

My subject in this report is the nature of those principles upon which competent design and successful performance of the needed new world system now depends unconditionally.

1. The U.S. in a Mortal World Crisis

The possibility of a recovery of our presently ruined U.S. and also the world economy, depends, absolutely, upon understanding, first of all, the relevant universal principles of natural law which are embedded in the foundations of our Federal Constitution. Today, unfortunately, these principles are little understood among even prominent statesmen and relevant others, both inside and outside the U.S.A. Therefore, we require the following exposition on the subject of the principles.

To be clear, restate, and emphasize that point as follows: In an attempt to deal with this present situation of hyperbolic world crisis, the crucially relevant fact is, that we must rely, essentially, on the most distinctive features specific to an original U.S. constitutional law so little understood even among ostensibly well-educated professionals today. Too many doctrines learned, means too many principles violated as a matter of conditioning-shaped habits among even most of today's leading professionals.

These usually ignored and violated principles of natural law are stated, in somewhat differing language, but to the same intent, within both the 1776 Declaration of Independence and the Preamble of the U.S. Federal Constitution. In the first instance, the Declaration of Independence, we have that citation that Declaration took from Gottfried Leibniz's "*the pursuit of happiness*," a citation intended to be a constitutional refutation of John Locke. That expression by Leibniz adopted in that Declaration must be understood as Benjamin Franklin and also relevant other founders of our republic understood Leibniz's specific argument, in his **New Essays on Human Understanding**, against John Locke to that effect. In the second instance, the Federal Constitution, we must recognize the same intention expressed as a universal principle of nature, in a Preamble which is, as President Franklin D. Roosevelt rightly understood, also the same underlying principle of law, echoing Leibniz, governing the reading and implementation of the entirety of the Federal Constitution, that in a manner which includes the principled, allowable intentions of all conceivable future amendments.

Although some extant European constitutions, such as Germany's **Grundgesetz**, include affirmations of certain important principles of natural law, the U.S. Constitution, with its supreme principle stated as the Preamble, is unique in making the principle of natural



Howard Chandler Christy

The possibility of recovery depends upon understanding and reviving the universal principles embedded in the U.S. Constitution. Here, an artist's rendition of George Washington presiding over the signing of the Constitution.

law the all-subsuming rule of law for the U.S.A. This principle of natural law, as commonly expressed by Leibniz's "pursuit of happiness" and the Preamble of the U.S. Federal Constitution, is the indispensable basis in law for the kind of reform needed, most urgently, now, to rescue both the recently ruined U.S.A. and the world as a whole from the onrushing threat of a general breakdown-crisis.

This shared intention of the 1776 Declaration and the Federal Constitution, must be understood as the ecumenical form of expression of what was for that time the essential principle of Christianity in particular: the notion of man and woman as set absolutely apart from the beasts: *man and woman as made equally in the likeness of the Creator of the universe*. This was implicit in the ecumenical statement, **De Pace Fidei**, of the great statesman and founder of modern physical science Cardinal Nicholas of Cusa. Cusa's argument was echoed for the ears of North American settlers, and others, in that initiative of Cardinal Mazarin which led into the 1648 Treaty of Westphalia.

As Leibniz argues specifically against the implicitly pro-slavery dogma of John Locke, the happiness of mankind depends on the free expression of that quality of human nature which sets man and woman absolutely



Library of Congress

The principles behind the U.S. Constitution impelled a commitment to “do good,” as that impulse is shown in the creation of scientific and cultural progress. Here, a reflection of that progress, the Fairmount Waterworks in Philadelphia, built in the early 1800s upon the impetus of Ben Franklin himself, who left 100,000 pounds to the City to create safe water infrastructure.

apart from, and above all other forms of life. In the language of Russia’s great scientist V.I. Vernadsky, it is what places the Noösphere (the domain of the creative powers of the individual human mind) above the inferior Biosphere, the latter the domain of brutish species of inferior living processes and their effects. The individual man and woman are each rightly happy when they are free to act in promotion of creative powers of discovery of universal physical principle and the promotion of Classical modes of artistic composition, powers which provide the basis for those changes which foster human progress, as mankind’s native, unique likeness to the Creator identifies such powers.

In those past and present oligarchical forms of society contrary to our constitutional law, there is the denial to the individual of the fruitful expression of those creative powers which express the implied immortality of the individual soul; this denial has always tended to herd the so-called lower classes of a class society, and their masters, into a mental state of virtual brutishness, a state which promotes the expression of evil in men and women, both lord and master, dehumanized in that way. “Herd mentality” is the right, ironical choice of expression to describe such a debased, dehumanized condition all too typical of most societies throughout known history.

So, for example, the spread of the cult of so-called “zero technological growth” in modes of physical production, promoted the alienation—and tendency toward

brutishness—widely associated with the so-called “Baby Boomer” generation of a thus-debased Europe and the Americas today.

It is the promotion of the creative improvements which the living persons transmit to future generations, which reveals to us the participation, by those persons, in a quality of immortality which surpasses death of the mortal part of individual human existence. That notion of the immortality of the individual human soul, as promoted by emphasis on Classical culture and scientific and technological progress, expresses the absolute distinction of man from the beasts. This typifies the fundamental principle of natural law reflected in Leibniz’s definition of human happiness. This expresses that sacredness of individual human life, for reason of the creative powers specific to human life, on which all

decent forms of government absolutely depend.

In a competent approach to the management of our economy, this moral principle, as I have just outlined the case here, is also the most essential principle of sound economic policy-shaping. The element taken from Leibniz into the U.S. Declaration of Independence, and the Preamble of the U.S. Federal Constitution, is the element known to the Classical Greek of Plato and the Christian Apostle Paul as *agape* (the love for all mankind, as man and woman are defined in **Genesis** 1), which is the foundation of all competent formulation of economic policy of nations.

It is on this point of natural law, as Leibniz and the Preamble of the Federal Constitution express this, that the principles of natural law, those principles of scientific and cultural progress, become one and the same in practice. In short, we exist, as Cotton Mather and Benjamin Franklin forewarned us, “to do good.” It is that commitment which sets apart the constitutional principles, upon which our republic was premised, apart from the governments of our often well-meaning ancestors in a Great Britain and continental Europe, where man and government live, still, under the sometimes waning, but always lurking, brutish heel of oligarchical traditions.

To escape from the threat of the new barbarism which, thus, now threatens the planet, we must recognize that the source of the present threat to all civilized life on this planet, is represented chiefly by the continuing, corrupting, recently resurgent influence of that tra-



Anglo-Dutch Liberals, who have dominated the world financial system since 1763, have put forward a number of forms of globalization, which amounts to imperialism. Here, the headquarters of the British East India Company, a prime example of such forces. Drawing by Thomas Hosmer Shepherd.

ditional, oligarchical model which is, still today, the traditional cause of the moral and physical degradation of modern society. *This force of degradation expresses an influence which is expressed today as the Sophistry of today's Delphic promotion of the form of imperialism called "globalization."*

They Hate the U.S.A.

With one most notable exception, the period of U.S. leadership under conditions set by Franklin Roosevelt's reforms, the state of modern European civilization since 1763 has been set in the following fashion. Since the times, from the wars of France's brutal and foolish "Sun King" Louis XIV, until the February 1763 Peace of Paris, the world's dominant international monetary-financial system has been the ideology expressed by the Anglo-Dutch Liberal system. That Liberalism is the imperial system which was codified in essentials under such underlings of Britain's Lord Shelburne as Jeremy Bentham, like other representatives of the British East India Company's Haileybury School from that time. In this respect, Liberalism and modern imperialism share the same meaning.

The most notable among the modern political exceptions to that imperialistic hegemony of what is called philosophical Liberalism, has been the dominant role of the U.S. dollar system, as its development must be traced from a point late during the 1930s, as that thus developed gold-reserve system was continued until the

Bretton Woods monetary system was destroyed, in successive blows, by the U.S. Nixon Administration and others, during 1971-1975. Then, in the context of the Nixon Presidency's reactionary reforms, the internal economic, "fair trade" system of regulation created by the Roosevelt Administration, was destroyed in essentials, during the "Trilateral Commission" reign under the 1977-1981 Carter Administration.

Franklin Roosevelt had intended that the powerful economic war-machine, through which the U.S. led the world in defeating the otherwise inevitable reign of a Nazi empire, should be converted, at the close of war, to be employed, during the post-war period, for establishing a new, colonialism-free, imperialism-free world system, a community of respectively sovereign nation-states.

Unfortunately, that President's death presented his successor, the regrettable President Harry Truman, with the opportunity to wreck Roosevelt's intentions for the post-war world. The result of that wrecking, by Truman and others, was what serious economists know as the general effects of the long-term, corrosive trend downward during the 1945-1970s interval. The subsequent wrecking of the U.S. economy which has occurred over the 1971-2006 interval, has assumed the openly avowed intention of creating a new form of global imperialism, called "globalization," under the hegemony of the financier interests associated with the Anglo-Dutch Liberal order rampant in international relations today.

To review summarily what I have written in earlier locations, the following is important to be noted again here.

Contrary to Lord Shelburne's Gibbon, the specific precedent and model for "globalization" today, is not the Roman Empire as such, but a radical redesign of the Roman system, a redesign which created the medieval European *ultramontane* system. The *ultramontane* system was based on coordination of the deployment of the brutish, crusading Norman chivalry by the superior authority of the Venetian financier-oligarchy. This medieval *ultramontane* system, which crashed in Europe's Fourteenth-Century "New Dark Age," is the model echoed in its frankly heathen reform of U.S. military policy, as the so-called Rumsfeld-Cheney reforms carried forward under the current, inept, President George W. Bush, Jr.

That *ultramontane* order which "globalization"

mimics today, the system which crashed into a New Dark Age during Europe's Fourteenth Century, came back to contend for reclaiming its medieval power; this attempt was launched over the time from Venice's orchestration of the Fall of Constantinople until the 1648 Peace of Westphalia. During the Seventeenth Century, this Venetian form of financier-oligarchy assumed the flesh of the Anglo-Dutch Liberal System, becoming thus like a stiletto-wielding Venetian predator, at night, wearing an Anglo-Dutch mask. With the February 1763 Peace of Paris, that Anglo-Dutch Liberal system assumed the form of the imperial East India Company, out of which the later form of the British Empire was developed.

The enemy in whose interest Roosevelt's intention was ultimately wrecked, were those Anglo-Dutch Liberal financier interests which are also represented within what we are accustomed to identify, typically, as "Wall Street." Notably, historically, those are, chiefly, the same interests which had backed the original ambitions of Benito Mussolini and Hjalmar Schacht's Adolf Hitler, until President Franklin Roosevelt's intervention had brought many of even those former Mussolini and Hitler sympathizers of London and Wall Street into tow, and forced them to support the war against Hitler. It was those same, so-called "white shoe" financier interests, my own most notable personal enemies, whose legacy is presently typified by John Train, George Shultz, and Felix Rohatyn, which came back into play beginning virtually right after the death of President Franklin Roosevelt, when the war had been won, interests which have tended to dominate U.S. political life, from the top, over the entire span of decades since, up to the present moment.

For those categories of opponents of Franklin Roosevelt now, as then, Roosevelt typifies their most hated enemy. That hatred springs in history from the same quality of passion which the tyrannical upper class of Lycurgus' Sparta practiced upon its victims, the helot underclass; it is expressed as a leading political and social trend in U.S. policy since the Nixon Administration. It has been expressed, so conspicuously, in the accelerating, increasingly mass-murderous oppression of the lower eighty-to-ninety percentile of our family-income brackets, as met within the communities with which their life is associated.

In order to foster a suppression of the natural-law rights of the lower eighty percentile of the population, efficient forms of sovereign national self-government are being suppressed, and then eliminated. This has

been the trend in the U.S.A. itself, as in many other places, since 1971-72,

Thus, this neo-*ultramontane* policy-trend is what now carries the name of "globalization." Under this trend, the former power of the population of a modern nation-state to control its own destiny, has been taken away more and more. So, predatory, and usually scurrilous private financier interests, have already wrecked the basic economic infrastructure, productive power, standard of living, and, now, even the life-expectancy of the lower eighty-percentile of the income-brackets of our citizenry. This, which is most fairly described as, morally, a global crime-wave of predatory financier power, is the true meaning and evil intention expressed by the promotion of "globalization."

These predatory financier interests, and also the class of lackeys which serves them, would prefer to lower the life-expectancy and conditions of life of the planet, even their own nations (as they have done), rather than accept a return to that civilized standard of relationship of man to man intended by our President Franklin Roosevelt and his great American and European predecessors. Thus, the intent of George P. Shultz, and his **Island of Dr. Moreau**-like zoo of the current Bush Administration, has not been to promote U.S. power in the world, but to destroy the U.S.A., through imposing upon it a regime under which the U.S.A. would do what the George W. Bush Administration has done thus far, to bring about the deep discredit, and ruin of the U.S.A. which had been the world's leading obstacle to Anglo-Dutch Liberal imperialism, as the U.S.A. had been under President Franklin Roosevelt. This was done in service to the *ultramontane* form of Anglo-Dutch Liberal imperial power, the power expressed now in the form called "globalization."

President Roosevelt led in saving the world from the threat of a world empire under the system of Adolf Hitler's masters, by placing the emphasis on scientific and cultural progress in fostering the intention and the ability of the U.S. to produce the mightiest machine for defense of civilization in all history up to that time. Since the virtual day of President Roosevelt's death, Anglo-Dutch Liberal resurgency in the U.S. has, first, undermined, and, later, now virtually destroyed the Roosevelt government's great humane intention. If our citizenry and Congress do not come quickly to understand that, and to reverse the post-FDR trend, there is little hope for the U.S.A. and the present and immediate future generations who live within it.

Therefore, we must now turn back to science as the driver of the national and world economy. We must bring to an end that quality of Sophistry which gripped the most typical intellectual and moral victims of the post-World War II financier oligarchy: the so-called “68ers,” and white-collar-oriented Baby-Boomer generation of the Americas, and of western and central Europe as a whole. Therefore: Back to real science as the basis for economic reform now.

2. Learning Needed Modern Economic Science From Our Classical Greek Tradition

The principles of natural law relevant to the matter of the current world economic-financial emergency, are expressed as the subject of a quality of science which is premised upon a (Leibnizian, Riemannian) *dynamic*, rather than the *mechanistic-statistical* (Cartesian) view of the experience of human history. The usual reliance of most economists, accountants, and others, on the incompetent, mechanistic-statistical methods of forecasting and analysis, is an error which must be eradicated from leading policy-shaping practice now, if the U.S.A. is to survive the presently onrushing avalanche of world crisis.

The progress of mankind’s power in and over the universe we inhabit, is expressed through added discoveries of universal principles of physical science and Classical artistic composition.

In other words, it is the study of mankind’s progress, or lack of progress, in this historical way, which guides a reasonable mind in understanding the principle of development expressed by the acquisition and employment of newly discovered universal principles. In other words, the universe belongs to the world-outlook of Pythagoreans, Heracleitus, and Plato, rather than the mechanistic, *apriori* schemes of Aristotle, Euclid, and Descartes. *It is the discovery of the manner in which mankind’s power in and over the universe is increased, which expresses the principle by which the universe is actually organized.* All experimentally validated universal physical principles meet that standard, as Johannes Kepler’s uniquely original discovery of the universal principle of gravitation typifies this same notion of universal principle copied by Leibniz for the infinitesimal calculus and the modern notion of *dynamics*, as this principled notion is summarized in Riemann’s

treatment of the dynamics of a *physical hypergeometric* domain.

This notion of such a principle of progress through discovered universal physical principles, is the experience which corresponds to, and typifies, in practice, the nature of mankind made in the likeness of the Willful Creator of the universe as a whole.

To define natural law competently, we must proceed to the study of the historical development of political and related human systems in that way. Perfection does not correspond to convergence on some predetermined ideal state of organization; perfection is a commitment, like that of the Creator Himself, to a universal, endless progress to higher states of organization and existence. Perfection is a commitment of human beings to develop their minds and practice, and that of the others for whose souls and welfare they must care, in the practice of a mode of commitment to progress which is consistent with the intended immortality of the soul of mortal man.

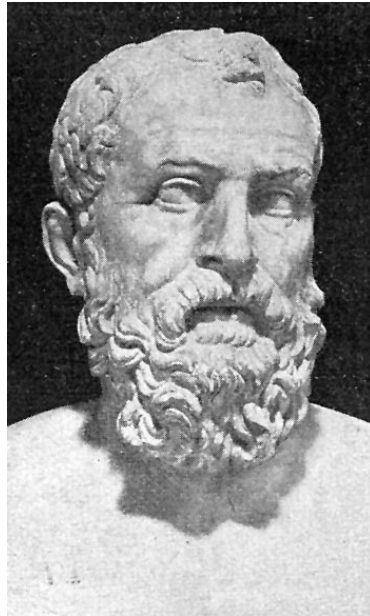
For the case of today’s European civilization, and its influence on the planet, we must study the actual history of the principles at issue, by starting from the case of the birth of now globally-outreaching European civilization itself, that civilization’s birth in ancient Greece.

As the great Classical poet, dramatist, and historian Friedrich Schiller emphasized in his Jena University lectures, the entire sweep of what may be described as specifically European history, has been expressed, chiefly, as an unbroken process of struggle between two principal, opposing currents of culture, the constitutional tradition, like that of Solon of Athens, and the opposing, oligarchical tradition associated with, and typified by the Delphic code of Lycurgus’ slave-holding Sparta.

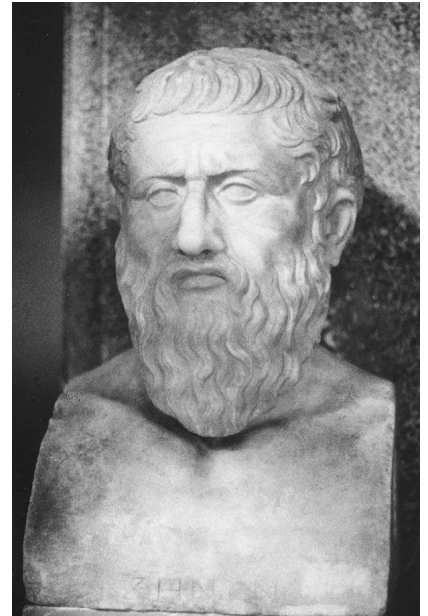
The principal source of extensive evil in known human existence thus far, is the form of social order, as within nations and empires, which has been known since the time of ancient Greece as the oligarchical model of society. The elimination of the reign of an oligarchical order, was the embedded objective of the founding of modern European civilization, as during the lifetimes of Thales, Pythagoras, Aeschylus, and Plato, and during the middle of Europe’s Fifteenth Century. The emergence of the modern, commonwealth form of sovereign nation-state, as in King Louis XI’s France and Henry VII’s England, to replace earlier, feudal and feudalistic systems, typifies the influence of Nicholas of Cusa’s contributions to the great ecumenical Council of Florence on this account.



Pythagoras (detail from Raphael's "The School of Athens")



Solon



EIRNS/Philip Ulanowsky

Plato

It is most notable, for understanding modern European civilization, as distinct from earlier times and other places, that this development of the commonwealth form of state, from which the constitutional system of the U.S.A. was derived, brought together Cusa's notion of the sovereign nation-state, as in his **Concordantia Catholica**, and the founding of modern experimental science, in his **De Docta Ignorantia**.

Contrary to certain Gnostics, history does not define a perpetual struggle between God and Satan, a struggle of eternal good against eternal evil; it represents a continuing struggle for an ultimate, decisive victory, over evil, which would free society, notably European civilization, from the grip of the evil expressed in such forms as the oligarchical tradition of ancient Sparta, and of the Roman and Byzantine empires, expressed as the tyranny represented by the partnership of Venetian financier-oligarchy with the brutish Norman, crusading chivalry, as the reactionary forces typified by the satanic figure of Grand Inquisitor Tomás de Torquemada, and by the imperial, "globalizing" lustings typified by Anglo-Dutch Liberalism since the February 1763 Peace of Paris, to the present day.

Evil is not an independent force in the universe; evil is the effect of denying man's divine nature in practice, and abusing the powers with which human beings are endowed to serve intentions which resist the compulsion of the human individual to be a creative force for

uplifting man's powers to assist the development of the universe to higher qualities of existence, a process of contribution to development which is inseparable from a truthful, even a sane notion of human individual immortality. Evil is casting the image of the Creator in the likeness of a beast, as by intent, or by negligence of the obligatory development and use of creative powers.

Repeatedly, as in the case of the Peloponnesian War, in the rise and fall of imperial Latin Rome, in the decline and fall of Byzantium, and in the Fourteenth-Century New Dark Age brought about through the Norman-Venetian partnership, the persistence of various expressions of the oligarchical model has led repeatedly to a great, genocidal rupture in the pre-existing order of civilized life, as we are threatened by the imminence of such a rupture, once again, even as early as during the months immediately ahead.

The Issue of Method

The considerations implicit in what has been said here thus far, has a corresponding expression and basis in those principles of physical science which pertain to the study of economic processes as physical-economic processes, rather than as they appear in their superficial aspect, as accounting systems based in what are merely monetary-financial processes.

The most common failure of economists and others today, is their inclination to view economic and cultural

cycles incompetently, from the standpoint of Cartesian, or Cartesian-like, mechanistic-statistical projections. That method is easily recognized as the common failure of generally accepted economic forecasting today. However, a still deeper problem presents itself,

Actual cycles in history are never determined in the way which mechanistic-statistical methods tend to imply; actual cycles of importance are, as I have said, dynamical, rather than mechanistic-statistical in character, and may be compared, on that account, with the notion of astronomical cycles as Johannes Kepler first, uniquely, introduced those conceptions into modern physical science in his **Mysterium Cosmographicum** and **The New Astronomy**. The proper modern term for such “astronomical-like” cycles in history is, again, “Riemannian.”

The notion of a Riemannian, rather than a statistical-mechanistic conception of forecasting in economy, is of crucial importance for those among us engaged with providing a genuine physical-economic recovery from those quicksands of misery which the alleged “reforms” of the 1971-2006 interval have dumped upon, especially, the lower eighty percentile of our family-income brackets today. (Hey, Congress, tell us, tell the lower eighty percentile of our citizens: “What have you done to the U.S. constitutional general welfare principle’s superior role in the making of our law?”) Without a fair comprehension of the issues associated with that distinction, no competent legislation could be crafted for the presently onrushing crisis.

The problem so specified, is that there is a prevalent, populist tendency in political life, to tolerate only simplistic sentimentalities which, because they enjoy resonance with ignorance, are endowed with the reputation of being popular, and therefore, like epidemic diseases, “democratic.” As the Enron and similar cases attest, this populist notion of “democracy,” is the chief source of that infectious spread of that ruinous, popular credulity on which swindlers rely to dupe and cheat the credulous mass of the nation and its people, as the George W. Bush Administration to date has typified such putrefying economic decadence.

We should be reminded by the fact that it was the Democratic Party of Athens whose Sophist impulses came closest to tyranny, that, sometimes, it is necessary to express doubt about that kind of faith in that alleged veracity of popular opinion which has been the usual instrument for bringing every bad government down upon ourselves, as during the recent six years. Truth,

not mere opinion, not even majority opinion, must rule. Without some serious thinking about economic and other policies, thinking contrary to the popular opinion which has misled us into the disastrous present administration, neither the U.S.A., nor the world at large, is going to escape from the presently onrushing general, planet-wide physical-economic breakdown-crisis.

Thus, all too often, as during the recent six years in the U.S.A. under the Bush-Cheney Administration, especially among the so-called democracies, the general population suffers the afflictions which its own populist form of Sophists’ credulities has brought upon itself. There is nothing noble, nothing good for the destiny of a people, especially its poor, in the adoration of popular ignorance. Tyranny prescribes government based on promoting barefooted ignorance and bestial sexual recreations of sundry forms, among those whom the tyrant wishes to herd as cattle are herded, largely by themselves, all the way to the slaughter which is their masters’ ultimate intention for them.

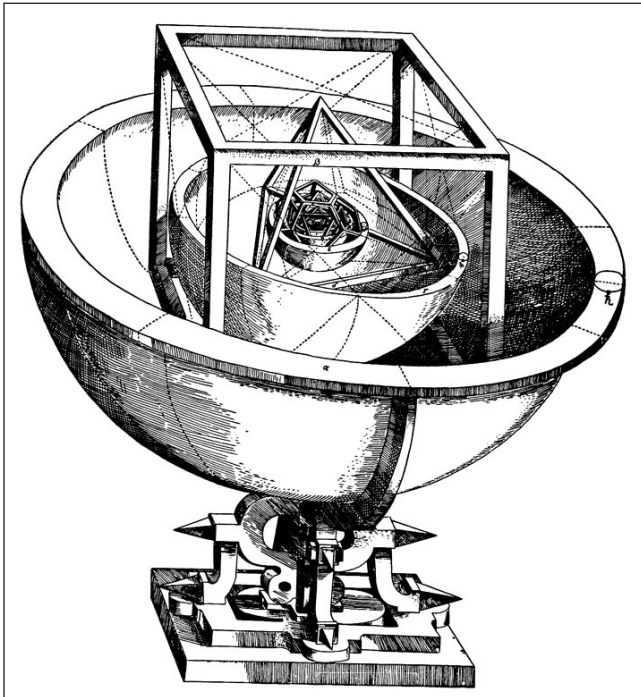
Knowledge, truthful knowledge, is the only true freedom, the only true source of justice. Popular opinion is the crafty tyrant’s favorite instrument, an instrument by which his human cattle are herded, as populist German cattle were herded by Hitler.

From Pythagoras to Riemann

How can we know what is actually truth, rather than relatively popular, or official opinion, or simply “tradition”?

The best among the ancient Greeks, as typified by Thales, Heracleitus, the Pythagoreans, and Plato, traced their crafting of their conception of man and nature, from, proximately, certain ancient Egyptian sources. The result was a set of conceptions counterposed to those of their own oligarchical adversaries of that time.

Those immediately relevant adversaries of the Pythagoreans and Plato, at that time, and later, were the advocates of an oligarchical model, as typified by the Delphic cult of Apollo. These adversaries introduced a specific form of corruption, called Sophistry, into Greek culture, a corruption sometimes expressed as Euclidean geometry and related, relatively depraved misconceptions of man and nature, which have continue to pollute teaching and related opinion of even widely accepted institutions up to the present time. The essential difference between the competent geometry of the Pythagoreans and Plato, on the one side, and, on the other side, the incompetent pretense at “science” by the Sophists



*A dynamic concept of the workings of the universe—as opposed to the mechanistic-statistical approach of a Euclid—was applied to physical science by Johannes Kepler. Here, Kepler’s Platonic solid model of the Solar System from his book, *Mysterium Cosmographicum*.*

in the likeness of **Euclid’s Elements**, or the modern sophists of Anglo-Dutch Liberal empiricism and its positivist and existentialist outgrowths, is precisely that same conflict, in respect to principles, albeit presently set in modern circumstances, today.

The Pythagoreans made no arbitrary assumptions of the type which are associated with that fraudulent, Sophistical notion of self-evident definitions, axioms, and postulates seen in **Euclid’s Elements**. The Pythagorean method was, for European culture then and to the present day, the forerunner of the best method of modern science: the principle, as expressed by leading modern scientists Kepler, Fermat, Leibniz, Gauss, and Riemann, that no self-evident principles exist, but only discoverable universal physical principles of *dynamics*.

Nonetheless, despite the great, leading achievements of these modern thinkers, the same folly central to the perverted **Euclid’s Elements**, has dominated much of modern physical science, politics, social theory generally, and what passes for both economic theory and current standards of national practice. Cartesianism, and the doctrines of mechanical-statistical practice commonplace among incompetent practice of what is

called “economics,” are typical of the problem of widespread mental confusion which must be addressed now, to rescue an imperilled civilization of today.

The widespread adoption by modern Liberal teachings, of either Euclidean, Cartesian, or kindred forms of reductionist geometry, prevents the mind so corrupted from grasping the most essential principle of science and human society. The victims of the reductionist folly of pro-Cartesian or similar reductionist forms of mechanistic-statistical notions, can not grasp the concept of universality, as Kepler, for example, defined gravitation as a universal principle, a principle which, as Albert Einstein emphasized, is as big as the universe, a self-bounded, and thus finite, universe, a universe with nothing outside it. This needed regard for the universality of such principles, is expressed locally as the notion of the mathematical-physical infinitesimal, that which Leibniz adopted from Kepler’s instruction to his successors, in Leibniz’s crafting of his uniquely original discovery of the infinitesimal calculus.

On this account, the great indirect, but nonetheless essential contribution of V.I. Vernadsky to a physical science of economy, is located, initially, in the implications of his definition of the *Biosphere* as a phase-space which is functionally distinct from the essentially abiotic domain, but which exists as a uniquely distinct, *dynamic* form of organization of those processes described as living processes. This notion of a universal physical phase-space defined by a universal principle of life, established the implied foundations for a related additional discovery by Vernadsky: the discovery of the specific physical principle of human intelligence, a principle, that of the *Noösphere*, as defined by Vernadsky. This notion of specifically human creativity, sets the human individual and society categorically within a universal phase-space above merely living processes, as, comparably, life sets the Biosphere above the universal phase-space of non-living processes.

All three states inhabit the same universe, and share the same material, but they differ absolutely, as phase spaces, through the differences generated as the expression of distinctly different qualities of universal principle of organization of the distinct processes so represented.

Just as life, in its character as a universal principle, organizes material of the domain of the non-living into a dynamic form of organization of development expressed as life, so the human intelligence, which is absent in animal life as such, prompts mankind to create

new, higher states of organization in the universe, higher states brought into being through means which can be rigorously distinguished as the potential creative powers of the human mind, the creative powers which define man and woman as equally in the likeness of the Creator.

This distinction is what separated the Pythagoreans and Plato, in their time, from the systemically mechanistic doctrinaires, the reductionists, including Aristotle and his followers. This distinction, brought toward fresh fruition by Cardinal Nicholas of Cusa's **De Docta Ignorantia**, is Leibniz's principle of *dynamics* (the modern term, introduced by Leibniz, explicitly, as a name for the Classical Greek *dynamis*) underlying the founding of systemic modern physical science by Cusa's avowed follower Kepler. This concept of *dynamics* was the crucial point made by Leibniz in exposing the intrinsic incompetence in science, of the mechanistic-statistical methods of both the Cartesians and other modern reductionists, such as the victims of the fraudulent Newton cult.

This set of distinctions is what separates today's intrinsically incompetent dogmas of virtually all varieties of taught economics from competence. If we are to rescue our presently imperilled planet from today's threat of a lurch into a new, planet-wide dark age, this is the problem which must be understood as our guide to practice in understanding, for overcoming the intrinsic incompetence of thinking which has brought the world to the verge of what may prove to be the worst crisis in the known history of mankind.

It is this specific issue of human creativity which, as I shall emphasize in the fourth chapter of this report, defines the proper meaning of the term *economics*.

Commonplace, but ignorant opinion, assumes that what is known as sense-experience, is reality *per se*. In reality, sense-perception is a state of the biological mental-perceptual apparatus, a state which expresses an induced response to the existence of an effect which has impinged upon the human sensory apparatus, as if from an unseen domain of reality beyond. What is recognized by the mind as the object of the form of sense-perceptual experience, represents an interpretation generated by the developed perceptual powers of the individual mind, rather than direct, ontologically sensory knowledge of the actual, external action which is the presumed cause of what is experienced.

This ironical role of sense-perception, is key to understanding the "infinitesimal" of Kepler's and Leib-

niz's notion of a calculus suited to dealing with the fact that an unseen universal principle has produced the effect known as gravitation. Already, for Kepler, the power of gravitation is expressed as what is defined as being an ontological existence experienced as a universal physical principle. It was Kepler's specification on this point, which was taken by Leibniz as Kepler's instruction to future mathematicians to develop an infinitesimal calculus.

Gravitation, for example, is an object as big in scale as the universe, and therefore expresses the ontological finiteness of the physical universe, and is expressed as the experience of an encounter with an infinitesimal, as Kepler shows this to be true for the case of gravitation.

Therefore, the idea of the existence of "self-evident" definitions, axioms, and postulates, of a formal geometry, such as a Euclidean geometry, is a piece of lunacy not to be tolerated within the finite bounds of study of an actual Solar System.

It is the faculty specific to the sovereign character of the human mind, which is the location of the human mind's ability to discover and comprehend the discovery of an efficient universal physical principle. It is through human actions located within that domain of the "infinite" expressed as the experience of an "infinitesimal," that mankind is enabled to effect willful changes in mankind's specific relationship to the universe.

Thus, from the ancient practice of what the Pythagoreans and like thinkers termed the Egyptian practice of *Sphaerics*, that which became Riemannian physics was generated. In place of *a priori* definitions, axioms, and postulates, of a mechanistic fantasy such as Euclidean and Cartesian geometry, the real geometry of the universe is an anti-Euclidean geometry of the type which has emerged as a Riemannian, dynamic form of *physical hypergeometry* (e.g., of *physical tensor-space*), instead of a Euclidean or Cartesian type of empiricist or other, mechanistic-statistical mathematical space. The physical "dimensions" of a Riemannian physical space, or its antecedents, are essentially universal physical principles whose extension as existing, efficient principles, is equal to that of a finite universal physical space-time as a whole. This was already clearly expressed by the original work of Kepler. So, Einstein came to conclude that the foundations of competent modern physical science are both Keplerian and Riemannian.

There is no need to pretend to be intimidated and

befuddled by one's own lack of formal-mathematical elaboration of Riemannian dynamics. For purposes of making general policies which are relevant to overcoming the presently onrushing crisis, it is sufficient for most to grasp the underlying principles of experimental knowledge which drive the physical-mathematical system. Beyond that, most relevant, sane policy-shapers will rely on qualified experts in the mathematical physics of the system who concur with the point of method I have identified here. The results will be sufficiently clear for intelligent policy-shapers, and will come as a sweet relief from the mumbo-jumbo of our contemporary, radically post-modernist—almost post-post-modernist, high priesthood of the financial-derivatives cults.

This view of the specifically *dynamic* form of Riemannian physical hypergeometric principles, is the essential conceptual basis for competent practice of physical economic science. *The only competent economic science is to be viewed in terms of the dynamic form of interaction within an economic phase-space as a whole, an interaction which reflects the form in which actual increases in the potential relative population-density of a society, and of the planet as whole, are generated.*

The function of a competent approach to economics as a body of scientific practice, is to achieve efficient, practical comprehension of the dynamic interactions defined in this way.

3. Money Versus Economic Value

As emphasized summarily, repeatedly since the opening of this present report, up to the present point, if an attempt is made to continue the present world system of economic practice within the bounds of relatively superficial reforms, then the entirety of the present world monetary system is already about to disintegrate. *If the entirety of the present world economy is not to collapse in a chain-reaction style of general breakdown-crisis, the present world monetary system must be replaced entirely by a new system, a new system based on fundamentally different notions of the nature of economic value than are, unfortunately for us all, presently in vogue.*

What must occur, if the planet as a whole is to avoid such a catastrophic plunge into a new dark age, is something akin to the reforms made under U.S. President Franklin Roosevelt, the changes he made to lead us from the U.S. monetary system of the bankrupted

1920s, to the regulated system which evolved into the form of the Bretton Woods fixed-exchange-rate form of system during 1944-1945. The death of that President Roosevelt, and the inauguration of his successor and actual opponent, President Harry S Truman, unleashed a wave of destruction of the work of Roosevelt.

On balance, the economic recovery launched by Roosevelt continued for about two decades, despite Truman's reforms; this continued through and somewhat beyond the assassination of President John F. Kennedy; but the interval from about 1968 through 1981 sent the U.S.A. and Europe, and also other places, lurching into a long-wave of physical economic decadence and present state of ruin.

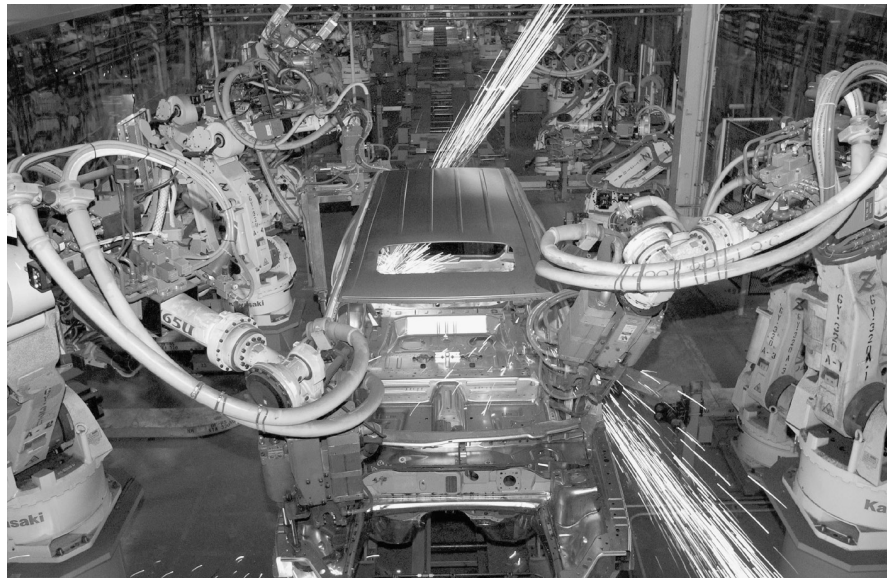
The emergence of the so-called "68ers," represented a cultural paradigm-shift, which had been launched on the death of President Roosevelt, but, whose political consequences had been expressed most clearly by the emergence of the new existentialist irrationalism, in the spirit of the post-Franklin Roosevelt Congress for Cultural Freedom and kindred offal. These consequences took hold as a reigning, new, net-downward cultural trend in trans-Atlantic society, as launched by the so-called "68ers."

The leading source of intellectual difficulties in attempts to understand reality, among leading circles around the world today, is that real history occurs in cultural patterns operating over the span of not less than several, or more successive generations, while prevalent leading circles in most of the world today think, at their relative best, in terms of a mere decade or two. Those today who do not see today's world crisis as already born in the reversal from Franklin Roosevelt's upward, to Harry Truman's downward trend, are exhibiting their condition as victims of an advanced state of that downward cultural and physical-economic trend today. It is that affliction among our policy-shapers which must be urgently corrected now, if civilization is to escape a relatively immediate plunge into a planetary new dark age.

These have been trends whose kaleidoscopic effects become apparent to most ordinary opinion only over generations. That short-term view is thus expressed as a lack of comprehension of the long-term forces of history, those which have predetermined what occurs to civilization two or more generations later. *Thus, Truman's betrayal of the Roosevelt legacy produced the hellish state of peril throughout our planet, two generations later; today.* The mental powers of most Baby



There is no solution to the current crisis without turning away from a fixation on money, (above: gold ingots) toward the concept of economic growth based on high-technology production, demonstrated (at right) by this automated robot spot-welding in a Chicago auto assembly plant.



Ford Motor Company

Boomers of today, do not reach far enough to take into account the reality of the fundamental change in direction introduced under President Truman.

The worst of the long-ranging effects of certain axiomatically reductionist presumptions respecting economics, in modern society since the 1648 close of the Thirty Years War in Europe, has been the Liberal presumption that there are monetary values whose existence is lawfully expressed by the assumed convergence of percussive interaction among prices, as converging on some mechanistic-statistical notion of asymptotic social value, as the case of the doctrine of Karl Marx reflects this same form of corruption in looking at economic processes. This was the fatal aspect of Marxist dogma which contributed, crucially, to the collapse of the Soviet system.

This was the assumption of Bernard Mandeville's weird and notorious, very, very Liberal defense of moral degeneration in his **The Fable of the Bees**. This was the implicit notion of value in the superstitious dogma of Physiocrat François Quesnay. This was the assumption of both hoaxster-plagiarist Adam Smith's 1759 **Theory of the Moral Sentiments** and his virulently anti-American tract **The Wealth of Nations**. This same nasty superstition also appeared as the cornerstone of Karl Marx's "theory of value," a view which a credulous Marx under the sway of Palmerston's "Young Europe" operation, acquired from Jeremy Bentham's Haileybury School economists.

Thus, virtual hordes from successive generations of

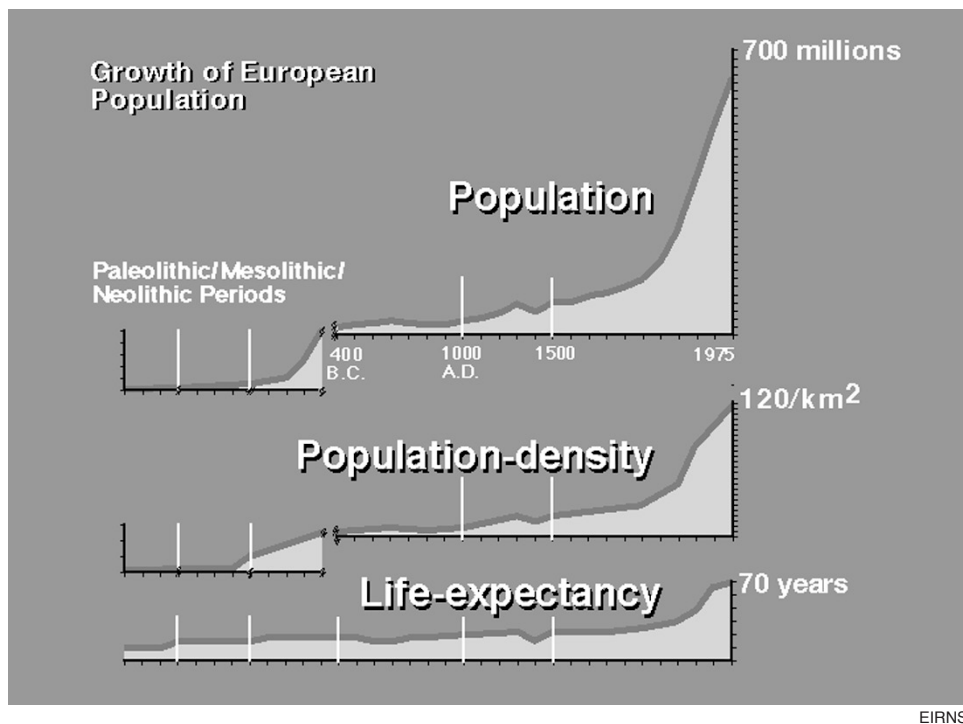
dupes of that dogma, have dominated both nominally Liberal and nominally Marxist types to the present time. With the eruption of the present world crisis, it is already way past time, two generations after Truman's inauguration, to end that farce.

There is no intrinsic natural value associated with the uttering and circulation of money in modern society. The very term, "honest money," is, next to the extreme of financial derivatives, the worst of all lies about money.

If British Biblical archeologists, searching for the numbered street address of Abraham in Ur, had not made such an awful mess of the cuneiform tablet collections which their pathetic zeal heaped into virtual discard piles, we would have had important additional evidence of the operations of ancient markets prior to approximately 2000 B.C. For that reason, some of the best indications of the development of markets of trade have been acquired during recent post-World War II decades, from the ancient Hittite sites of Asia Minor which reflect reactivated use of cuneiform tablets, rather than the perishable parchment and the like media, for documents of international trade.

Consequently, our best early, functional form of knowledge of the role of currency in the operations of a trading economy, is associated with the role of the site of the Delphic Apollo cult as a center of usury and Mediterranean maritime trade, and the emergence of what was ostensibly the Delphi Apollo-cult colony set up within the Etruscan region which became known as the

FIGURE 1

European Population Growth and Life-Expectancy

The only true measure of progress lies in the physical-economic rate of increase of the potential relative population-density of entire nations, measured per capita and per square kilometer.

city and empire of Rome.

From that role of the Delphi cult to the present day, the known history of the development of medieval and modern monetary systems, and of monetary doctrines, is a history of the rule of usury in the sundry imperial systems of Delphi; Rome; Byzantium; and, in the role of the *ultramontane* medieval system in providing the foundation for the modern Anglo-Dutch Liberal model of modern imperial monetary systems, the latter the systems whose legacy dominates the absurd but popularized notion of money and its use to the present day.

So, the currently prevalent notions of theories of monetary value, are essentially products of the forms of usury practiced by imperial and closely related systems of government.

It is useful to restate this point as follows: there are two mutually exclusive ways for defining the value of money. The prevalent opinion, still today, echoes the way in which the imperialistic Anglo-Dutch Liberal defines money and its value, that from the standpoint of usury, rather than production. This includes the so-called Marxist theory of economic value, which a Karl

Marx who was an unsuspecting dupe of Lord Palmerston's direction of the "Young Europe" movement, adopted, with some relatively superficial adjustments, from the imperial system and empiricist doctrine of the neo-Venetian, British East India Company's Haileybury School.

Two Opposing Cultures

To understand the political and economic trends within today's globally extended modern European civilization, it is essential to look at the entire sweep of cultures over a period not less than the known portions of the history of the language-cultures of our planet since a time prior to the establishment of the Great Pyramid of Giza. Bal Gangadhar Tilak's principal writings¹

are of crucial importance for insight into earlier phases of development of a functional form of known language-culture. Tilak's insight into the integration of artistic and scientific functions in early known history of the internal dynamics of civilized cultures, is of crucial significance for historians, and strategists today.

During all such known cultural history from early civilization onward, there has been a continuing state of cultural warfare between civilizing and oligarchical cultures.

1. On evidence of the pre-history of India's culture: **Orion** (1893) and **Arctic Home in the Vedas** (1903), but, in the latter part of the same time-frame, his prison writings on the Bhagavadgita. The relationship between ancient maritime cultures, and the reflection of these cultures in both the ancient development of the maritime-based cultures of the Mediterranean and of the Indian subcontinent's cultures, and the latter's impact on the development of pre-Semitic cultures of lower Mesopotamia, the region known as Sheba, Abyssinia, and elsewhere, were crucial features of my proofs, developed, chiefly, during the early 1980s, against the popular myth of a riparian origin for civilization's cultures, and my recognition that riparian cultures had developed as products of the oceanic maritime cultures from the time of the last great ice age (currently due to be experienced anew, unless we change that).

Unfortunately, the skein of development internal to European civilization since ancient Greece, has been masked and blurred by the hoaxes such as those of Roman history's most notable chief priest, and lying Sophist, Plutarch, of the Delphi Apollo cult. The entirety of the rise of Rome, since the last actually civilized Roman, Cicero, until the Fifteenth-Century Renaissance organized around the circles of Cardinal Nicholas of Cusa, has been dominated by a general retrogression of European cultures from the higher level typified by Thales, Heracleitus, Aeschylus, the Pythagoreans, Socrates, Plato, and Plato's followers of the Platonic Academy. The deaths of the greatest scientific thinkers of their time, the collaborators Eratosthenes and Archimedes, about B.C. 200, marked the point of eruption of the dominant role of decadence in the broad sweep of European history from that time until the Fifteenth-Century Renaissance, as the latter is signalled by Brunelleschi's use of his own insight into the same physical principle of the catenary central to the Leibniz calculus, for the completion of the cupola of the Cathedral of Florence.

This long sweep of the history of European culture, from Plato through Nicholas of Cusa, is better understood by looking at the matter of the rise of Christianity as the chief medium of continuation of Classical Greek culture until the rise of Byzantium under the emperors Diocletian and Constantine, and the role of the Augustinian tradition, since then, leading into Charlemagne's civilizing role, during the period preceding the regression into the long, *ultramontane* dark age under the partnership of the Venetian financier oligarchy and the bestial Norman chivalry.

We must understand ourselves today, especially from within globally extended evolution of European civilization's history, as reflecting, in ourselves, and, usually in the typical, contemporary, putatively educated individual's behavior, what has been a long sweep of the persisting conflict between the humanist and oligarchical models of societies and cultures. In the end, one of the two principal, opposing views must triumph; since the laws of the universe will determine the ultimate outcome of this struggle between the forces of civilization and the bestiality of the oligarchical currents, the humanism which I defend and promote will ultimately prevail. It is my certain knowledge from the advantages gained from a long life's unusually significant experience in defending the principle of truthfulness

against the living history of the reign of Sophistry over mere popular opinion, that the Creator is awesomely patient in His own way; His clock of history is not that of the span of individual existence of the mortal form of the human individual.

What I discovered to be right, in the long-range forecasts I developed as early as the late 1950s, have become, in respect to all essentials, the reality of the crisis-situation gripping the world today. Who does not think in terms of two generations of extent of life's future experience, is really not thinking very much at all.

As we examine the history of what we call "economy" since ancient Greece, or somewhat earlier, a study of economic systems from the vantage-point of the relative increase or decline of potential relative population-density, per capita and per square kilometer, shows us a persisting domination of what we view, retrospectively, as economic systems, by the role of money under oligarchical systems. Such studies confront us with the conflict between two, ultimately irreconcilable conceptions of man and nature. In this history, the idea of money and the oligarchical practice of usury are virtually inseparable.

In real economy, as defined by Gottfried Leibniz's notion of physical economy, the progress and goals are measured in terms of willfully induced rises in the level of physical productivity, per capita and per square kilometer, of the total land-areas. In oligarchical systems, as typified by the predatory policies of the current George W. Bush Administration, the majority of the population (such as the lower eighty percentile of the family-income brackets of the U.S.A. since about 1977), the physical productivity and incomes of the lower income-brackets of the population have been declining, per capita and per square kilometer, that at a dramatically accelerating rate during the 2001-2006 interval. Whereas, the monied wealth of the upper three percentile of income brackets has zoomed. In effect, the present Bush Administration treats the lower eighty percentile of the income-brackets of the population as human cattle, as the Physiocrat François Quesnay did, as herds of human cattle intended to be culled at increasing rates, as we are experiencing that trend today.

Worse, the tendency among political forces, even within the Democratic Party, is to fawn upon the predatory strata of financier power, while complaining

against the impatient rustlings among the increasingly looted lower eighty percentile. Ambitious Democrats are usually kinder to the human cattle than the crueler of the ambitious Republicans of similar persuasions. The case of Democratic fawning upon the Synarchist-linked predator Felix Rohatyn is typical of the fawning of even Democrats on the most vicious predators of the financier class. For Democrats, too, politics goes to the financial market where the big money is, especially among Democrats and others of the Baby Boomer age-range.

Contrary to the mythologies expressed among even leaders of the Democratic Party today, despite what the Democratic Party had gained by the rescue of our nation, as also that party, by President Franklin Roosevelt's reforms, the foundation of modern civilized life of nations was the establishment of the principle of the commonwealth under the succession of France's Louis XI and his follower, England's Henry VII. Where foolish modern opinion presumes that national wealth is the sum-total of individual gains by persons and corporations, a sane view of economy treats the physical-economic rate of increase of the potential relative population-density of entire nations, in physical terms, per capita, and per square kilometer. Competent practice treats the net gains of human civilization as a whole, as the standard of performance by which the role of the physical performance of combined sovereign nation-states of the planet is measured.

Such is both the principled and the practical difference between a sane form of economic thought, which is premised on the dynamic outlook of Leibniz and his ancient Pythagorean and Platonic predecessors, and the inherently decadent, intrinsically incompetent, and essentially silly methods of neo-Cartesian/"Newtonian," mechanistic-statistical nonsense generally taught as "economics" today.

In a sane form of modern economy, money is an organized (*regulated!*) phenomenon, structured, by custom and by law, as President Franklin Roosevelt's reforms typify this, to prompt the flows of physical and services goods in proportions which conform to the objectives of a unitary commonwealth and its foreign partners. In this, the primary concern must be emphasis on the development of the mental-creative powers of the population as a whole, as I have defined "mental-creative" powers here, as in the earlier locations of my writings on this subject-matter.

The contrary view, is the viewpoint of usury, as in the imperial and related traditions, which includes the inherently imperialist view expressed as Anglo-Dutch Liberalism.

From the beginning of the U.S. republic, in the pre-1688 Seventeenth-Century development of the Massachusetts Bay Colony under the leadership of the Winthrops and the Mathers, the principle of "The Common Good" was expressed by the development of the individual and community for increase of the productive powers of labor per capita and per square kilometer. So, from the beginning of its emergence and later formation as a Federal Republic, the American System of political-economy has been the same implicitly deadly adversary of the intrinsically imperialist British, so-called "free trade" system of political-economy it was when President Franklin Roosevelt confronted his uncomfortable, reluctant ally Winston Churchill, on Britain's intent to continue imperialism during the post-war period, the same Churchill whose image sponsored those virtually treasonous policies of Harry S Truman whose impulses led in unleashing the impulses which are the chief source of every self-inflicted wound which the U.S.A. has suffered from the moment of the death of President Franklin Roosevelt, to the present date.

4. 'Fair Trade,' Not 'Free Trade'

The secret of competent economic policies by the U.S. government, has always been choosing "fair trade," as opposed to "free trade." The policy of "free trade," when continued for a decade or so, has always been, sooner or later, a disastrous outcome, as it has been the cause of an increasingly severe disaster throughout the recent thirty-five years. This requires a bit of explanation.

Therefore, at his point, I must shift, as briefly as tolerable, into a relatively autobiographical mode. Knowledge of what anyone has discovered, or merely acquired as an adopted outlook, must be explained, as it were by the author of that opinion, in autobiographical terms.

Real knowledge never occurs as an object *per se*. Pointing to an object of sense-perception, is never an act expressing knowledge as such: knowledge is never merely description of objects of sense-perception. Knowledge exists only in the form of the discovery of a



EIRNS/Steve Carr



World Bank/Tomas Senett

Moving production to cheap-labor countries, where infrastructure is lacking and carried out with primitive methods (such as the ditch-digging shown here in Sri Lanka), goes along with shutting down U.S. industrial production, and lowers the world's productivity as a whole.

principle which often governs an action which is expressed in terms of sense-perceptual experience, but which, itself, is not an object of sense-perception.

Kepler's discovery of a universal principle of gravitation, as he actually reports the relevant successive steps of investigation in, as a first step, his **Mysterium Cosmographicum** and, then, his next step, his **The New Astronomy**, is not an object of sense-perception, but the demonstration of a necessary existence of a principle of the universe which governs the relevant behavior of the class of objects considered. All true knowledge of principles, is of this nature. How the discoverer is able to report his or her experience of discovering a claimed principle, is the most crucial issue of scientific and related methods of argument: "You say that is true? Exactly what was the experience which led you to that conclusion?" Or, "You think you know something about economics; where and how did you experience that conclusion?"

The question to be answered is, therefore, posed to others, as to anyone who wishes to contest my conclusion: "How did you reach this conclusion, and from what point of reference in your personal experience, did this begin?"

Some highlights of that experience are perhaps sufficient for the purposes of both the writer and the reader on this present occasion.

My presently specific discoveries within the domain of the science of physical economy which are relevant to the issues at hand here, were set into motion during

early 1948, through study of a pre-publication, Paris edition of the reviewers' proof copy of Professor Norbert Wiener's **Cybernetics**. Wiener's outline of the cases of positive and negative feedback, was sufficiently entertaining to hold my interest in that book until the end; his misconception of human intelligence not only disgusted, but horrified me, as a worse than bestial view of the nature of mankind.

That reaction of mine was prompted not only by my "hands-on" familiarity with some features of the role of innovation in production technology, but, even more significantly, by my well-founded reaction of disgust, a decade earlier, with the axiomatic presumptions of any Euclidean geometry, a reaction which occurred at my first encounter with that feature of the secondary curriculum. These reactions, approximately a decade apart, were connected, for me, to my adoption of English translations from among the writings of a Gottfried Leibniz whom I had adopted, from about the age of fourteen, as that choice had been provided to me from my readings among the English, French, and German philosophers of the Seventeenth and Eighteenth centuries.

From 1948 onward, my intention to develop a systematic refutation of Wiener's "information theory" hoax was closely related in fact, to my focus upon two subjects, the matter of the notion of physical principle as the issue posed by Wiener's work, and the related issue of Classical irony in (especially) English-language poetry, drama, and prose. In this process, with

help of reference to the work of Kurt Gödel,² I encountered, and developed a related reaction against what appears to me still today as an implicitly autistic, other follower of the evil Bertrand Russell, John von Neumann and von Neumann's worse-than-bestial notion of "artificial intelligence." From closer study of his work, I have come to think of von Neumann as one who might have tagged a colleague, or, perhaps himself, as "It."

These explorations of mine converged, at the beginning of the 1950s upon, first, a significant but not entirely satisfactory experience with the work of Georg Cantor, and, in reaction, about 1952, to the flaw in Cantor, to turn back, in 1953, to reexamination of the work of Bernhard Riemann.³

The outcome of these experiences, and the connecting integument among them, was my own adoption of the standpoints of Leibniz and Riemann for my own version of a Leibnizian science of physical economy. My own view, thus formed, was obviously greatly influenced by the reflections of Leibniz's influence on the thinking of Alexander Hamilton's argument for the concept of the American System of political economy.

My orientation of today, has emphasized the development of the elements of a new generation of young adults, in promoting their own independent work in the realm of the crucial developments of European science since Thales and the Pythagoreans, a development I

now contemplate with gratifying results as a hopeful indication of the future in reach for the adult generations immediately ahead.

The crucial point developed in John Perkins' account of his experience as an "economic hit-man" for the likes of George P. Shultz, et al.,⁴ is that by inducing a targeted nation to incur the debt of development of a large infrastructure venture, without building up the producer sector of that nation, the nation can be bankrupted and looted by the relevant creditors engaged in such an "economic hit-man" form of swindle.

Similarly, just as investment in infrastructure elements, without relevant investment in modern modes of production, is a way of bankrupting a nation, so investment in cheap-labor employment for production of goods, without relevant infrastructural development, is a form of looting an economy. Similarly, investment in production by some part of an economy as a whole, while leaving the remainder in relatively impoverished conditions, has largely negative net effects.

So, in general, "outsourcing" to cheap-labor markets results in an ultimate net loss for the physical form of the world economy, as the U.S.A.'s exports of its production to nations with poorer people and less infrastructure, has ruined the U.S. economy, caused a skyrocketing of our balance-of-payments debt, and ruined the physical standard of living and per-capita physical output of our national economy. In the relatively shorter term, this has been viewed as a relative gain for the cheap-labor markets to which the exported industries have been delivered; however, the effects of a collapse of the U.S. financial system would not only unleash a sinking of the markets to which we had exported our industries, but, these effects would reveal the fact that "outsourcing" has caused a net decline of the world's productivity, per capita and per square kilometer, considered as a whole.

Another piece of popularized economic idiocy, "Just-in-Time" marketing, is to be considered in like fashion for its effects.

The general criticism to be made against this set of contemporary global practices, is of the same type, at root, as Gottfried Leibniz's derision for incompetence and related bungling of the claims to science by René

2. Cf. Kurt Gödel, "On Formally Undecidable Propositions of *Principia Mathematica* and Related Systems," (1931) in **Kurt Gödel Collected Works**, Vol. I, Fefermann et al., eds. (London: Oxford University Press, 1986), pp. 144-195. It should be noted, as a point of relevance, that Gödel spent the concluding years of his career at the Princeton Institute, where his notably relevant discussion partners featured the sympathetic figure of Albert Einstein, for as long as Einstein lived.

3. My hesitations on the subject of the work of Cantor during my 1952 studies of his work, were prompted chiefly by Bertrand Russell associate Philip Jourdain's 1915 translation: **Georg Cantor: Contributions to the Founding of the Theory of Transfinite Numbers**. On this subject, see **Georg Cantors gesammelte Abhandlungen mathematischen und philosophischen Inhalts**, Ernest Zermelo and Adolf Frankl, eds. (Berlin: Julius Springer, 1932) and **Georg Cantor Briefe**, Herbert Meschkowski and Winfried Nilson, eds. (Berlin: Springer, 1991). These sources demonstrate how Cantor was victimized by, not only the notorious Leopold Kronecker, but, more slyly, by one-time Lucifer cultist Rudolf Steiner and other representatives of the circles of Bertrand Russell. The induced insanity of the later Cantor shows clearly in the **Transfinite** pieces and his correspondence with B. Russell and Russell's circles. I did not know these other connections in 1952, but the smell in the pages of Jourdain's work had set my nose a-twitching.

4. John Perkins, **Confessions of an Economic Hit Man: How the U.S. Uses Globalization To Cheat Poor Countries Out of Trillions** (San Francisco: Berrett-Koehler, 2004).

Descartes.⁵ Leibniz referred directly to the Classical Greek conception of the Pythagoreans and Plato, *dynamis*, which Leibniz presented under the rubric of his general principle of modern physical science, dynamics, a term used to contrast the competent scientific method of Kepler, Fermat, himself, et al., to the bungling incompetence, for physical science, of the method of Descartes. This view, as expressed so by Leibniz, is the same conception, the same notion of *dynamics*, employed by Russia's V.I. Vernadsky's mid-1930s report on the principles of Biogeochemistry.⁶ This is the method of Leibniz carried forward from Kepler, Fermat, and Leibniz, by Carl F. Gauss, Henrik Abel, and Lejeune Dirichlet, into the concept of physical hypergeometries by Bernhard Riemann.

In competent physical-economic science, there are no Euclidean-like, *a priori* definitions, axioms, and postulates, but only universal physical principles defined as such by what Riemann represents, within his 1854 habilitation dissertation, as uniquely appropriate experiments. The operating of such physical principles within the functions of a physical economy, define the physical geometry of action within that system: that economic process.

The subject of physical-economic analysis, is the net effect of the application, or lack of application of those principles as measured in terms of entropy-versus-anti-entropy. The set of principles involved, when their relative ratios are quantized, defines a potential relative population-density: *the rate of increase, or decrease* of the quantitative value so determined, defines an indicated relative entropy or anti-entropy.

This means, in general, that investment in more advanced combinations of productive and infrastructural technologies, is the precondition for the continued existence of any economy in the long term, and the relative rate of change in direction in the short to medium term. What is also crucial, are the ratios among the principles represented, as the proper ratio of infrastructural to pro-



EIRNS/Stuart Lewis

The Bach choral tradition epitomizes progress in Classical art, as a marker of progress for all mankind. Here, the Thomanerchor—the choir of St. Thomas Church, Leipzig, which dates from Johann Sebastian Bach's time in the early 18th Century—sings in Washington, D.C. in 1998.

ductive development, under varying levels of technology, bears upon this.

Implied in this, is the evidence that the universe is characteristically anti-entropic, in the sense of proceeding from a relatively lower to higher state of organization. So, the development of the Solar planetary system, with its enlarged “periodic table” of elements and isotopes, represents a higher state of organization of the universe than the fast-spinning, solitary Sun from which that Solar System was generated. Or, restated: we have Heracleitus’ insistence that continuing change, rather than fixed forms of action, is the characteristic of the existence of our universe.

It is the “68ers”’ role in halting investment in scientific and technological progress in production and infrastructure, which best typifies the principal source of the collapse of the physical standard of output and average net income of the U.S.A. over the 1971-2006 interval to date.

This characteristic entropy of the economies of the Americas and Europe under the influence of the “68ers,” has a relevant theological correlative.

Reason in Art: Bach

Ever since my first startled hearing, in a replacement depot outside Calcutta, of a recorded performance by the greatest orchestral conductor of the Twentieth Century, Wilhelm Furtwängler, I have been increasingly aware of the crucial importance, for all great mu-

5. E.g., G.W. Leibniz, *Specimen Dynamicum*.

6. Cf. Lyndon H. LaRouche, Jr. “Vernadsky & Dirichlet’s Principle,” *EIR*, June 3, 2005.

sical composition and its performance, of the meaning of Furtwängler's reference to "performing between the notes."⁷

This notion of "performing between the notes," dates, in our explicit knowledge of the matter, from the Pythagorean conception of the musical *comma*. In the development of modern European musical culture, both methods of performance, such as singing, and composition, are traced, most emphatically, from the Florentine *bel canto* which one can witness as carved in stone within Florence's great Cathedral of Santa Maria del Fiore. The children sculpted as singing, are a perfect typification of the expression of the singers singing a recognizable composition in the *bel canto* mode. The implications of this *bel canto* training and use of the natural mode of human singing (and also literate speech) have been perfected and memorialized to the present date by Johann Sebastian Bach's creation of well-tempered counterpoint.

The principle involved in musical compositions following the strict Bach tradition of Haydn, Mozart, Beethoven, Schubert, Mendelssohn, Schumann, Brahms et al., has a direct correlation with the principles of composition and rendering of Classical poetry, of literate modes of speaking and of written speech. The principle of the *comma*, is implicitly expressed by comparing the challenge of performing a leading motet, **Jesu, meine Freude**, of Bach with the implications of a comparison of Bach's **The Art of the Fugue** with Beethoven's Opus 133 **Grosse Fuga**. To render the sung compositions with contrapuntal transparency of interacting voices, all great Classical musical compositions from Bach through Brahms, and beyond, reflect the central role of this principle of counterpoint, a principle which corresponds precisely to the Pythagorean *comma*.

These are the implications of the Classical musical

tradition from Pythagoras through the work of performing musicians in the same specific quality of tradition as Furtwängler. The contrary view, that of the admirers of Adorno, or the clockwork bandmaster tradition which Hermann Göring admired in the young von Karajan of the Nazi time, has the effect, and also the intention, of uprooting and smothering the essential spiritual function of the Classical musical tradition.

This issue in music, runs athwart the exact same role as the principle of composition in physical science. The significance of this quality of distinction, is the relationship between the function of the Pythagorean *comma* in music, and the ability to communicate what the poet Shelley identified as the power of receiving and imparting profound and impassioned conceptions of man and nature, as accomplished through the sovereign potential expressed as the powers uniquely shared by the Creator and the potentials of the individual human mind.

On this account, contrast the method of Bach and his successors to the embalmed-dead character of the rules of composition of a Rameau or Fux. The powers of the human mind which set the human individual apart from, and above the beasts, are associated, as I have already stressed repeatedly here thus far, with the notion associated with the way in which I have followed Kepler and Leibniz here with the complementarity of the "infinite" and "infinitesimal."

In this usage, "infinite" and "infinitesimal," are not the corpse-like stuff of formal-mathematical conceptions, but physical conceptions. "Infinite" is a metaphor for the universal principles of a finite universe; "infinitesimal" is a very lively metaphor for the encounter with the efficient effect of a universal principle in a local region of physical space-time. So, on this account, the notion of the complex domain as developed by Leibniz (i.e., the universal physical principle of least action) for the infinitesimal calculus, and the generalization of the same principle as Riemann's notion of physical hypergeometries.

Think, therefore, of the *comma* as an expression of such infinitesimals.

The substance of the matter addressed, thus, here, is that the distinction between what is truly Classical art, on the one side, and physical science, on the other, is that in such art, we are contemplating the underlying characteristics of the relevant social process. In physical science, the same quality of mental powers addresses the pre-biotic domain or Biosphere. With that

7. During the post-World War II times, the fraudulent rumor was spread, that Wilhelm Furtwängler was either a Nazi, or pro-Nazi. On the basis of this allegation, Furtwängler, a defender of targeted Jews, at significant risk to himself, and himself a political target of Hermann Göring, was replaced, early during the post-war period, by Göring's favorite band conductor, the Herbert von Karajan who, eyewitnesses among the orchestra's members recall as conducting by stop-watch. Furtwängler was targeted by the culturally depraved circles of the post-war Congress for Cultural Freedom, and related, pro-existentialist circles of Hannah Arendt, et al., who were typified by the wretched Dame Margaret Mead. The intention was to destroy competent musical performances and their repertoire in the interest of anti-humanist rubbish such as that promoted by Arendt's side-kick, the freakish Adorno.

said, the supposed enigma posed by the late C.P. Snow's "two cultures" paradox, vanishes. The common subject of truly Classical artistic media and physical science is man: the distinct ontology of the human mind, the mind of a creature made to express the intended likeness of the Creator.

Art in Trading

During the period of World War II, my father had returned, competence significantly refreshed by business management experience, to the footwear industry. Under those auspices, during a certain time immediately prior to my induction into war-time service, my father assigned me to certain duties in support of his function as technical consultant on certain manufacturing techniques to the Manchester, New Hampshire branch of the International Shoe manufacturing firm. One of the technological innovations which I encountered, and participated in assessing, was a new promotion by the Dupont firm, using color schemes in painting of machinery, to enhance the operative's performance and also personal safety. I was favorably impressed with what I observed as the success of that experiment.

With the widespread tendency to misunderstand the productive process, especially with the advent of the white-collar and kindred strata among the Baby Boomer generation to adulthood (or, some might prefer, "adulteration"), understanding of the broader role of innovations in product design and production process has been largely lost today. Anyone from my generation, or the earlier generation, who had been employed as a technical or management consultant in fields of product design and technology, was made aware of the importance of certain subtleties of the production and marketing processes which had a positive importance for the quality of the product and the productive process.

Today, under the influence of the post-1971-72 shift from a productive to a "post-industrial" economy, the former emphasis on the utility of the product has been displaced in favor of what are, in fact, dubious, but popular conceptions of marketing appeal. That is to stress the point, that a population, including business management strata, who have adapted to an irrational form of the general economic process, will be attracted, as we should have witnessed this for ourselves, by considerations as irrational, and, ultimately counterproductive, as the change in mission-orientation of the economy which sets the new direction in standards. If we

attended with as much passion for the quality of the ideas which govern producer and consumer behavior, as we claim to show for trends of popular taste in the matters of products and services, we would not have tolerated the increasing insanity of popular economic behavior during the recent thirty-five years.

The result of this pattern I have just identified summarily, is a loss of the relatively rational form of guiding sense of relative values which prevailed among managements, operatives, and also their families, during the decades prior to the 1968-1981 rise to power of the white-collar stratum of the "Baby Boomer" generation. There were thus, sharp changes, such as to increasing emphasis on food as a children's toy and human sexuality as virtually a marketable product on, or off the "shopping list" of implicitly taxable entertainments.

Three pieces of popular insanity illustrate the point: the first, urban and suburban development; the second, mass-transportation policy; the third, the Enron syndrome.

Take the case of Felix Rohatyn's post-industrial hoax, "Big MAC."

During the time of the great Cathedral towns, as cathedrals are typified by Chartres, the economic life of the surrounding territory was organized around such churches and their market-places. Putting momentarily to one side, the suicidal corruption of the cities of the *ultramontane* system's medieval Lombard League, and since the middle of Europe's Fifteenth-Century Renaissance, the urban center became the center of population within the towns and cities, and the agriculture of the adjoining countryside. The role of Brunelleschi in crafting the cupola of the Florence Cathedral of Santa Maria del Fiore, and the impact of Luca Pacioli and Leonardo da Vinci, typifies the function of the city-centered region, in developing the territory and population of that region as an engine of scientific, technological, and economic innovation and progress. Thus, France's great Louis XI bribed France's blackmailing adversaries of England, Burgundy, et al., but made a profit on the peaceful outcome of the bribery, through the promotion of innovation, around markets organized within France.

The modern American city based upon industry and commerce, and its functional relationship to the broader areas, remained the pivotal policy-factor in the rise of the United States to the world's most productive power, until phenomena highlighted by the case of the ruinous

effects of the wrecking job, called “Big MAC,” conducted by the picaresque financial ruffian Felix Rohatyn. Rohatyn did not begin the deindustrialization of the greater New York City and adjoining areas, but he produced the great sucking sound which produced the dysfunctionally gentrified parasite called New York City today: real people can scarcely afford to live there since Felix looted the place!

A different case, to similar ultimate effect, is to be seen in the threatened, self-inflicted doom of Loudoun County, Virginia. The idea of “development” as launched in that county, over objections of saner residents, during the early 1980s, has produced a situation of threatened doom called “suburbanization,” more or less typical of many entire regions of the United States. Consider the following points as an illustrative summary.

The county itself has incurred vast carrying costs in promoting a form of “development” which has depended chiefly on tax-rates which depended, in turn, on a soaring, virtual hyperinflation in nominal real-estate values. This expansion program has generated a massive increase in costs per square kilometer to the government and related functions of the county as a whole. Now, former Federal Reserve Chairman Alan Greenspan’s hyperinflationary financial-derivatives bubble, with its emphasis on raiding of the implicitly Federally subsidized mortgage-based-securities market, is in the process of reaching its popping phase. Mass evictions and related phenomena are on the immediate horizon, increasingly, now. What happens to the costs of maintaining the county, when the present tax-revenue base of that county, and comparable areas of so-called “development,” around the nation are taken into account?

The closing of the railway system, and the massive costs incurred by the commuter-related irrationalism of major highway systems for passenger and truck travel, have produced an insane and unnecessarily costly national transport system, relative to the rational development of the national territory as a whole around the modern form of rail, and superior form of magnetic-levitation transport of people and goods. The lunacy of “Just-in-Time” policies adds to the costly complexities



Michael Maddi

Among the trends in national policy which have brought the U.S. economy to the edge of national economic breakdown is the swindle of deregulation, epitomized by the now bankrupted Enron, whose headquarters in Houston is shown here.

of this system.

Enron, the great swindle associated with funding of the rise of the George W. Bush, Jr. Presidential campaign of 2000, represents a trend in national policy which has brought the U.S. economy to the edge of a general economic breakdown, even on that account alone. If we had not virtually destroyed the U.S. economy, and ruined the lives of most among our citizens, with an “outsourcing” policy, the lack of power, in respect to both quantity and quality, would have shut down much of our economy on that account alone.

As I have shown in sundry print publications and national and international webcasts, the world has entered

a phase at which the continued existence of civilized life on this planet now requires massive investments in nuclear-fission-powered desalination, and the onrushing realization of the benefits of controlled thermonuclear fusion for maintaining the supply of the quality of minerals needed for the world population trends of today.

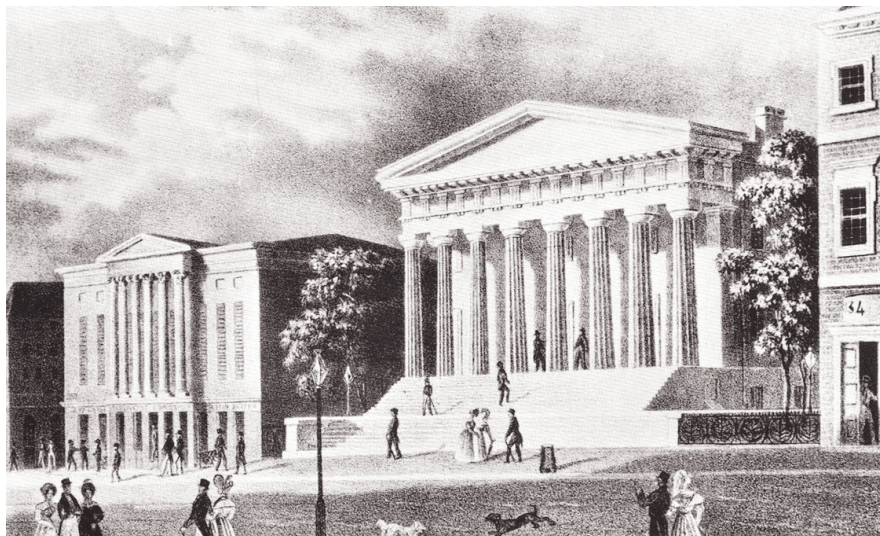
Deregulation is an economic name for mass economic insanity.

5. The Credit System

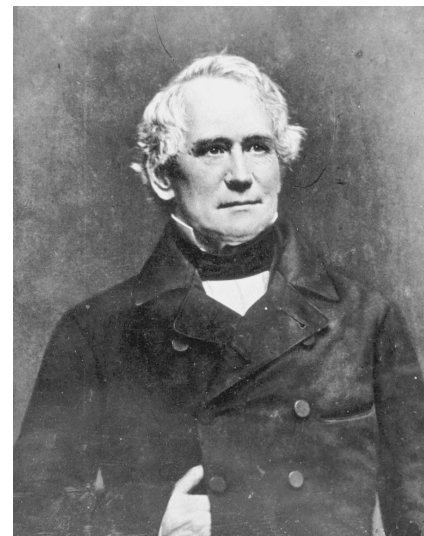
In 1837, the Land-Bank system which had been created under banker Martin van Buren’s puppet-President Andrew Jackson, crashed. By the time van Buren had become President of the U.S.A., by succeeding his puppet Jackson, van Buren reaped the whirlwind of financial disaster which he and Jackson had sown. In 1838, the leading economist of the U.S.A., Henry C. Carey, arguably, already, next to American System economist Friedrich List, the leading economist of the world, published his **The Credit System**.⁸

Martin van Buren was the New York banker sometimes rumored to be the son of bed-hopping, hyperactive traitor, and founder of the Bank of Manhattan,

8. Henry C. Carey, *The Credit System in France, Great Britain, and the United States* (Philadelphia: Carey, Lea and Blanchard, 1838). (Reprinted in Clifton, New Jersey: Augustus M. Kelley, 1974).



Historical Society of Pennsylvania



Library of Congress

One of the major hallmarks of the successful American System in the 19th Century was Nicholas Biddle's Second National Bank of the United States (shown here, in a lithograph by J.C. Wild). Abraham Lincoln's chief economic advisor, Henry C. Carey (right), was the chief defender of this national credit system.

Aaron Burr. At the very least, van Buren's role as successor of Burr as operating in enemy, British, interest, is a connection beyond honest dispute. British foreign office asset Burr, was a protégé of the Foreign Office's Jeremy Bentham, and had escaped being tried and convicted of treason because of a softness on the part of President Thomas Jefferson. Van Buren had engaged Jackson, the man who had conducted the virtual genocide against the Cherokee nation on behalf of what became the Confederacy's land-grabbers, and who had narrowly escaped charges for complicity in a treasonous plot by Burr. Such are the all too frequent gaps between official honor and actual perfidy in even our own national history, as with the added tinge of hypocrisy celebrated at some Jefferson-Jackson dinners.

Actually, President Franklin Roosevelt salvaged the honor of the Democratic Party, which is what the Party, if it has not lost its senses, will concentrate on choosing as its spiritual father today.

What Jackson had destroyed, at his patron van Buren's request, was the Second National Bank of the United States. Henry C. Carey's response to the Land-Bank Crisis created by Jackson's puppet van Buren, was Carey's effort to put some sense into public understanding of the ruin which Jackson and van Buren had wrought: just as the Democratic Party's capitulation to joining the Republican far-right wing of the late Professor Milton Friedman, et al., in the cults of "post-industrial" ideology, "free trade," and "globalization," had

contributed crucially to ruining the U.S.A. again, today.

Our republic faces a comparable, but worse problem of the same general origins today; the problem is merely typified by the outright lunacy and related incompetence of the 2001-2006 Bush Administration. Like Carey then, we must bring sense into the ruinous situation which the Bush-Cheney Administration has handed to us, for us to remedy, urgently, today.

In view of the prevalent lack of knowledge of the realities of American history in U.S. universities and elsewhere today, it is important to note that Carey, also well established for his **Principles of Economy**, was a leader in exposing the fraud of the argument, resonant to the present day among persons ignorant of the rudiments of economics, the delusion that the U.S. economy benefitted economically from slavery. Carey was, later, the leading figure of the U.S. in bringing about not only the Bismarck reforms in Germany, but was also the architect of the industrial development of Japan during the same period Carey was in Germany in connection with the Bismarck reforms. By that latter time, Carey was, beyond reasonable doubt, the leading and most influential economist of the world, and, thus, the bane of the existence of that British Prince of Wales, Edward Albert, who directed the preparations for launch of what is called World War I, as a "geopolitical scheme" for destroying his own foolish nephews, Germany's Kaiser Wilhelm II and Czar Nicholas II, in the course of bringing about the mutual ruin of the Ameri-

can System-influenced nations of Germany, Russia, and other developing economies of the Eurasian and American continents.

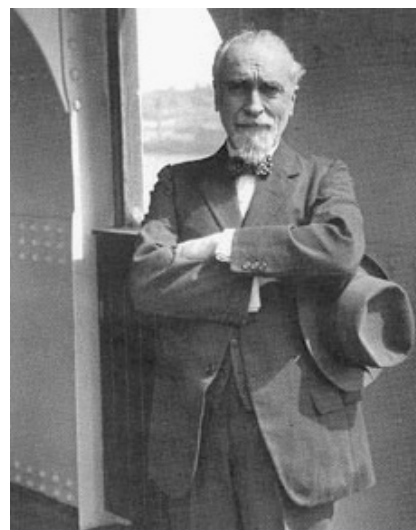
Through the corruption of the monarchy of Japan by the influence of Britain's "Lord of the Isles," Prince of Wales (and later King of England) Edward Albert, Japan launched the first of its 1894-1941 series of wars against the U.S.A. First, in the launching of the first Sino-Japanese War, then in the British-orchestrated Japan war against Russia of 1905, the conquest of Korea, Japan's alliance with Britain for World War I, and Japan's plotting, during the early 1920s, with London, for destruction of the naval power of the U.S.A., including Japan's intention, with its ally London of that time, to destroy the U.S. naval base at Pearl Harbor. In response to this, the U.S. political forces in the respective, personal Confederacy and Ku Klux Klan traditions of Theodore Roosevelt and Klan fanatic Woodrow Wilson, led the U.S.A., both in backing for Britain's launching of World War I, and in promoting the preparations for Britain's support for the emerging, post-Versailles fascist movements in continental Europe, and in opposing General Billy Mitchell's plan for defending against a known Anglo-Japan plan for the destruction of the U.S. Pearl Harbor base.

Meanwhile, during the 1920s, the U.S.A. was being set up for self-inflicted ruin under such successors as President Calvin Coolidge and Herbert Hoover on the Republican side of the aisles, and the opponents of what became Presidential contender Franklin Roosevelt on the side of the Democratic Party's leadership of that time. The U.S. Liberals of the 1920s and early 1930s, including the circles of modern Sophistry of Pragmatist John Dewey, the sometime patron of Sidney Hook, for a time, were solidly in sympathy with the British asset of the 1920s, Italy's "socialist" Benito Mussolini, and were, like most high-ranking Republican circles of our financier oligarchy, associated with financial London's choice of "national socialist" Adolf Hitler at the beginning of the 1930s.

The role of President Franklin Roosevelt and the patriots of Harry Hopkins' crew of military and other relevant professionals, saved the U.S.A. and the world



David Croll



Independent central banking systems, such as dominate Europe, eliminate the ability of nations to exercise national sovereignty in pursuit of progress. Here, the "central bank for central banks," the Bank for International Settlements; and Hitler-backer Montagu Norman, who was governor of the Bank of England.

from the intended Hell which the Anglo-Dutch Liberal sometime backers of Japan's series of Sino-Japanese wars and of Mussolini and Hitler had set into motion.

Franklin Roosevelt's election and leadership saved us from the evils thus intended against us.

However, with Franklin Roosevelt's death, matters were turned, immediately, for the worse, with the inauguration of a Harry S Truman who served implicitly in the Jackson-van Buren tradition. We still had patriotic heroes in those terrible times of the changes which have chiefly ruined us since Roosevelt's death. Nonetheless, Eisenhower represented the same patriotic tradition as the Harry Hopkins legacy and General Douglas MacArthur. President John F. Kennedy committed himself to return to the Franklin Roosevelt legacy—but, "they killed him," terrified Lyndon Johnson, and gave us Nixon and the Trilateral Commission to ruin us, as Britain's one-time imperial asset Japan had attacked Pearl Harbor before. There is a deeply rooted patriotic tradition, the Franklin Roosevelt legacy, rooted in our patriotic heroes, among us, still today; I have spent my post-World War II span of life hoping to see that patriotic tradition revived, and, perhaps to be able to contribute significantly to that end, myself.

The issue of the Credit System, as defended by Henry C. Carey on the occasion of the van Buren-created Land Panic of 1837, thus typifies the crux of the irreconcilable difference between the American and Anglo-Dutch systems of political-economy, that to the

present day. We should recognize the echoes of Carey's relevant writings of 1838 in President Franklin Roosevelt's rescue of the world from an imperial system under the Anglo-Dutch Liberals' creation, Adolf Hitler. We should, as a corollary of this, recognize that the most brutal adversaries of the Roosevelt tradition in U.S. social and political life today, such as the circles of fascism-polluted William F. Buckley, Jr.'s family, represent a persistence of the evil which President Franklin Roosevelt led in defeating during the course of World War II. It is only when Americans see the connection between the rise of fascism as the legacy of Teddy Roosevelt, Woodrow Wilson, and the policies reflected in the Coolidge and Hoover administrations, that we are likely to understand, and therefore defeat, that awful legacy of the 1920s and 1930s fascist movements which is, once again, the immediate chief threat to civilization globally today.

The problem can neither be understood, nor the menace defeated, unless we recognize the need to defend the Credit System, as defended by Alexander Hamilton, Henry C. Carey, Abraham Lincoln, and Franklin Roosevelt, against those forces of Anglo-Dutch Liberalism, still today, which have brought us the two so-called "World Wars" and Hitler menace of the recent last century. It is necessary to defend civilization against the forces of monetarist usury today, with the kind of determination mobilized for the defeat of Liberalism's creation of Hitler earlier. Otherwise, for nearly all of you, you, your family, your descendants, would have no happy future in the world emerging from the erupting world crises of today.

The Issue Is Usury

To speak plainly of necessary things, to both Liberals and their Marxist dupes alike: *the belief in some lawful value of money as such, is worse than lunacy; it is usury.* Karl Marx and the doctrines presented in his three volumes of **Capital** and the supplementary **Theories of Surplus Value**, are thoroughly polluted with this delusion which the British Foreign Office apparatus of Lord Palmerston's Foreign Office patron, Jeremy Bentham, and the Haileybury School, and the British Library's recording secretary of the combined Young Europe and Young America conspiracies, David Urquhart, had induced in a veritably brainwashed Marx.

It is the historical fact of the matter, that it is only from the inside of the British, intrinsically imperialist system of political-economy, that Marx's doctrines

have served to expose the true thinking and outcome of that British System, as this could be conceived, *as a system*, from inside that Anglo-Dutch Liberal system itself. Once we go beyond the confines of a world dominated by Anglo-Dutch imperialism, into the larger, and real world defined by the American System of political-economy, the further attempt to approach the problems internal to the Anglo-Dutch Liberal system from the standpoint of Marx himself, leads to confusion, and therefore disaster, as was faithfully demonstrated in my 1983 forewarning that Soviet General Secretary Andropov's rejection of President Reagan's proffer of the SDI had ensured the collapse of the Soviet Union, as I said then, during the early months of 1983, "within about five years."

What brings about even worse failures than the errors of Marxist theory on this account, would be, as we have seen since 1989, the attempt to rescue Russia from Marx, by tendencies toward embracing the mother of all evil, the model of that British imperial system which had been the mother of all of Marx's own principal follies.

As I have emphasized earlier, *money-systems* as defined in today's prevalent theory and practice, are products of what is termed either "*imperialism*," or known by the generic name of "*the oligarchical model*" which has been the dominant form of morally corrupt social systems since the Delphi Cult of the Pythian Apollo against which Socrates and Plato fought. The most typical feature of all of these systems in combined ancient, medieval, and modern history of globally extended European civilization, has been the practice of *usury*.

The expressions of systems of usury include the formal empires of Rome and Byzantium, but also include the principal successors of those formal empires, the system of Norman chivalry and Venetian usury, known as the *ultramontane* system, and *the Anglo-Dutch Liberal system* which dominates the world as a whole still today. The only globally significant modern alternative, as a model, to present world domination by the Anglo-Dutch Liberal form of virtually an imperial world system of supranational government, has been the anti-Anglo-Dutch Liberal system which was developed in what became our U.S. Constitutional republic.

The essential systemic difference between the Anglo-Dutch Liberal and American System of political-economy, has been the sovereign control of utterance and circulation of currency, under the American System of political-economy, as opposed to the intrinsic

cally imperialist Anglo-Dutch Liberal system of reign over banking practices of nations by so-called “independent central banking systems.” Any government which submits to control of its practices by consent of a so-called “independent central banking system,” has no true sovereignty as a nation, as a people. All governments (and their nations) which submit to such a system of control by “independent central banking systems,” are de facto colonies of an Anglo-Dutch Liberal world empire, and dwell, thus, today, under the reign of a tyranny of global usury, as typified by the rampaging “hedge fund” and related swindles perpetrated under the reign of hoaxster Alan Greenspan as nominal head of the U.S. Federal Reserve System. Therefore, when any public figure says, he supports that Federal Reserve System and what it has come to represent in practice, I must say, “Surely you are joking,” a very sick, sick, sick joke.

Thus, the institution of the Bretton Woods system of fixed-exchange-rates, which emerged from the U.S. reforms under President Franklin Roosevelt, was a fruit of the U.S. victory in leading the rescue of the world from the Adolf Hitler tyranny which the Anglo-Dutch Liberal cabals, and their French Synarchist accomplices had brought to the verge of a long-reign world empire.

Money has no intrinsic value. No system of money has intrinsic value. Economic value is essentially physical value. This value reposes not in physical objects as such, but in the rate of increased power of society over nature, per capita and per square kilometer; as this gain is generated through promotion of the development of the processes of physical production to higher states of productivity, as per capita and per square kilometer of the total territory of, respectively, the nation and the world.

To accomplish that specified result, the primary need is for a form of development of the physical potential of the territory and its people, which results in constantly higher levels of physical productivity, per capita and per square kilometer. Once that obligation is accepted as a matter of reigning long-range policy, political-economy is confronted by the fact that the elementary root of progress of society as a whole, is the development of the sovereign form of the creative mental powers of the individual. Hence, progress must be organized, but the form of organization must be attuned to the source of all progress, which lies within the development of scientific and Classical artistic ex-

pressions of development of the mental powers and mission-orientation of the sovereign individual personality.

To organize a society of such developing individuals for common progress of the powers of the society over nature, it is necessary to create a regulated money-system, which is regulated in a way which deters all deviations from the intended goal of development of the productive powers of the society as a whole.

Since, for example, the success of modern forms of society, has been demonstrated to depend upon investing about half of the total expenditure of society in promoting improvements, per capita and per square kilometer, in the basic economic infrastructure of the society as a whole, a system of national creation of money-credit is required to stimulate the growth of infrastructure-building, which will, in turn, stimulate the scale, intensity, and productive power of the society as a whole through private, personal initiative.

On that account, it is the prudent side of the tradition of the U.S.A., among other relatively most successful nations in their best periods, to emphasize closely-held enterprises, rather than giant corporations, especially predatory giant financier-controlled corporations, in the development of local communities in a balanced way. We do not ignore the need for some giant enterprises, but they must be controlled such that they serve as partners, rather than predators, in respect to the common welfare of the nation and its people as a whole.

To these ends, as Carey details some of this in his referenced 1838 **The Credit System**, prudent nations join in creating and maintaining a national credit system of the type implicit in the reports to the U.S. Congress by our republic’s first Treasury Secretary, Alexander Hamilton.

Those reforms, back to the American System, are the only hope for, not only our U.S.A., but the rescue of the nations of the world from the great, global financial panic at the verge of general eruption now.

6. A Planet of Nation-States

Philo of Alexandria refuted the followers of the Sophist Aristotle, and also Aristotle’s follower Euclid, by insisting that the Creator of the universe did not render himself impotent by the act of Creation. So, as our once-solitary Sun generated the development of a higher form of existence, our Solar System, the actual

principle of perfection operating in the finite universe of Kepler, Leibniz, Riemann, and Albert Einstein, is expressed by the overreaching power of processes which are characteristically anti-entropic: proceeding from relatively more primitive, lower, states of existence, to higher forms.

This power creativity, is the intrinsically anti-entropic universal principle of Creation expressed uniquely, among living creatures, as the distinction of the human individual from the beasts; it is, therefore, naturally expressed in the development of society, when this development actually occurs, as higher states of existence.

However, it must not be overlooked, mankind's progress on this account is not without complications.

Thus, as I pointed out as the thematic feature of a recent international webcast broadcast from Berlin, the world has now entered the condition, under which civilized life can not continue to exist without a massive increase in the development of nuclear fission as a principal source of power among nations, and that that development would not be sufficient, without a radical upshift into the domain of controlled thermonuclear-fusion processes. In the first instance, there is no practical solution for the drawn-down of fresh-water resources without massive use of nuclear power, as this is imperative in Southwest Asia, and India, for example. In the second instance, the management of the natural resources available within the domain of the Biosphere can not be provided without development of thermonuclear-fusion technologies over the generation immediately ahead.

At the same time, we have entered, similarly, into a global domain in which the policies of warfare leading into the so-called World War I and World War II, are no longer feasible. Military action as a means of defense against actual assault, is tolerable still, and might be necessary, but everything which smells of the pro-satanic rantings of a bestial Thomas Hobbes or the like, can absolutely not be tolerated any longer. Cooperation, not conflict must be the basis for relations among the sovereign nation-states which must compose the entirety of man's affairs on this planet, and beyond.

The worst approach to the challenges of our time, would be toleration of continued drift into that new "Tower of Babel (i.e., 'babble')" represented by the pathetic imperialist vanity of so-called "globalization." The functional distinction of man from "beast" and from slave, alike, is the expression of those processes of irony which are the site of the human creativity which

distinguishes mankind absolutely from beasts. This process of non-literal irony, which is characteristic of great Classical modes in prose, poetry, music, drama, and physical-scientific discovery, is the functional distinction of human behavior from beasts. This function of Classical irony, as typified by the role of the *comma* in the musical principles of Pythagoras and J.S. Bach, is the aspect of language, as emphasized in Percy Shelley's "In Defence of Poetry," which distinguishes a civilized form of culture of the sharers of a common language from a humanity degraded to the brutishness of a literal dictionary type of meaning.

If it were our intention to bring the peoples of the world upward in their cultural development, to the degree that scientific and artistic progress demand, then we must promote arrangements in sovereignties which promote the uplifting of the realized cognitive potential of virtually all strata within each society. Only thus, can the soul of the people of one language-keyed culture speak to the soul of the others.

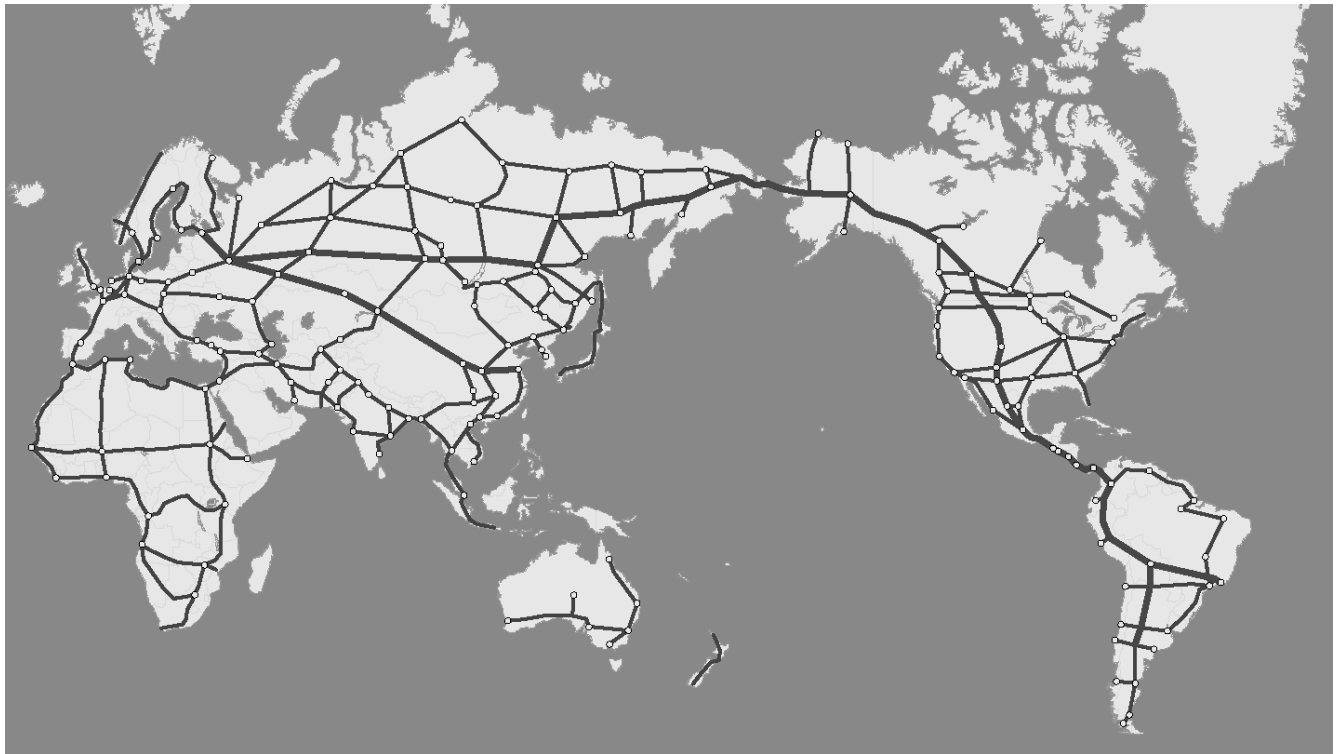
So, for practical reasons of science-driven technological progress, and for the sake of promoting the relations among the souls, rather than the dictionaries read at grammarians' funerals, of men and women of differing cultural strands, we must finally learn to live together as a community of respectively sovereign nations, cooperating in those great projects of today, such as projects associated with nuclear fission and thermonuclear fusion, which represent, for today, the leading, current objectives to be defined, and preferred as the currently "common aims of mankind."

To that end we require a common, planetary system of respectively sovereign nation-states, united by certain common aims for the half-century or more ahead.

The organization of such a community of cooperation, demands the resurrection of what is, in principle, the model of the Bretton Woods, fixed-exchange-rate system launched by U.S. President Franklin Roosevelt.

The global economic recovery from the folly of the past thirty-five years, requires a vast investment, with initial great emphasis on capital-intensive forms of technological progress in modern basic economic infrastructure. These projects and related programs will be the means of transforming the conditions of life and work of vast tracts of this planet, to the effect of great increases in the physical output, per capita, and per square kilometer of the planet as a whole. The emphasis will be, at least to a relatively large degree, re-

FIGURE 2



EIRNS, from a sketch by H.A. Cooper

Nothing epitomizes the mission for collaboration among sovereign nation-states, which must be fostered, better than the Eurasian Land-Bridge project, which has been promoted for more than 15 years by the LaRouche movement. Here, the design for the Eurasian Land-Bridge extends into the Americas.

vitalizing the parts of the world, as in the Americas and Europe, which have been rotted out by the post-industrial and related lunacies of U.S. and other policy-trends since 1971. We must debride the formally relatively developed economies of the moral depravity of “post-industrial” madresses, and commit those nations to mobilization of their potential contributions to capital-intensive scientific and technological progress in their own practice, that they might also make long-term contributions to uplifting the poorer regions of the world, as in Asia and Africa.

For this mission, we require an international, fixed-exchange-rate monetary system which is akin in essential respects to Franklin Roosevelt’s launching of the fixed-exchange-rate Bretton Woods system. This requires fixed prime interest-rates of between not more than 1-2% simple interest per annum, for long-term credit largely advanced to nations over treaty-organization-based agreements of a quarter- to half-century maturities.

This requires, in turn, an end to the practice of “free

trade” and return to the “fair trade” system developed in fair approximation under Franklin Roosevelt, and under succeeding measures launched among nations until the aftermath of the assassination of U.S. President John F. Kennedy.

This requires, also, agreements on leading technological goals of development, as the implications of greatly extended use of nuclear fission, and ensuing development of thermonuclear-fusion applications imply.

In this, we of the U.S.A., on the condition that we resurrect that Franklin Roosevelt legacy which expresses all of the good things about our existence since the colonization of Massachusetts, must take the lead in this. We must understand, that our included purpose must be to uproot, as gently as tolerable, but as rapidly and extensively as needed, the last vestiges of the oligarchical tradition from this planet, such that the kind of evil which now grips the planetary relations of today, must never return to threaten the very existence of civilization again, as it does today.

SUBSCRIBE TO

EIR

Executive Intelligence Review
EIR Online

EIR

Executive Intelligence Review
October 31, 2014 Vol. 41 No. 43 www.larouchepub.com \$10.00

LaRouchePAC Issues Emergency War Plan Against Ebola
Asian Investment Bank Will Finance Great Projects
Putin Speaks the Truth about NATO War Provocations

**The New Silk Road: Mankind
Is the Only Creative Species!**



EIR Online gives subscribers one of the most valuable publications for policymakers—the weekly journal that has established Lyndon LaRouche as the most authoritative economic forecaster in the world today. Through this publication and the sharp interventions of the LaRouche Movement, we are changing politics worldwide, day by day.

EIR Online includes the entire magazine in PDF form, plus up-to-the-minute world news.

EIR DAILY ALERT SERVICE

EIR's new Daily Alert Service provides critical news updates and analysis, based on EIR's 40-year unparalleled track record in covering global developments.



SUBSCRIBE (e-mail address must be provided.)

EIR Online

- ☐ **\$360** for one year
- ☐ **\$180** for six months
- ☐ **\$120** for four months
- ☐ **\$90** for three months
- ☐ **\$60** for two months

EIR DAILY ALERT SERVICE

- \$100** one month (introductory)
- \$600** six months
- \$1,200** one year (includes EIR Online)

For mobile users, EIR and
EIR Daily Alert Service
are available in html

Name _____

Company _____

Address _____

City _____ State _____ Zip _____ Country _____

Phone (_____) _____

E-mail _____

I enclose \$ _____ check or money order

Make checks payable to

EIR News Service Inc.

P.O. Box 17390, Washington, D.C. 20041-0390

Please charge my ☐ MasterCard ☐ Visa
☐ Discover ☐ Am Ex

Card Number _____

Signature _____

Expiration Date _____

EIR can be reached at: **www.larouchepub.com/eiw**

e-mail: **fulfillment@larouchepub.com** Call **1-800-278-3135** (toll-free)