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A New Bretton Woods of Sovereign Nations



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A New Bretton Woods of Sovereign Nations

Cover This Week

The twin cooling towers and reactor containment buildings of the Tennessee Valley Authority's Sequoyah Nuclear Plant, on the Tennessee River north of Chattanooga, Tennessee.



CC/Photorush

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I. Why We Fight

Concerning Kamala: Obama in a Skirt

by Barbara Boyd

Aug. 14—The popular satirical site, *The Babylon Bee*, is spot-on concerning Joe Biden’s VP pick. They [write](#):

In a tearful “thank-you” to Joe Biden this week, Kamala Harris expressed how deeply humbled she was to have been chosen for VP based solely on her race and her gender. According to sources in the Democrat Party, Harris has both the required number of chromosomes in her cells, and also the right amount of melanin in the epidermis that protects her internal organs. “My woman-ness and my black-ness are by far my two best qualities,” said Harris. “As it turns out, I’ve been qualified to run for VP since birth!”

Joe Biden is senile, and like some aging former Soviet dictator, is being endlessly propped up, via his scripted appearances from his Delaware basement, in the mad quest to throw Donald Trump out of the presidency, no matter what. Whether this act can continue through one term, in which the President is trotted out occasionally while technocrats run the show, is an open question. Thus, Kamala is now the presumptive president-in-waiting.

Already, those who are wise to this artificial personality have seen that raging narcissistic ambition and sophism are her controlling features. She said, during her presidential run, that Joe Biden was probably a sexual predator. She said, during her presidential run,



Gage Skidmore

U.S. Senator Kamala Harris, the presumptive President-in-waiting for the Democrat Party.

Below, Joe Biden announces his choice of Kamala Harris to be his running mate for President, August 12, 2020.



C-SPAN

that Joe Biden was an unrepentant racist. Yet, there she is, in the vice-presidential announcement, waxing all tearful about the wonder of joining Biden’s “family.” “Phony,” tweeted Donald Trump, to the outrage of RESIST.

Harris explains her former take on Joe Biden as a



Gage Skidmore

U.S. Congresswoman Tulsi Gabbard showed Harris was a fake.

racist and sexual predator as simply “positions” taken in a “debate.” Thus, in her mind, defense of Biden now is probably like the mindset of a defense lawyer faced with defending a horrible criminal, or, in Biden’s case, a horribly corrupt former Senator gone senile. It’s not, by the way, what moral defense lawyers do, performing an advocate’s role in the adversarial search for truth. It’s what other defense lawyers do, purely for the money and the perverse and vicarious pleasure of putting something over on “the system.”

Tulsi Gabbard is widely credited with destroying Harris’ presidential candidacy by demonstrating that she was a fake, incapable of responding to an attack based on her actual career and morals as a prosecutor. You can watch that takedown [here](#). Now, Kamala is all about Black Lives Matter, endorsing the riots which have eviscerated our nation’s police forces and destroyed whole sections of our cities. This, she apparently realized, was the necessary [costume change](#) for her future in the increasingly insane and Jacobin Democratic Party. She always has been a radical environmentalist, leading the charge in the U.S. Senate for the Green New Deal which will completely deindustrialize the country.

Harris’ rise in the Democratic Party in California was a completely elite-sponsored affair, scripted, just like Barack Obama’s rise to national prominence. She

assiduously courted and was courted by the richest folks in Pacific Heights. It is the combination of San Francisco old money and the nouveau riche billionaires of Silicon Valley who have sponsored, funded, and controlled this chameleon throughout her career. By September 2019, Harris had attracted more billionaires to support her presidential campaign than any other candidate—47, according to a [survey](#) by *Forbes*.

The tech elite have always figured big throughout Harris’ political career and some speculate that the pick of Harris was necessary to secure their money for Biden’s run. Both the tech sponsorship of Harris’ entire career and their lack of enthusiasm for Sleepy Joe are well documented. *Venturebeat* [wrote](#) about the Valley’s sponsorship of Kamala back in 2015, *Vox* supplemented this on August 11 with an [account](#) of the Valley’s total lack of enthusiasm for Biden.

With respect to San Francisco old money, for those who don’t know, the zip codes in which Harris made a second home feature the gated places from which



CC/Tony Webster

Kamala Harris has endorsed the riots that have eviscerated the police and destroyed entire sections of our cities. Shown is the interior of a grocery store in Minneapolis, following violent protests, property damage, and looting in the wake of the police killing of George Floyd on May 25, 2020.

Nancy Pelosi and Diane Feinstein tell the rest of us how to live. Claiming to be a child of working- and middle-class Oakland, Harris’ appeal to them is like that of Barack Obama to Joe Biden. Biden famously said in 2007: “I mean, you got the first mainstream African-American who is articulate and bright and clean and a nice-looking guy. I mean, that’s a storybook,

man.” So cringe-worthy was Harris’ social climb that it even made the [pages](#) of *Politico Magazine* for early damage control purposes, putting it in the softest light possible.

Harris’ father, Donald, is Jamaican by birth and a retired professor of economics at Stanford. Harris’ parents divorced after seven years of marriage and Harris was raised by her mother, an India-born and very significant cancer researcher who died in 2009.

Donald Harris wrote an article for *Jamaica Global* in September 2018, proudly discussing his Jamaican roots and noting that he was a direct descendent of Hamilton Brown, a famous Jamaican plantation owner and slaveholder. This, of course, has set the Right’s hair on fire while the Left, in the form of genealogical researchers, have engaged in a frenzied effort to debunk Donald Harris’ own claims about his heritage.

Donald Harris also directly criticized his daughter’s campaign embrace of pot. She stated she had to be for legalization because of her Jamaican heritage. Donald Harris’ response was quick and brutal. In a statement to *Jamaica Global Online* he said,

My dear departed grandmothers (whose extraordinary legacy I described in a recent essay on this website), as well as my deceased parents, must be turning in their grave right now to see their family’s name, reputation and proud Jamaican identity being connected, in any way, jokingly or not, with the fraudulent stereotype of a pot-smoking joy seeker and in the pursuit of identity politics. Speaking for myself and my immediate Jamaican family, we wish to categorically dissociate ourselves from this travesty.

So, history appears to be repeating itself, both as tragedy and as farce. Can white guilt and misplaced black pride propel another empty, easily manipulated persona into the presidency, after enthusiastic sponsorship by the modern British Empire, including their satraps in Silicon Valley and Wall Street? That, indeed, now becomes a question, particularly as our inner cities burn and black people are shot in huge numbers every weekend, not by white cops, but by criminals and doped-up gangsters, all in the name of “Black Lives Matter.”

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**War Drive Toward Armageddon,
Or a New Paradigm Among Sovereign Nations
United by the Common Aims of Mankind?**

We face not only the increasing danger of a new Cold War, but the danger that the unthinkable might truly happen: that a third world war, this time thermonuclear, could break out. We are at the end of an epoch.

To escape from the combined strategic, economic, and pandemic dangers, our deliberation at this conference will be critical.

The full prospectus and RSVP information is available [here](#).

What, After All, Is the Coup Against Trump? Sitrep: USA, August 17, 2020

by Barbara Boyd

In rhetoric, the term, “bathos,” signifies false pathos. “Pathos,” as defined by Plato, is a sophistical appeal to the emotions, rather than arguments based on the search for truth. In “bathos,” this appeal becomes so crude that it is mawkish. It is abruptly so vulgar that it is almost comical. As we head into the Democratic Party’s virtual convention this week, that term, “bathos,” jumps to mind.

In prime time, the reality of the social carnage these Democrats have wrought over the past four years is supposed to disappear, washed away by the lofty rhetoric of Michele Obama and Kamala Harris telling us

thing concerning peaceful protests and the social justice revolution now allegedly occurring in our country. You see, nothing, but nothing will be allowed to interrupt the flow of bathos and sophism, except, perhaps, the technical incompetence of boomers attempting, yet again, to conquer the internet.

The Green New Deal, open borders, decriminalization of practically any and all behavior, Medicare for All, men competing in women’s sports based on their new-found freedom from biological fate, dismantling the police, the actual *adopted* Biden/Harris platform, are not scheduled for any heavy treatment. That dein-



Gage Skidmore



Gage Skidmore

The identity politics and fake “caring” expressed by Michelle Obama and Kamala Harris is no substitute for the reality of the deindustrialization, loss of jobs, and spread of opiates that voters rejected in 2016.

how, through them, America has triumphed over its “original sins” of racism and sexism. Any reference in this affair to the simple fact that slavery was a European and specifically British imposition on the young United States, a disease aimed at crippling the new nation, will be censored, the proponent’s social media accounts cancelled.

The smoking ruins of downtown Minneapolis and other areas where black and immigrant businesses have been burned to the ground and trashed will not grace your screen. The most you will hear about this is some-

dustrializing and dystopic scheme, would, if implemented, mean the end of the United States as we know it. No, the actual platform will not really be discussed, except, perhaps, in passing, by Bernie Sanders.

Instead, the main theme will consist of 18 varieties of demonization of Donald Trump coupled with a lot of talk about “empathy.” Driven mad by the information warfare operation the Democrats have run against Donald Trump for four years now, suburban housewives, the professional classes, minorities, and enraged youth are the primary audience for this pretend Nurem-

berg rally choreographed from dozens of home “studios” redone for Zoom. And the “empathy?” Well, that’s just for balance. It’s the same type of “empathy” that Bill Clinton sold you on when he told you how he “felt your pain” as your job disappeared south of the border or across the ocean.

Barack Obama will speak in prime time Wednesday, the same night as vice-presidential nominee Kamala Harris. You are supposed to see that they are the same thing, that gauzy “hope and change” thing that didn’t work out too well the first time America bought it, the last time around. In fact, Obama’s failed presidency was outright perverse, a supreme act of fakery performed against a backdrop of suffering, deprivation, and pain inflicted on this nation’s lower classes by our Anglophilic elites stretching back centuries. Obama lied to millions that things were going to be better, if you only suspended your brain and believed.

Lyndon LaRouche saw what America’s perpetual political romantics fought so hard to deny. This was a British imperial product, a sophist wordsmith of color,

ingly cartelized, including the entire agricultural sector. The middle class disappeared in most cities. The bubble which had caused the collapse was grown again at a vastly expanded scale. Entire former “professions,” like medicine and healthcare, were financialized when “Obamacare” bailed out Wall Street’s failed insurance giants in the wake of 2008. The underemployed and unemployed population was targeted with opioids. Suicide became rampant.

There were all sorts of programs to ameliorate racism, bad policing, homelessness, systemic inequality, drug use and addiction, and violence. None of them worked because they weren’t designed to. They were consoling and illusory band aids in a post-industrial society where the rich were intended to get richer and the poor were simply depopulated, physically and/or mentally, by one means or another.

His primary job, as Obama put it, was to protect Wall Street from the pitchforks of the population in the wake of the 2008 collapse. To accomplish this, he ramped up the national security surveillance state em-



U.S. Army/Lorenzo Ware



LaRouche PAC

Hated by Americans, the endless wars in Libya, the Middle East and Afghanistan were only one ugly feature of the Obama Administration. At left, a U.S. soldier in West Paktika Province, Afghanistan, Aug. 23, 2010. On the right, Obama, portrayed with the moustache he deserved.

packaged for a certain moment in our history. That is why LaRouche put a moustache on Obama—reminiscent of a similar fascist force in world history—very, very early on. LaRouche caught hell, as usual, for his precocity.

A Brief Reminder About the First Obama Administration

Obama and Biden presided over an economy which never recovered from the 2008 collapse. It was increas-

played in the wake of 9/11 by George Bush and Dick Cheney. It aims at complete population control through censorship and soft totalitarian surveillance. Predictive behavioral analysis, information warfare based on it, and intervention psyops and provocations, came to the forefront as methods of social control, using social media, video games, and deviant cultural movements to produce the required results.

Obama, on Tuesday afternoons, engaged in drone kill sessions in which he ordered the assassination of

alleged terrorists across the world, using baseball card descriptions provided by his mentor, the CIA's John Brennan. Wars against Syria, Libya, and the people of Ukraine were undertaken and executed, utilizing terrorists and neo-Nazis as the mercenaries who carried out genocidal pogroms against targeted populations. It set off a human wave of migration and suffering from Northern Africa, not seen in such magnitudes since the Middle Ages. The war in Afghanistan, largely a massive training ground for the military's hybrid warfare operations and a protection racket for the world's opium trade, continued. Such was Obama's gambit of "leading from behind."

Why We Fight: The Decisive Battle Is Now

This was their picture of the United States as it was supposed to continue, in 2016, with the ascension of

D.C. political Swamp he vowed to drain.

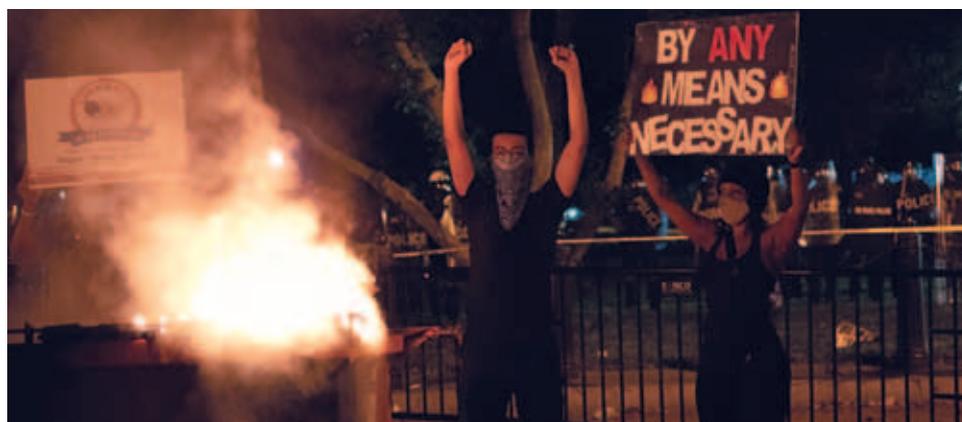
We have been fighting a very real war in the United States against an insurrection determined to remove the President ever since November 8, 2016. That war has been brutal, as this President, like Lincoln and like Roosevelt, has refused to accede to the forces of sedition, consisting of the oligarchs of the City of London, Wall Street, and Brussels, and their associated intelligence agencies, information warfare mass media allies, foundations, and the synthetic political movements they foster and spin.

In the course of their desperate campaign to remove Trump, much has been revealed about the actual institutions and persons who have been used since August of 1971, to convince the American people to put on chains and accept their role as a declining power in the globalist system managed from London and other European financial capitals.

As the result of the fight waged by Donald Trump and his allies and those who have fought for the Constitution, regardless of their personal political preferences, the traitors now stand extremely exposed; their plots against the Presidency are out in the open in all their gory details. But John Durham and Bill Barr can be forced to take on the whole corrupt mess if and only if Trump wins the election and by a significant

margin. And, if this happens, the American Revolution can be reclaimed and won again. On the other hand, if the Obama/Harris/Biden ticket wins—Obama/Harris/Biden is what it really is—then this war will have been lost, along with the Republic.

Hence, in this last round of the coup, our cities burn and large-scale violence is common as people of color are killed in large numbers by people of color every single weekend. Police have abandoned whole areas, fearing attack. Many are resigning. Children spanning the ripe ages of 14-24, brainwashed by social media and video games, are the recruits to the new terrorist, "off the pigs," Youth Liberation Front formations emerging in Portland, Seattle, and other cities. And they vow the abolition of capitalism along with "the United States of America."



CC/Rosa Pineda

The Biden/Harris campaign feeds on the rioting, violence, and destruction of America's cities. Shown are anarchist protesters in Lafayette Square, Washington, D.C., May 30, 2020.

Hillary Clinton to the presidency, along with her plan to confront Russia and China—militarily, if necessary—based upon General Joseph Dunford's emergent National Defense Strategy. The United States was to continue its managed decline, its absorption by the world's globalist financial system, while maintaining its forward bases throughout the world and acting as the globalists' gendarme, its mercenary killer force. That was all rudely interrupted by the American people and Donald Trump, who chose to fight it.

None of this, of course, will be told at the Democratic Convention. Again, the mood will be "empathetic," a quality this President, who has been in a knife fight for his life from the moment he declared his candidacy, is said to "totally lack." This knife fight involves both the inner circle which surrounded him, and the

Local officials, installed through the auspices of George Soros, the Democracy Alliance of Silicon Valley billionaires, and Mike Bloomberg and his Wall Street friends, refuse to prosecute the violence. Assault on a police officer is now a “misdemeanor” offense in RESIST cities. Criminals are freed, following arrest, without bail or detention. In Seattle, the City Council followed Minneapolis and New York City in defunding or significantly cutting its police department, freezing new hiring, and firing more recently hired and highly trained cops. That forced the resignation of the police chief, Carmen Best, the first female African-American chief in the city’s history, driven from office on the specious claim that disbanding the police advances black equality.

Determined to use COVID-19 as a singular weapon against Trump, blaming him for every death which has occurred along with his deplorable “heathen” and “anarchic” supporters, Congressional Democrats have refused to negotiate an immediate second economic relief package which does not include a bailout of the cities they have run into the ground, and which are erupting in riots against the President—riots assisted by the very officials demanding the bailouts. Tax the rich? Trump must do it, the Democrats clamor, but, Andrew Cuomo simply can’t be asked to even consider it. Their gamble is that Trump’s executive order relief package will not be enough, and that the desperate multitudes will blame the President rather than Congress.

They have also opened a new fake news front this mid-August, claiming that Trump is deliberately tearing down the Post Office in order to suppress mail-in voting. They are now demanding billions of dollars in new funding for the Post Office as an additional price for providing emergency economic aid to the unemployed and Main Street. Mail-in voting, of course, presents a huge opportunity for fraud and for uncertainty regarding the results of this most consequential election—an election which will take place for the first time in history amidst a pandemic and a full-blown insurrection.

While five states—Hawaii, Washington, Oregon, Colorado, and Utah—have used mail-in voting for years without major incidents of fraud, other states are just now gearing up to do this based on COVID-19, in the shortest of preparation times. In New York’s 12th Congressional District, almost 20% of the mail-in absentee ballots ended up being disqualified and tossed in the tight Democratic party primary race between

incumbent Carolyn Maloney and challenger Suraj Patel. The race was finally called six weeks after the election, with ballots still being challenged and counted. The Post Office has warned that if every state adopts this procedure, it may simply overwhelm the present capacity of the postal system, resulting in late results.

Now that the establishment Democratic and Republican Party elites have significantly divided the country in their quest to remove Trump, and trashed and deprecated the judiciary and the Congress, an [article](#) in *The Spectator* magazine of August 6th highlights how they would like all of this to end. They did a tabletop exercise concerning the election results. The fake news scenario in which Trump is defeated and refuses to leave the White House is what the mainstream media has fed to the public. But two other scenarios run by them involve the President winning the election, and have received little notice.

Assigned the role of Joe Biden in the exercises where the President won, John Podesta, Hillary Clinton’s 2016 campaign manager, says he cannot concede. He pollutes the electoral college and promotes threats of secession by California, Oregon, and Washington. He demands that California be carved into five pieces, that Puerto Rico and the District of Columbia become states, that the electoral college be abolished, and that Supreme Court Justices be required to retire at age 70. These are the conditions under which Podesta/Biden says Trump can take his seat. Refusal of these demands leads to a standoff in the House of Representatives, which declares Biden the winner. Inauguration Day comes and goes without a resolution, as everyone waits for what position the military will take.

If you think this scenario for a new Civil War is based on whatever Podesta smoked that day, and elite fantasies without basis, you are wrong. These are long-held beliefs of the Democrats who prefer to eviscerate the strong presidency the founders intended under the Constitution and the deliberative vehicles which allow for republican rather than popular rule. They have long insisted that the U.S. would be better off with a parliamentary democracy, on the easily manipulated British and European models.

They are also actively pursuing plans to pack the Supreme Court and eliminate the Electoral College. They have advocated breaking California into smaller units, and openly talked about secession. A dry run for

a military revolt occurred during the recent D.C. riots, sending retired generals into a heated argument, aired publicly, with the Pentagon's current occupants, about whether the military should follow the President's orders in quelling domestic unrest. Not only that. There is now a complete run on ammunition east of the Mississippi, and the suppliers of guns and protective vests also report very stressed conditions.

Winning the War

Joe Biden was questioned by this writer's African-American husband in a finely appointed Manchester, New Hampshire living room during a fundraiser in 1988. The question posed to Senator Biden was, "Do you agree with Lyndon LaRouche that vocal and orchestral tuning should be at the Verdi tuning, C=256, especially to save singers' voices?" Biden hemmed and hawed and tried to divert the questioner, only to have the question repeated. And then he blurted it out: "You know, the problem with LaRouche is that LaRouche believes the American people are more intelligent than they really are." Therein lies the rub, doesn't it? Two days later, Biden's presidential campaign disintegrated, as his speech plagiarisms from the British Labor Party's Neil Kinnock were revealed.

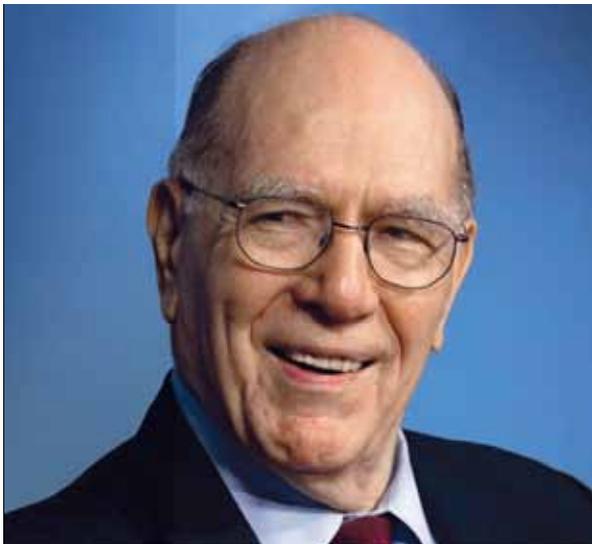
We are at a great moment in this country because those who have worked from the shadows to destroy us have been, as the result of their repeated failed and desperate efforts to remove this President, revealed. Thus the elements of surprise and successful deception, so significant in warfare, are lost to them now. Since the emperors can be seen to have no clothes, no one should

really fear them either. In fact, the best approach toward them should be heavy sustained satire and ridicule.

The danger lies in the fact that those surrounding the President very often think like Biden does about the American people. They will make regular sophisticated political appeals and engage in snarky negative campaigns pointing to past electoral success with such tactics. This, now, is the road to defeat. What is required to win is the optimism about the future which this President embodies, coupled with the type of bold programs which can inspire people to become greater than they ever believed themselves to be—a mission-orientation through great infrastructure projects, new city building, and space exploration in which we build our way out of COVID-19 and the recent decades of decline.

The ideas and programs of Lyndon LaRouche provide this road to recovery. They are based, in turn, on the great revolutions run by Hamilton, Lincoln, and Roosevelt which made America the greatest economic power on Earth and the universally acclaimed City on the Hill. That is how our small-minded, desperate, and decadent elites will, finally, be vanquished.

In the coming days, leading into Labor Day, we will be producing a series of exposés under the title, "Sitrep: U.S.A.," to better inform this fight. The first will be on Antifa and the various "youth insurgencies" which have been unleashed on our inner cities, and their relationship to the Obama/Biden/Harris ticket. A subtle hint: the genesis for these groups, their ID formats and induced beliefs, derive directly from Britain and the European intelligence elites, just like the coup against this President.



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

[Watch](#) The LaRouche Case video

[Watch](#) the LaRouche Memorial video

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

II. The Divine Spark in Man

OCTOBER 14, 1996

Why We Must Colonize Mars

by Lyndon H. LaRouche, Jr.

LaRouche contributed this article as a member of the Scientific Advisory Board of 21st Century Science Associates. In 1985, he first proposed a great project to establish a science-city on Mars in the next 40 years that would create skilled jobs and an economic recovery, but its greatest benefit would be the beauty of discovering the ideas that make such a program possible.

My commitment to designing a new policy of Moon-Mars colonization for the United States, began during the early Spring of 1985, as I prepared the address I was assigned to deliver at a June 15-16, 1985 Schiller Institute Conference, dedicated to honor the memory of our recently deceased friend, veteran space pioneer Krafft Ehrlicke.¹

At that time, it appeared to me that the appropriate way in which to remember Krafft as I had known him, was to ensure the furtherance of that goal which he had devoted so much to bring about: the use of our Moon as the industrial base from which to launch the future colonization of Mars. In light of my relevant special competencies as a physical

Editor's Note: This article originally appeared in *21st Century Science & Technology* magazine, Vol. 9, No. 4, Winter 1996-1997, pages 16-29.

1. *Colonize Space! Open the Age of Reason*, Proceedings of the Krafft A. Ehrlicke Memorial Conference of June 1985. New Benjamin Franklin House, New York, NY. 1985. This international conference was convened in Reston, Virginia, June 15-16, 1985, co-sponsored jointly by the Fusion Energy Foundation and the Schiller Institute. Krafft Ehrlicke had died in December 1984.

economist, and my earlier work on what was then known as U.S. President Ronald Reagan's Strategic Defense Initiative (SDI),² I had something unique and important to offer on the subject of such a Mars-colonization project.



NASA

"To say, that we could not afford a space-program at this time, is the opinion of a person who shows no comprehension of the world's present economic crisis. For the very reason that more and more of the world's people can no longer afford to eat, a Mars-colonization science-driver, economic-recovery program, is a far more urgent need of this planet, a far more practical undertaking, than it was back during 1985-1986, when I developed my initial proposals on this subject." Shown is Mars, as imaged by the Hubble Space Telescope.

Weeks later, exchanges with conference participants, during the discussion panel, led to my commitment to amplify my proposal. This, in turn, led to my

2. The initial form of the SDI, as summarized in the approximately five-minute, relevant segment of President Reagan's nationwide televised address of March 23, 1983, was a policy which I had featured as part of my 1980 candidacy for the U.S. Presidential nomination of the Democratic Party. Later, during the twelve months beginning mid-February 1982, my proposal for a strategic ballistic missile defense, served as the principal talking-point of an exploratory "back-channel" chat with the Soviet government which I conducted on behalf of the Reagan Presidency. Apparently, the President liked what was reported to him from those "back channel" discussions; his televised announcement of March 23, 1983 echoed every principal policy-feature of the design that I had outlined to the Soviets, point by point. Later, the SDI underwent mutilating modifications, but it was the March 23, 1983 confirmation of my outlined policy which stuck in the Soviet mind.

February-March 1986 public submission of my design for a forty-year program leading to the colonization of Mars.³ Much later, I updated that proposal in sundry ways, including a draft motion-picture script, *The Woman on Mars*, which I composed with the intent that it serve as a dramatic vehicle for documenting the successive stages leading into the opening of the first science-city colony on Mars, after forty preparatory years. An abbreviated version of that script was the basis for a half-hour television network broadcast, as part of my 1988 campaign for the Democratic Party's U.S. Presidential nomination.⁴

All of this occurred against the backdrop of the "back-channel," exploratory discussions which I had conducted, during 1982 and early 1983, on behalf of our government, with a Soviet channel. The "Mars Colonization" policy was seen by me as a way of circumventing the effects of the stubborn Soviet rejection of President Reagan's offer of March 23, 1983.

As I had reported, both to the Soviet channel, and to the relevant officials in the U.S. National Security Council, my leading concerns in those discussions, were three: 1) the risk of thermonuclear war inherent in so-called "detente" agreements; 2) the accelerating decline of the world economy since 1970-71; and, 3) my judgment, as stated to both my Soviet and U.S. channels during February 1983, that the Soviet economy was currently headed for a collapse, approximately five years ahead.

The strategic objective built into my design for "strategic ballistic missile defense, based upon 'new



NASA

A youngster contemplates a model of a nuclear-propelled Mars lander, at the Nuclear Rocket Development Station in Nevada in 1966, during a Science Youth Day.

physical principles',” was to realize the urgently needed, combined, global, economic and political benefits of a “science-driver” program. It was essential to reverse the ongoing, and, then, already far advanced trend, toward a worldwide physical-economic collapse, and to prevent, thus, the collapse into the kinds of cultural pessimism which would almost certainly produce new forms of fascism in the “West,” and the probable degeneration of an economically collapsed, and demoralized Russia into a Dostoevskyian, “Third Rome” nightmare.

The hysterical rejection of the SDI, first from General Secretary Yuri Andropov, and, later, from the Gorbachev regime, prompted me to judge, in Spring 1985, that cooperation in a forty-year science-driver program to prepare the colonization of Mars, was the only visible alternative which might be proposed under those circumstances.

The Comecon system collapsed in about six years, not the five which I had foreseen in 1983. Not only have both the Comecon and the Soviet Union dissolved; since 1988, there have been sweeping changes in institutions throughout most of the world. The world is a far worse place, a more dangerous place, a vastly poorer place to live today, than in 1983, 1986, or 1989. As of

3. This was subsequently printed by the Fusion Energy Foundation, and was circulated, at a later time, at the event at which the Payne Commission presented its own proposal for a long-range Mars exploration project. A comparison, and contrast of the similarities and differences between the two designs, is a fruitful approach to understanding the policy issues such a long-range undertaking ought to provoke.

4. *The Woman on Mars*, sponsored by LaRouche's presidential campaign committee, was broadcast on March 3, 1988.

the present moment of writing, the Managing Director of the International Monetary Fund, Michel Camdessus, has come around recently to agreement with at least one key element of my general economic forecast: that the international monetary system is gripped by a systemic crisis, centered in the banking system, which could collapse the entire system, in an implosive, reversed-leverage chain-reaction. He appears to agree with my estimate, that that chain-reaction collapse could break out at almost any moment.⁵

Today, most among our financial institutions are managed by the species of madmen which makes riverboat gamblers seem paragons of prudence and moral rectitude, by comparison. Our basic economic infrastructure, our ruined farms, our lost industries, our collapsing family standard of living, have been destroyed, as tribute to the fires of a monetarist Moloch. In the U.S.A., the net physical market-basket of consumption and output, per capita of labor-force, is approximately half what it was twenty-five years ago.⁶ A similar situation prevails in today's Western Europe. In Eastern Europe, the territory of the former Soviet Union, and other regions of today's looted Third World, the physical realities of economic life are beyond mere desperation.⁷

To say, that we could not afford a space-program at this time, is the opinion of a person who shows no comprehension of the world's present economic crisis. For the very reason that more and more of the world's people can no longer afford to eat, a Mars-colonization science-driver, economic-recovery program, is a far more urgent need of this planet, a far more practical undertaking, than it was back during 1985-1986, when I developed my initial proposals on this subject.

Unfortunately, aging has overtaken all of the great space-pioneers of this century. Only among a minority of "Baby Boomers," and a larger ration of those of retirement age, does our population have as much as a faint recollection of the joy which surged through our population with the first landing of men on the Moon;

5. John Hoefle, "IMF Admits Global Banking Crisis Is Out of Control," *EIR*, Vol. 23, No. 41. Oct. 11, 1996, pp. 4-6; Mark Burdman, "G-7 Leaders Reach New 'Munich Pact' at Lyons Summit," *EIR*, Vol. 23, No. 29. July 19, 1996, pp. 14-31.

6. Christopher White, "NAM's 'Renaissance' of U.S. Industry: It Never Happened," *EIR*, Vol. 22, No. 16. April 14, 1995, pp. 12-19; Richard Freeman, "U.S. Consumer Market Basket Shrinks to the Crisis Point," *EIR*, Vol. 23, No. 39. Sept. 27, 1996, pp. 12-13.

7. "Russia, the U.S.A., and the Global Financial Crisis," *EIR*, Vol. 23, No. 23. May 31, 1996, pp. 4-65.



Stuart Lewis

"For the very reason that more and more of the world's people can no longer afford to eat, a Mars-colonization science-driver, economic-recovery program, is a far more urgent need of this planet, a far more practical undertaking, than it was back during 1985-1986, when I developed my initial proposals on this subject." Here, the author addresses the Krafft Ehrlicke Memorial Conference in June 1985. Helga Zepp-LaRouche is at left.

for many of our people, that was the next to last time the news broadcasts gave them good reason to be happy. Today's situation in space policy, is comparable to the state of affairs, that medical science and public sanitation had been, finally, successfully eradicated by today's insurance cartels, at the time history's greatest wave of pandemics had seized our planet. Virtually, we must teach the world the principles, purposes, and benefits of the almost-lost science of space exploration, all over again.

It is necessary to explain these functional connections: *What is the economic principle which defines a science-driver, space-exploration program as key to a successful near-term recovery from the presently deepening, global economic depression?* Let us name this topic, "The Christopher Columbus Principle of Economic Science." The usefulness of that choice of name for this principle, will be made clear below.

Commodities Do Not Produce Commodities

Until the terrible, destructive changes in U.S. policy-shaping, 1966-1979, ours had been a nation in which veterans of World War II could make a revolution in the agriculture of family-operated farms of be-



Ford Motor Company

Here, Ford Motor Company's giant Rouge industrial complex in Dearborn, Mich., which was once the largest concentration of manufacturing and assembly operations in the world. Iron ore, limestone, and coal were unloaded on the docks, smelted into iron, converted into steel, and within days, transformed into engines, frames, bodies, and parts—and finally, into completed automobiles.

tween 200 and 400 acres. It was time in which most of the labor-force was employed as either operatives or technologists in some branch of either production of physical goods, or in related employment as operatives or technologists in basic economic infrastructure. Most of the labor-force experienced wealth as the benefit of a productive process. In management, the production executive, with his engineering staff and subordinate line management, thought of products and productive processes in terms of investment in scientific and technological progress, and analyzed the management of pathways and inventories in terms of production-planning tools such as bills of materials and process-sheets. We were a productive-performance society.

Today, that sanity reigns no more.

Since about 1966, we have passed over, from an increasingly healthy and wealthy, production-oriented, “blue collar” society, to a decadent, self-bankrupted, consumption-oriented society of “casual attire” and hedonism: a pathetic, decadent “feel my pain” society, a society besotted with the mystiques of “midlife” and

“midriff” crises.

One should be reminded of the decaying Roman slave-society of the Civil Wars and the Caesars, of parasitical mobs of those citizens who had been degraded into living on the scant rations of political hand-outs, of a decadent population of Imperial Rome, mobs and all, taking pleasure in the pre-electronic improvisation of our present-day TV entertainments, the Roman Circus Maximus. No person who graduated from university after 1968 ever experienced, during his or her adult life, a time during which the axiomatic assumptions of our nation's economic-policy-shaping were not insane. The thoughtful archeologist might slowly shake his head: He is reminded of dead cultures which had also mislaid the moral fitness to survive.

The added problem, in Europe as in the Americas, is that, during the recent ten years, most among those who entered the top-most positions of policy-shaping within the most influential governmental and private institutions, were drawn from the world's “Baby Boomer” generation. Therefore, except for a tiny minority of the exceptional among them, the policy-axioms which they regard as

“mainstream” verities today, reflect the confines of their childhood, shared with such celebrated moral titans as “Howdy Doody,” and with a subsequent adolescent and adult education and experience dating from approximately the middle of the 1960s.

The “Baby Boomers” in today's policy-shaping positions, are not to be blamed for inventing the “cultural paradigm-shift” of the 1966-1972 interval; they are chiefly victims of the 1962-1971 decade of aversive behavioral modification of almost an entire generation.⁸ They, as victims of Tavistock Centre mass-conditioning, simply take those innovations for granted, on blind faith, as what they were conditioned to accept decades earlier. The axioms of the present economic policy-shaping are, thus, fairly described as the fashionable things which one should be overheard saying, to pro-

8. From the “Cuba Missiles Crisis” and political assassinations of President Kennedy, Malcolm X, Martin Luther King, and Bobby Kennedy, of the Vietnam War performed on nightly television, and of the August 1971 collapse of the Bretton Woods agreements.

mote one's career in politics, in a university post, in business, or, simply in those recreational settings in which self-important people foregather, ostensibly to be admired by others, but, most of all, by themselves.

We who watched that process of behavioral conditioning of the Baby Boomers and others, during the past thirty-odd years, must help the leaders of that generation of victims, and of so-called "Generation X," to understand their own predicament. If we fail to do precisely that, those two generations, and more, are as self-doomed as Shakespeare's Hamlet, to come soon to a wretched end, and in a similar fashion. Within the limited specific purview of our subject here, the economics of space-exploration, we must assist today's "Baby Boomers" in understanding the axiomatic incompetence of their parents' generation on the subject of economic principles: the incompetence which is the axiomatic underpinning of so-called "mainstream" economic thinking today.

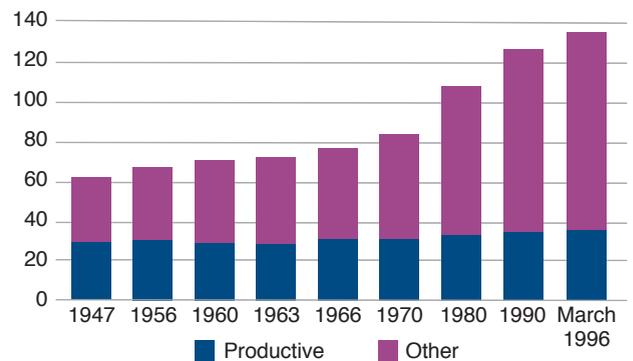
During the post-war interval, the proverbial "cutting edge" of economics and industrial-management professionalism, was represented by a mid-1950s factional controversy, between two mutually opposing factions in a newly encamped branch of economics teaching. This recent development in taught economics, was known as "systems analysis," or, "input-output analysis."

On the one side of the controversy, was (then) Harvard University Professor Wassily Leontief, a principal designer of the U.S. government's post-war National Income and Product. Opposing Leontief et al., was what Leontief himself aptly identified as the "ivory tower" school of Tjalling Koopmans' Operations Research Society.⁹ The U.S. component of this "ivory tower" faction, was permeated with the influence of two devotees of Bertrand Russell, Norbert Wiener (of "information theory" notoriety), and John von Neumann's "systems analysis" dogmas. The mother of the doctrine, internationally, was what came to be known as the Cambridge (England) "Systems Analysis" mafia of such Bertrand Russell successors as Lord Kaldor and his associates.

Although the experimental standpoint of Leontief was much preferable to that of the "ivory tower" fanatics, there was a common axiomatic fallacy underlying

9. See reference to this in Lyndon H. LaRouche, Jr., "Kenneth Arrow Runs Out of Ideas, but Not Words," *21st Century Science & Technology*, Vol. 8, No. 3. Fall 1995, pp. 34-53.

Productive Portion of U.S. Labor Force, 1947-1996



The proportion of the labor force that is engaged in productive labor (manufacturing, construction, farming, mining, public utilities, and transportation) has dropped precipitously since the end of World War II. ("Productive" signifies the direct alteration of nature through labor, in order to increase the rate of potential relative population density.) The rest of the labor force ("other") consists of "essential" workers in such fields as health, education, and useful engineering, but also "overhead" workers such as accountants, retail clerks, and lawyers, who are neither productive nor essential to the physical economy. Most new jobs today are in the overhead category.

Source: *Executive Intelligence Review*, Sept. 27, 1996, p. 14

both. This significance of this pervasive fallacy is put into sharper focus, if from a Cambridge vantage-point, by a small, 1960, book, of British economist Piero Sraffa, *The Production of Commodities by Means of Commodities*.¹⁰ That fallacy is the most stubborn of the underlying, axiomatic morbidities governing virtually all currently "mainstream" economics opinion.

To understand the axiomatic root of the incompetence of today's economics dogmas, it is indispensable, if not sufficient, to recognize the absurdity of studying an economic process from a consumerist, rather than productive standpoint. It is also necessary to recognize that today's popular monetarist illiteracy represents not only the "consumerist" lunacy, but also carries forward the crude errors of axiomatic assumption already embedded in the "input-output analysis" of the 1940s through 1970s. On the latter account, this writer has introduced the pedagogical imagery of the "Columbus Principle." We now quote the relevant pages from the preface to a new, Chinese-language edition of the writ-

10. Piero Sraffa, *The Production of Commodities by Means of Commodities*, Cambridge University Press, 1960.

er's 1984 textbook in physical economy.¹¹

The analysis of economy from the standpoint of production, employs statistical tools such as bills of materials and process sheets. Each detail of the network of an economy's total production-cycle, from infrastructure to consumption of finished product, is mapped, as streams, into the junction-points where productive actions are performed. "Market-baskets" of required goods are accounted for, per capita of labor force, per unit of land-area, and per family household. Leibniz's approach to defining a necessary household market-basket, is employed throughout, both for household consumption and for each branch of agriculture, industry, and infrastructure.¹² Allowances are made for sundry forms of administration, in a similar way.

This analysis of the production-stream, faces the economist with the challenge of discovering some notion of functional relationship between variation in the physical contents of these market-baskets and variation in the productive power of labor, per capita, as Leibniz demanded the necessary income of the household of the laborer be studied.¹³ We must do this for every

Decline in Production Levels for Goods in Producers' and Consumers' Market Baskets on a Per-Household Basis

(index 1967 = 1.000)	1967	1973	1979	1982	1990
CONSUMERS' MARKET BASKET					
Men's trousers	1.000	0.965	0.594	0.504	0.335
Men's shirts	1.000	0.644	0.486	0.343	0.165
Women's blouses	1.000	1.023	1.511	1.405	0.684
Women's dresses	1.000	0.597	0.503	0.339	0.279
Women's woollens	1.000	0.264	0.254	0.139	0.166
Refrigerators	1.000	1.247	0.935	0.703	0.932
Passenger cars	1.000	1.150	0.869	0.484	0.512
Tires	1.000	1.020	0.833	0.666	0.877
Radios	1.000	0.706	0.467	0.316	0.098
PRODUCERS' MARKET BASKET					
Metal-cutting machine tools	1.000	0.643	0.530	0.289	0.212
Metal-forming machine tools	1.000	0.854	0.730	0.404	0.406
Bulldozers	1.000	1.200	0.713	0.334	0.306
Graders and levellers	1.000	0.786	0.748	0.383	0.349
Pumps	1.000	1.140	0.541	0.424	0.506
Steel	1.000	1.029	0.821	0.416	0.487
INTERMEDIATE GOODS FOR EITHER MARKET BASKET					
Gravel and crushed stone	1.000	1.023	0.914	0.624	0.575
Clay	1.000	1.022	0.759	0.459	0.544
Bricks	1.000	0.999	0.850	0.451	0.598
Cement	1.000	1.045	0.911	0.632	0.689

In the United States, the production of physical market baskets has declined to about half of what it was in 1967. Today, the average working family must hold down three jobs to buy what a single job afforded in the 1950s and 1960s.

branch of production and infrastructure, in addition to study of the required market-baskets of family households.

The immediate goal of such inquiries, is to determine the relationship between the expenditures and the variation in effective productive output of the society, per capita of the employed labor-force. No competent measurement of such a functional relationship can be made in money-prices; the correlation must be between physical inputs and physical productivity of labor. Only one exception to this rule should be permitted:

11. Lyndon H. LaRouche, Jr., *So, You Wish to Learn All About Economics?*, 2nd printing, EIR News Service, 1995. The quoted paragraphs are also published in "While Monetarism Dies," *EIR*, Vol. 23, No. 43, Oct. 25, 1996, pp. 10-19.

12. G. Leibniz, "Society and Economy," 1671. English translation by John Chambless, *Fidelio*, Vol. 1, No. 3, Fall, 1992, pp. 54-55.

13. *Ibid.*

the degree quantity and quality of education, health-care, and science and technology services affects the potential physical productive powers of labor, those expenditures must be included in the market-baskets of consumption by labor, by infrastructural facilities, by agriculture, and industry.

By those empirical means, we attempt to determine what portion of the consumption by a society corresponds to “energy of the system.” We correlate that consumption with a certain level of potential productive output. We assume that any of the non-wasted output in excess of replacing that required consumption, is the “free energy” of the productive process. The economist must account for the role of reinvestment of some portion of that “free energy,” both to expand the scale of the economy and its supporting infrastructure, and to increase the productivity of the productive process by emphasis on power-intensive, capital-intensive modes of investment in scientific and technological progress. The economist’s goal, is to ensure that the ratio of “free energy” to “energy of the system” does not decline, even though the “energy of the system,” *per capita*, is being increased.

The question is, how would changes in the patterns of consumption affect the potential productive powers of labor? How would changes affect the ratio of “free energy” to “energy of the system”?

The apparent cause for the failure of most attempts to understand the physical economy of an entire nation-state in those terms, is the error of assuming that we can measure the functional variation in relationship of input to output in such a way as to imply that we are measuring the “production of commodities by commodities,” with the human individual serving only as vehicle for such functions. The unscientific character of Norbert Wiener’s “information theory,” and John von Neumann’s attempts to apply his “systems analysis” to economic processes, is a related case. The work on input-output models by Professor Wassily Leontief, is useful, on condition we do not fall into the delusion, of assuming that, in such a configuration, we are studying the

implied “production of commodities by commodities.”

The source of increase of the productive powers of labor, is the quality of the typical newborn human individual, which sets all persons absolutely apart from, and above all lower forms of life. This distinction is most readily identified, in functional terms of reference, as that developable, but sovereign capability of each human individual mind, for making valid, revolutionary discoveries of physical principle. This applies both to experimentally valid original discoveries of principle, and to the student’s reenactment of an original such act of discovery. The same principle of cognition central to fundamental scientific discovery, is the source of all of the masterworks of European Classical art-forms. The increase of the individual person’s power over nature, in production and in design of products, is derived from the cultivation of those same cognitive powers from which we obtain advances in scientific and artistic knowledge.

We must think of products not as the cause of productivity of labor, but as the necessary circumstances of that productivity. Consider the case of Christopher Columbus’ discovery of the Americas.¹⁴

Columbus’ discovery of the Americas began toward the close of the Third Century B.C., with the estimate of the Earth’s curvature by the celebrated member of the Platonic Academy at Athens, Eratosthenes. Employing Eratosthenes’ and other ancient experiments as his guide, Paolo Toscanelli (A.D. 1397-1482), the leading astronomer of the Fifteenth Century, created the maps of the world which guided Columbus to his successful voyage.¹⁵ Toscanelli’s map had but one notable flaw; it was based upon a nearly

14. In rebuttal of those who insist that “Columbus could not have discovered America,” because there were already inhabitants of the Americas thousands of years earlier than A.D. 1492, one might mention the case of the wise woman who set a trap by means of which to *discover* another woman in her husband’s bed. Columbus’ discovery of the Americas was accomplished by the same methods of astrophysics used to discover planets, moons, and asteroids of the Solar system.

15. Gustavo Uzielli, “Paolo Toscanelli, Amerigo Vespucci, e la scoperta d’America,” in his book of essays, *Paolo del Pozzo Toscanelli, iniziatore della scoperta d’America*. Riccardo del solstizio d’estate del 1892. Florence, Italy, 1892.

accurate size of the Earth, as determined by astronomical observations of the Earth's curvature, but, it relied upon the highly exaggerated reports supplied by Venice, on the distances from Venice to China and Japan, placing Japan and the islands of the Indies in the middle of today's United States!

Columbus learned of Toscanelli's maps nearly two decades before his famous voyages of discovery. This included Columbus' access to the correspondence between Toscanelli and Lisbon's Fernão Martins, on the subject of exploration westward across the Atlantic Ocean for the Indies.¹⁶ Columbus wrote to Toscanelli and became fully informed, in the last years of Toscanelli's life, of the collaboration which had been ongoing for decades before, and which had begun with the immediate Florentine circle of Nikolaus of Cusa during the years before the Council of Florence of 1439.¹⁷

Columbus added to this scientific knowledge, his experience and knowledge as a navigator for the Portuguese, knowledge of ocean currents and prevailing winds, which clearly implied the probable location of, and route toward land on the other side of the Atlantic. His use of Toscanelli's map, indicates that his original goal were the islands of the Pacific far to the South of Japan. Columbus' discovery of the Americas was, thus, a 'scientific discovery,' in the strictest meaning of experimental physics.

This example of Columbus' discovery is cited here to illustrate one of the most crucial principles of economic science, a principle apparently unknown to the popular economics doctrines of today's universities. The relevant question is: *Was the discovery of the Americas accomplished by the three ships Columbus commanded, or the sailors on those ships?* Reports of Columbus' difficulties in securing those ships, and the reluctance of the crew, illuminate the twofold fact: *It was Columbus, and he alone, who acted to effect the discovery of the Ameri-*

cas; but, he could not have succeeded without the ships and crew.

It is not the means of production, or even labor as such, which produces those advances upon which progress in the condition of mankind is effected. It is the power of valid scientific and artistic discovery by the sovereign powers of the individual intellect, upon which all human progress depends. However, to advance, the discoverers, and their associates in labor, must be educated up to the level needed to make valid discoveries and put them into operation. Even those means will not succeed, unless the suitable tools and materials are provided to make effective the impulse of the creative individual intellect.

The ships did not cause the discovery of the Americas, but they were essential to that discovery. The material conditions of life do not generate human progress, but without such means to convey the work of the human intellect, progress is not possible. The point ought to be obvious, but most professed economists have been too fiercely gripped by the delusions demanded by their adopted ideologies, to recognize the right relations within the productive process.

The same word of caution must be applied to this textbook's treatment of the relations expressed in terms of the social division of physically productive labor. It is not the quantity of persons, or the amount of their labor-time employed, which generates productivity; it is the developed powers of the individual's human intellect, an intellectual power which could not be effective without associated development of basic economic infrastructure and means of production.

Thus, once we have accepted, as a matter of principle, the need for certain preconditions of production, we must concentrate upon the development of the quality of the individual person within society.

For example, the amount of time of the child freed for education, will affect the level of development of that child's knowledge and mental powers. To provide a suitable quality of education, even with the best teachers, would not be possible unless the economic standard of household life permitted the young to devote the

16. Ibid.

17. Paolo Emilio Taviani, *Christopher Columbus: The Grand Design*, Orbis Press, (London); Ricardo Olvera, "The Discovery of the Americas and the Renaissance Scientific Project," *EIR*, Vol. 17, No. 40. Oct. 19, 1990, pp. 42-45.



NASA

consumed per capita, and in tools of production required per capita.

All survivable economies are characteristically “not entropic” in these terms: *The ratio of “free energy” to “energy of the system” must not decline, despite the imperative increase of the “energy of the system” through “reinvestment” of a portion of the “free energy” flow.* The source of that “not entropic” impulse, is nothing

other than that which sets mankind absolutely apart from, and above all other known species in this universe: those creative powers of the individual human mind, by means of which valid, original discoveries of universal principle are discovered, and that mental act of discovery replicated, by reenactment, within the sovereign precincts of the mental processes of the student.

That “Columbus Principle” is the key to the stunning success of the U.S. 1940-1943 economic mobilization for war, under the leadership of President Franklin Delano Roosevelt. That is the source of Chase Econometrics’ estimated \$14.00 return to the U.S.

economy, for each \$1.00 spent by government on the Kennedy Apollo Project. Drive the rate of realization of scientific discoveries of principle to the limit, and mobilize the material, educational, and health resources needed, to enable modern “Christopher Columbuses” to succeed in their voyages of discovery beyond new frontiers.

That is the secret of all the great economic achievements of modern western European civilization. The relevant policy, is to promote the development of the mind of as many individual persons as possible, through a method of education consistent with the Christian-humanist models of the Brothers of the Common Life, Friedrich Schiller, and Schiller’s fol-

Sail on, Columbus! Replicas of the Santa Maria, Niña, and Pinta sail near the Space Shuttle Endeavour, as it awaits liftoff in May 1992, the year of the 500th anniversary of Columbus’s voyage to the New World.

greater portion of the many years of childhood and adolescence to such education. The health and longevity of the members of the households, is crucial for this. Those social relations and material conditions of family and community life, which are essential to the improved development of the individual personality’s scientific and artistic powers, are essential material needs of the household and community, are essential features of the “energy of the system” required to perpetuate a specific, corresponding level of potential productive powers of labor.

Similarly, any society based upon a fixed productive technology, must decay into ruin from the accumulated effects of what we term “technological attrition.” Without investment in scientific and technological progress, a society will degenerate. Yet, investment in scientific and technological progress requires increased investment in infrastructure, in improvements in nature, in water consumed per capita, in power



Library of Congress

Christopher Columbus

lower Wilhelm von Humboldt. One must drive those developed mental capabilities toward their limits of achievement, through providing the appropriate choice of mission and means to bring about fundamental increases of mankind's power over nature, in man's per capita relationship to our universe, as *Genesis* 1:26-28 prescribes.

In the Wake of the Santa Maria

During the 1950s, Werner von Braun acknowledged Christopher Columbus's choice of three ships for the discovery of the Americas, as the appropriate model for mankind's future journey to Mars.¹⁸ In 1986, this writer adopted von Braun's "Columbus Principle," and featured it, as such, within his own designs, that year and later, for a forty-year science-driver program, for preparing the colonization of Mars.

Yet, there is another crucial lesson to be adduced from the Columbus Principle, a point with which von Braun would have concurred, at least in substantial degree. How was it that the associates of Cardinal Nikolaus of Cusa came to propose that voyage to the Indies which Christopher Columbus adopted from the correspondence of Cusa's associates Paolo Toscanelli and Fernão Martins?¹⁹ As Columbus' sponsor, the noble Queen Isabella insisted: it was not the search for gold and slaves, or other booty from distant places, which was the purpose of her government in sponsoring the exploration.²⁰ The purpose of space-exploration, is not

18. For a bibliography of von Braun's published writings on Mars, see Marsha Freeman, *How We Got to The Moon: The Story of the German Space Pioneers*, 21st Century Science Associates, Washington, D.C., 1993, pp. 352-353.

19. Nikolaus of Cusa, the author of the key work in the founding of the modern European nation-state, *Concordantia catholica* (A.D. 1433), and the founder of modern physical science, as in his *De docta ignorantia* (A.D. 1441). He contributed a decisive role in organizing the great ecumenical Council of Florence (A.D. 1439-1441). He was also a key figure in promoting a policy of ecumenism among Christians, Jews, and Moslems (*De pace fidei*). Cusa designated his close collaborator Fernão Martins to be the executor of his estate. Martins returned to Portugal to assume church duties assigned him there. Thus, the correspondence between Toscanelli and Martins came into the orbit of Columbus' activities as a Portuguese navigator.

20. Isabella forbade the practice of slavery in the Americas. Unfortunately, she died in A.D. 1504, leaving leadership to persons more susceptible to the influence of the Venice which remained the world's leading slave-trading nation, until the trade was taken over by the Dutch and British India Companies. For Isabella, as for Cusa and his circle in Italy, the purpose of the voyages to the Indies was to evangelize, to win ecumenical allies against the enemy forces, against the tradition of oligar-

conquering real estate or looting raw materials for Earth; it is making a change in the existing relationship between man and the universe, a change which is necessary for developing new principles essential to the improvement of life here on Earth.

The primary benefit from space-exploration is the progress of the individual's human condition on Earth itself. This benefit arises from the "spill over," into the Earth's internal economy, of forced-draft breakthroughs in discovery and development of newly discovered principles. This occurs chiefly through the use of the designs of successful proof-of-principle experiments, as models for introducing new design principles into machine-tools and end-products of the productive process in general. In the jargon of the shrewd businessman: "We may lose a great deal of money in exploring space, but we get that back, many times over, from the by-products of the operation."

Then, during the mid-1980s, as now, this writer defined the scientific objectives of science-driver "crash programs" of economic development, in the following rule-of-thumb terms.

We begin, as Nikolaus of Cusa did, and Johannes Kepler, Gottfried Leibniz, Carl Gauss, Wilhelm Weber, and Bernhard Riemann after him.²¹ We begin by emphasizing the distinction between the useful, but relatively defective formal mathematical physics, and experimental physics.²²

In experimental physics, we repeatedly encounter paradoxes which threaten the authority of any established mathematical physics. The experimental validation of discovered solutions for those paradoxes, presents us with new physical principles. It was the kernel of Riemann's act of genius, in his 1854 habilitation

chical Babylon represented then by Venice and Venice's sometime partner, the Osman dynasty which had taken over the Byzantine Empire. Ethiopia and India were among the projected allies of European civilization against the continued threat from the tradition of Babylonian oligarchical culture.

21. On the relevance of Gauss's and Riemann's collaborator Wilhelm Weber, see the contributions by Jonathan Tennenbaum and Laurence Hecht to this issue [Fall 1996] of *21st Century Science & Technology*.

22. Lyndon H. LaRouche, Jr., "Leibniz from Riemann's Standpoint," *Fidelio*, Vol. 5, No. 3, Fall 1996. (G.F.) Bernhard Riemann, "Über die Hypothesen, welche der Geometrie zu Grunde Liegen" ("On the Hypotheses Which Underlie Geometry"), Bernhard Riemann's *Gesammelte Mathematische Werke*, H. Weber, ed. (reprint of Stuttgart: Be. G. Teubner, 1902), Dover Publications, New York, 1953. Also reprinted by Sändig Verlag, Vaduz, Liechtenstein, pp. 272-287.

dissertation,²³ to recognize that such principles represent the new “dimensions” of a physical space-time geometry, whose addition creates, thus, a new (Platonic) hypothesis to rule over mathematical physics, a new physical space-time manifold, each such with its own characteristic “curvature.” As Riemann apprehended the genius of Gauss’s work, it is the experimental measurement of that “curvature” which satisfies Nikolaus of Cusa’s prescription for experimental physics: *measurement*.²⁴

The scientific method which must underlie all successful science-driver programs, such as space-exploration, is that of experimental physics, rather than formal mathematical physics. The practical essence of the matter, that which predetermines the relative economic success, or failure of the program, is a breaking of frontiers, repeatedly, forcing paradoxes to manifest themselves, and discovering and validating the new principles of experimental physics needed to overturn, repeatedly, any pre-existing mathematical physics. The relative “not entropy” to be gained from a science-driver program, is to be associated with the advantageous changes in the physical space-time curvature of the manifold represented by human technological practice.

It is the forcing of revolutionary discoveries in the domain of experimental physics, by successively, and successfully assaulting the seemingly impossible, which generates the success of (in this case) the space program, and also the gain in productive powers of labor derived as spill-over from the science-driver program.

It is from such revolutionary discoveries of seemingly impossible new principles, that the creative powers of the human mind are called most fully into play. It is from the characteristically “not entropic” creative processes of individual human cognition, and from no other cause or source, that “free energy” (e.g., true “profit”) is generated within an economic process. If this were not so, the demographic characteristics of the human population would have been characterized,

23. Ibid.

24. e.g., *De docta ignorantia*. Thus, it is a delusion to think that “statistics are science,” or that extrapolating a “model” within the virtual reality of a digital computer system, is “doing science.” A related delusion of the mathematical formalists, is today’s generally accepted, but absurd assumption, partly the fault of Hermann Grassmann, of “linearization in the very small.”

throughout all pre-history and history, by a secular shortening of life-expectancy, and a corresponding, “entropic,” lowering of the potential relative population-density of every culture.²⁵ Therefore, for economic science, those who prefer to “play it safe,” and urge us all to avoid technological progress, are rightly classed as social parasites, and, also, of course, heathenish opponents of *Genesis* 1:26-30.

Sail on, Columbus!

Why Choose Space-Exploration?

When we wish to be understood, in discussing modern, science-driver “crash programs,” it is mandatory that we make mental reference to a number of clinical examples.

Included among available choices, would be: Filippo Brunelleschi’s application of the catenary principle, to effect the feasible completion of the cupola for the Florence cathedral of Santa Maria del Fiore; the work of Leonardo da Vinci; the A.D. 1461-1483 transformation of France into the first modern nation-state and national economy, under Louis XI; the science-driver development program of France’s Minister Jean-Baptiste Colbert; the work of Lazare Carnot, Gaspard Monge and their associates, both during the military crash-program of 1792-1794 and by the 1794-1814 École Polytechnique under Monge;²⁶ the wartime U.S. mobilizations under Presidents Abraham Lincoln and Franklin Delano Roosevelt; the Manhattan Project; and, the German-American U.S. Space Programs of the early 1950s and the 1960s. There are other examples, but the list given suffices for our purposes here.

In each of these cases, a local (e.g., Florence), regional, or national economy was mobilized, *as if to win a war*, around some set of tasks whose mastery required the mustering of what the great Gerhard Scharnhorst’s protégé, Carl von Clausewitz, identified, in his *Vom Krieg [On War]*,²⁷ by his use of the German term *Entschlossen-*

25. For example, it was the proto-Malthusian, “zero-technological growth” feature axiomatically underlying the Code of Diocletian, echoing the Babylonian model of oligarchism, which imposed upon Byzantium its subsequent, characteristic demographic and moral degeneration.

26. Until the 1815 takeover and gutting of the École by the Marquis Laplace and his protégé, the plagiarist Augustin Cauchy.

27. Clausewitz’s works on warfare were published posthumously: originally, in a ten-volume edition. Berlin, 1832-1837. The most relevant edition is the *Vom Krieg* published with an introduction by Alfred (Graf)

heit: To force successive breakthroughs in the form of valid discovery of new physical principles. The military language is appropriate, almost indispensable. The military-historical allusion is to the principle of the flank, as practiced with exemplary brilliance and success, during 1792-1794, by France's "Organizer of Victory," Lazare Carnot, and by Alexander the Great (Gaugamela), Hannibal (Cannae), and General William Tecumseh Sherman, the "Hammer" of General Ulysses Grant's "Anvil."²⁸

The "principle of the flank," as exemplified famously by Alexander the Great, Hannibal at Cannae, as set forth by the soldier-scientist Carnot, executed with consummate brilliance by Sherman, and built into Schlieffen's famous design for crushing the anticipated, two-front aggression by Britain, France, Russia,²⁹ cor-

von Schlieffen. Berlin, 1905.

28. Alfred (Graf) von Schlieffen, *Cannae*. Berlin, 1905, *passim*. Dino di Paoli, "Carnot's Grand Strategy for Political Victory," *EIR*, Vol. 23, No. 38. September 20, 1996. Pages 14-29.

29. The point made here on the Schlieffen Plan, is of such prime relevance, that we could not fairly detour around the implied controversy. Lest some credulous reader have been duped by sundry British, French, Russian, and Woodrow Wilson administration liars, on the subject of the cause of World War I, the following facts should be listed. World War I was caused by no other agency than the British monarchy, specifically Albert Edward, as Prince of Wales, and as King Edward VII. In the eyes of the British Prince and his "Club of the Isles" cronies and lackeys, the *casus belli* of the matter was a strategy for destroying the British Empire devised by U.S. President Abraham Lincoln.

Lincoln's war-plan, which he would have executed, had the British not arranged Lincoln's assassination by its agent Booth, had three features. 1) The U.S. occupation of Canada, from which London had deployed its forces in the 1776-1783 War of U.S. Independence, the 1812-1815 war, and the Civil War of the United States against the treasonous British agents who had created Britain's slave-owner ally, the Confederate States of America. 2) The execution of Ericsson's design for a U.S. fleet of ocean-going Monitors, to blockade the British ports, and bring London to its knees. 3) As proposed by Henry Carey during the late 1860s, the creation of a system of transcontinental railways across Eurasia, from the Atlantic coast of a post-Napoleon III France, to the Pacific and Indian oceans.

It must be remembered, that during the period from the outbreak of the U.S. Civil War, until the 1901 assassination of U.S. President William McKinley, the Russia of Czar Alexander II, of Dmitri Mendeleyev, and Minister Count Sergei Witte, was the leading ally of the United States against the U.S.'s deadly foes, both the British Empire and Napoleon III's France. Also most notable, are the alliance between the so-called "Lazzaroni" and other circles of Benjamin Franklin's great-grandson, Alexander Dallas Bache, and the circles of Gauss, Humboldt, Siemens, and Emil Rathenau, in Germany. The British monarchy chose to see the cooperation among France, Germany, and Russia, around the transcontinental railway projects, as a *casus belli*. The plan to unleash a war in Europe which would permanently destroy such cooperation, was named the British "geopolitics" of the Prince of Wales, Halford Mack-

responds precisely to the state of mind required for a successful science-driver program, or the discovery of a Christopher Columbus.

A weaker force may, sometimes, annihilate a more powerful one, by concentrating sudden and relentless waves of attacks upon a well-selected, predetermined "flank" of the opposing, superior force. The selection of such a point, or coordinated points of focussed attacks, requires the same qualities of intellect which must be summoned for driving through an apparent paradox to the validated discovery of a new physical principle. Scientist Carnot's dispatched commands to the various parts of the French military under him, during 1792-1794, illustrate the connection; the making and execution of such strokes, whether in warfare, or in science, may appear to subordinates as a terrifying spectacle of sheer, remorseless will by their commander. Once the commitment is made, one must not flinch, nor permit subordinates to waver. Whether in military command, or science, this is the meaning of Clausewitz's use of the term *Entschlossenheit* in *Vom Krieg*.

No soldier, or other professional should wish ever to serve in combat under a commander who lacked this quality, nor face a crisis under a scientific or political leader who lacked the same quality.

Once that qualifying requirement is adopted for a science-driver enterprise, the question may be posed: *Among all the choices of science-driver programs which might be devised, why choose space-exploration?*

inder, Milner, et al. The Prince of Wales/Edward VII revived the former alliance with London's puppet, Napoleon III's France, over the period 1898-1904, as the so-called *Entente Cordiale*.

Through the Russian Revolution of 1905-1907, Witte's influence was ruined, and Russia's Pan-Slav factions lured into the anti-Germany alliance with Edward VII's *Entente Cordiale*. It was Russia's late-July 1914 general mobilization for military assault on Germany, which pushed a peace-seeking Germany to declare war on August 1, 1914: moving to crush the French and British forces in the west, before bracing to meet the main body of Russia's military aggression from the east. Had Chief of the German General Staff, Helmut von Moltke, not altered the Schlieffen Plan, Germany would have crushed France and the British Expeditionary Force in the initial flanking assault, Russia would have had no option but to make peace, and neither the prolonged World War I, nor World War II would have happened.

In short, the doctrine of "exclusive German war-guilt" concocted by Woodrow Wilson's Secretary of State, Robert Lansing, is a fraud, from beginning to end. Schlieffen's morally untainted grasp of the principle must not be overlooked in the attempt to identify the principles for design of successful science-driver programs.

For our mission here, we must view science, not from the ivory-tower vantage-point of today's generally accepted classroom standpoint of formal mathematical physics, but, rather, from the standpoint of experimental physics, as this distinction, already stressed by the founder of modern science, Nikolaus of Cusa, was emphasized in a new, and most profound discovery, by Bernhard Riemann.³⁰

Look, then, at experimental physics. Look at it from the standpoint we have outlined up to this point. Bear in mind our reference to Riemann's devastating proof against a mathematical-formalist approach to mathematical physics. Bear in mind, that the present writer and Riemann base themselves upon the scientific method inhering in Plato's method of hypothesis. Bear in mind the approach to Leibniz's specification for a



Stuart Lewis

“ ‘Human knowledge’ must be understood to signify nothing other than validation of man’s discovery of those principles of change, by means of which man can, or cannot, cause the universe to bend to man’s will.” Above, children constructing a sundial in a class on solar astronomy.

30. *op. cit.* Riemann emphasizes this near the outset of his 1854 habilitation dissertation, and restates the point, summarily, in his close. For reason of the extreme relevance of the points to be developed, immediately hereinafter, we excerpt these references at some modest length. From pp. 272-273: ... *Es wird daraus hervorgehen, dass eine mehrfach ausgedehnte Grösse verschiedener Massverhältnisse fähig ist und der Raum also nur einen besonderen Fall einer dreifach ausgedehnten Grösse bildet. Hiervon aber ist eine nothwendige Folge, dass die Sätze der Geometrie sich nicht aus allgemeinen Grössenbegriffen ableiten lassen, sondern dass diejenigen Eigenschaften, durch welche sich der Raum von anderen denkbaren dreifach ausgedehnten Grössen unterscheidet, nur aus der Erfahrung entnommen werden können. ... Diese Thatsachen sind wie alle Thatsachen nicht nothwendig, sondern nur von empirische Gewissheit, sie sind Hypothesen; man kann also ihre Wahrscheinlichkeit, welche innerhalb der Grenzen der Beobachtung allerdings sehr gross ist, untersuchen und hienach über die Zulässigkeit ihrer Ausdehnung jenseits der Grenzen der Beobachtung, sowohl nach der Seite des Unmessbargrossen, als nach der Seite des Unmessbar-kleinen urtheilen.* Riemann returns our attention to this crucial portion of his opening argument, in the closing sentence of this dissertation (p. 286): *Es führt dies hinüber in das Gebiet einer andern Wissenschaft, in das Gebiet der Physik, welches wohl die Natur der heutigen Veranlassung nicht zu betreten erlaubt.*

“hypermathematical” method of Analysis Situs, as this writer has presented the case for the science of physical economy.³¹ Under those explicit and implied conditions, the “map” of human knowledge (science), is constructed as follows.

1. *“Human knowledge,” or “knowledge,”³² must be understood to signify nothing other than validation of man’s discovery of those principles of change, by means of which man can, or can not, cause the universe to bend to man’s will.* The conception of objects as fixed objects *per se*, is not knowledge; only the validated principles of change affecting designated objects, permits one to speak truthfully of “knowledge of” an object.

2. *“Knowledge” can be acquired by no other means than metaphor. “Metaphor” references the existence of that quality of paradox, in which an undeniable event mocks stubbornly an implicitly referenced system of belief. The only solution to such a paradox, is the generation of an appropriate new system of belief by means of the sovereign cognitive processes of the individual’s mind. The experimental, or equivalent validation of that generated new conception, establishes that conception as enjoying the authority of a physical principle. The reconstruction of the old system of belief in a way which coheres with the validation of the newly discovered principle, constitutes “knowledge,” then so acquired, and enjoyed, by that individual’s mind.³³*

31. On the role of Analysis Situs in physical economy, see Lyndon H. LaRouche, Jr., “While Monetarism Dies,” *EIR*, Vol. 23, No. 43, Oct. 25, 1996, pp. 10-19.

32. Of all known species subsumed by eternity, only the human species is capable of knowledge. Hence, the strictly admissible use of “knowledge” to signify “human knowledge.”

33. The resulting knowledge occurs in the form of a new hypothesis, as Riemann describes this for physics. This use of Plato’s principle of hypothesis, is the common foundation of all of the scientific work of both the present writer and Riemann.

3. The authority of such “knowledge,” is located, ultimately, in the demonstration of the efficiency of the new system of belief, respecting a society’s, or mankind’s ability to command the universe to such effect that the characteristic³⁴ productivity, potential relative population-density, and other demographic features of the human species’ existence, are improved.

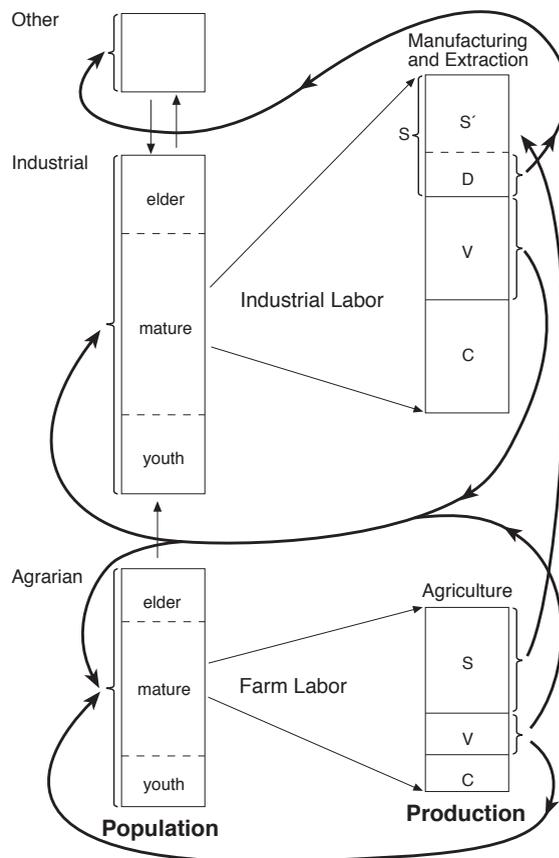
4. Such knowledge, as qualified by the “Great Experiment” of advancement in the characteristics of the existence of the human species within the universe at large, constitutes knowledge of what is termed “Natural Law.” Other names for “Natural Law” are “Reason” (as used by Johannes Kepler, for example) and “necessary and sufficient reason” (G. Leibniz).

5. The principles of knowledge are equally efficient for, and equally represented by physical science and the production of masterworks in Classical forms of art.³⁵

With these definitions and implications in view, one may then proceed to construct a cohering map of the knowledge to be derived from the directed progress of experimental physics. This map defines the terrain on which science-driver forces deploy their relevant flanking operations. Retrace the steps which this writer followed in his initial, 1985-1986 design of a forty-year development for the initial colonization of Mars.

Already, in the “Plan of the Investigation,” at the beginning of his 1854 habilitation dissertation, Riemann defined the entire domain of experimental physics as divided among three, mutually distinct sub-domains. In contemporary English-language usage, these are: A.) *Astrophysics*, B.) *Microphysics*, and, the residue of the evidence, relations whose effects may be observed directly within the domain of the senses, C.) *Macrophysics*. In each of these domains, we are presented with three distinct species of phenomena: 1.) Ostensibly non-living processes, including so-called “organic” ones; 2.) Living processes, which are ostensibly not capable of cognition (all species below the level of man); and, 3) The cognitive processes we have repeatedly referenced here. Thus, all science is represented by the transitions associated, in experimental practice, with all existing permutations of combinations from

The Ratio of the Economy’s ‘Free Energy’ to Its ‘Energy of the System’ Must Not Decline



The economist’s goal, is to ensure that the ratio of “free energy” to “energy of the system” does not decline, even though the “energy of the system,” per capita, is being increased. In this diagram of the physical-economic process, the vertical bars represent 100 percent of population (left) and of production (right). Free energy is represented by S'. C represents capital goods consumed by the production process, including the physical infrastructure of physical-goods production. V represents the portion of total physical-goods output required by all households from which industrial and agricultural labor comes. S is gross operating profit of the entire agro-industrial process of the economy, from which D, total overhead expense, must be deducted.

Source: Lyndon H. LaRouche, Jr., 1995. “Non-Newtonian Mathematics for Economists,” *Fidelio*, Vol. 4, No. 4 (Winter), pp. 4, 14.

among nine cells defined by three rows and three columns.

However, all of the knowledge we are able to acquire by these means, belongs to the domain of cognition. It is our cognition of the “Great Experiment,” human development itself, which subsumes the knowl-

34. “Characteristic” in the sense of “curvature” of a specific physical-space-time manifold.

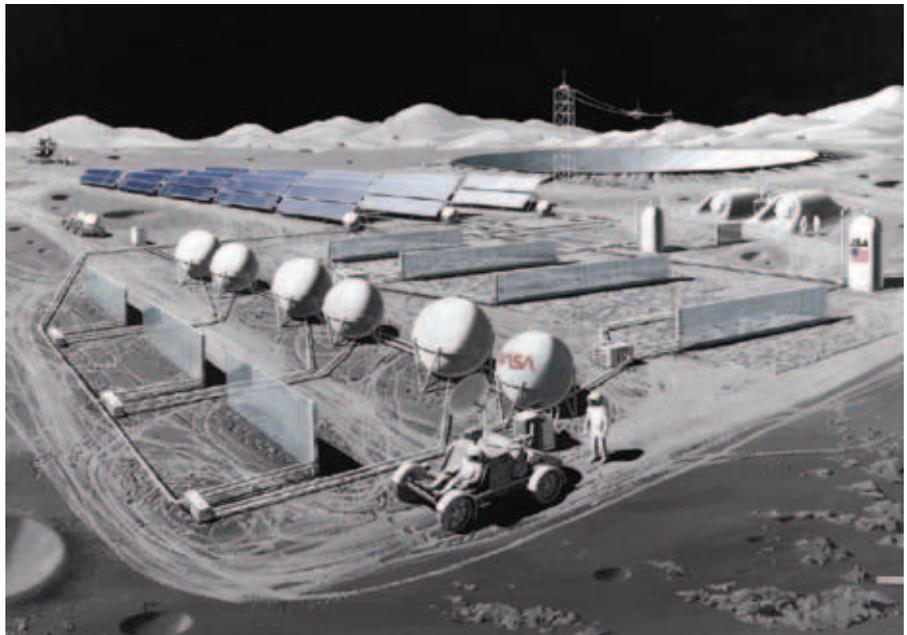
35. See Lyndon H. LaRouche, Jr., “The Essential Role of ‘Time-Reversal’ in Mathematical Economics,” *EIR*, Vol. 23, No. 41. Oct. 11, 1996, pp. 19-43.

edge we possess of each cell, and of the relations associated with all actual transitions corresponding to possible permutations of combinations from among the nine cells. All of our presumed knowledge of the lawful design of our universe is limited to the knowledge we acquire from the vantage-point of no other means than the *cognition* of the “Great Experiment.”

At the highest level of physical science, scientific knowledge is none among its subsumed specialties; at that superior level, where the name of “science” properly reposes, it is the discernible transitions which link each and all among the cells, not the internal features of any one cell, which represent the ingredients of scientific knowledge. It is the transition which subsumes and thus unifies those many transitions, which supply the word “science” a specific ontological content.

Yet, any persisting paradox within any part of that unfolding tableau, challenges any hypothesis associated with scientific knowledge in general: whether the challenge arises from biological microphysics, as an astrophysical anomaly, or any other permutation assembled from among the nine cells.

Among all sources of such paradoxes, a handful of questions are crucial for science as a whole. What is the transition which, in an instant of dying, represents the transition from the generative characteristic distinction of a living process, to that of all non-living ones? What is the transition from a merely living process, to the control of the actions of a living process by a process of cognition? How were the planets of our Solar System, with their chemical composition, and other distinctions, generated by the shedding of rotation from our much-younger, faster-rotating Sun? What are the principles by which our astrophysical universe continues to be generated? How are the transitions of the astrophysical domain to be reconciled, functionally, with the characteristic microphysical distinctions among non-living, living, and cognitive processes?



NASA

“By working in space, and on Earth, simultaneously, for these coordinated breakthroughs in discovery of new principles of astrophysics, microphysics, and biology, by the time . . . we establish the first science-city colony on Mars, we shall have revolutionized science and economy on Earth, each many times over.” Shown, an artist’s depiction of a manned radio telescope installation, recessed in the lunar surface.

The central question is: What are the experimentally demonstrated absurdities of our presently established systems of established scientific belief, in each niche of our map of permutations, especially the most notable niches? What additional absurdities of this type might we succeed in evoking? Instead of taking on these issues, one at a time, why not organize a coordinated project, in which we attack several among the most crucial such paradoxical flanks, as a single, integrated campaign? That is the standpoint which defines the distinction between ordinary scientific research, and a science-driver approach of the type illustrated by the Manhattan Project or a space-exploration program.

Since the most fruitful form of science-driver project available, is one which includes microphysics under a regime of astrophysical revolutions, one which involves a living, cognitive process—man—exploring the astrophysical domain, the most profitable of all science-driver projects, is a long-term, manned space-exploration program.

For example: Merely taking human beings off the surface of Earth, and putting them into the stratosphere, and higher, begins the process of driving the capabili-

ties of the human being, as a living, and as a cognitive process, to its limits of adaptability and performance. A round-trip journey from geostationary Earth-orbit to the Moon, and back, could become almost a mere weekend jaunt, when compared with the stresses of flight to Mars-orbit: for example, continuously powered flight, is necessary—“a whole new kettle of fish.”

Why send man to Mars at all? There are several absolutely irrefutable objections to any argument that man ought not be preparing to colonize Mars right now.

The first objection, is the well-known apothegm: “It is there.” History shows us, that whatever it might be nearly impossible to achieve, it precisely what mankind must commit itself to achieving, if the human species is to survive. Often, we have discovered why it was imperative that we attempt the seemingly near-impossible, only after we have achieved it.

The second objection might remind us of the recent proposal, that computer management might control the medical judgments of physicians, or that nurses might be replaced by “technicians” whose training, from welfare rolls to hospital assignments, might be accomplished with a few weeks training in simple routines. No linearized device, or training, can substitute for the cognitive powers of the individual mind of a professional. The computer that controls the physician’s decisions on care, will be guilty of malpractice much of the time, perhaps most of the time, often fatally. The replacement of nurses by unskilled “technicians,” also means an assured increase in morbidity rates in hospitals. The same is true in all scientific work. The tool is no replacement for human cognitive powers, but never more than a useful aid to irreplaceable, human cognition by the trained professional.

The “Christopher Columbus Principle of Physical Economy,” properly governs competence in both voyages of discovery, of all kinds, and in the functions of irreplaceable human cognitive powers of professionally trained judgment.

To set up space-laboratories which can probe a far fuller spectrum, than is possible from near-Earth orbit, and with far greater resolving power, we must go as far from our noisy Sun as possible. Men must go into solar orbits far from any planet, to construct “radiotelescopes” of enormous aperture, to focus upon all of the most anomalous astrophysical objects. There must be space laboratories similarly constructed and situated. This requires a “science city” built up, as far from Earth as is practicable. Given the inherent limitations of

future thermonuclear fusion, pending “fuels” of superior power-to-mass ratios, Mars is the available, usable object within reach, on which to construct a “science city” colony under an artificial environment: a kind of “Los Alamos in Space,” ultimately capable of supporting about a quarter-millions or more scientists and support personnel.

The general mission assignment, is to drive astrophysics, microphysics, biological science, and human knowledge, to far beyond their presently foreseeable limits for the coming century. By working in space, and on Earth, simultaneously, for these coordinated breakthroughs in discovery of new principles of astrophysics, microphysics, and biology, by the time, approximately forty years hence, we establish the first science-city colony on Mars, we shall have revolutionized science and economy on Earth, each many times over.

The Tavistock Papers

During the middle of the 1960s, a representative of the British Imperial psychological-warfare agency, the London Tavistock Centre,³⁶ conducted a study of the psychological effects of President Kennedy’s *Apollo* program upon the U.S. population. The mid-1960s Tavistock report complained, that the U.S. space program was inspiring an excess of rationality and optimism within the U.S. population, and argued, successfully, that, for this reason, the space-program must be cut back sharply. The following year, the U.S. government collapsed the *Apollo* program, to the degree that the initial manned Moon landing could be completed on schedule, but little more after that. For this, and also other reasons, the rationality and optimism of the U.S. population has subsequently withered to a degree which the Tavistock Centre must consider gratifying.

Those who can still remember the United States of

36. The origins and character of the London Tavistock Centre, was the subject of an intensive, task-force study, done under the present writer’s direction, during the early through middle 1970s. The first reports, under the title of “The Tavistock Grin,” occupied two successive editions of *The Campaigner* monthly, April and May 1974. The present Tavistock Centre, the London Tavistock Clinic, was established under the direction of the head of the British psychological-warfare program, one Brigadier Dr. John Rawlings Rees, the man who supervised the brainwashing, in captivity, of Nazi Deputy *Führer* and Tibetan mystic, Rudolf Hess. Later, the Clinic was enveloped by the larger institution built up around it, the Tavistock Centre where the British foreign intelligence trained its subsequently self-avowed agent of influence, Henry A. Kissinger.

thirty years or so ago, could supply the wistful observation, that the general availability of skilled employment, by aid of which we might once again have entire communities in which single-income-earner families raise children under normal conditions, does tend to foster a degree of happiness which is virtually lacking in eighty percent or more of our population today.

The writer and most readers might agree, that if a population enjoys a standard of community and family life consonant with the argument which Leibniz made in his 1671 *Society & Economy*, this would mean a society less violent, less perverse, less fearful, less hate-brimming, and much less unhappy, than is characteristic of most of our population today. A science-driver program which targetted the establishment of a science-city colony on Mars, beginning about forty years hence, would enable us to meet those standards of community and family life once again. That means less unhappiness, but it does not assure happiness; the moral benefit of a science-driver Mars program comes from a different quarter than the undeniably considerable material benefits such a program would generate.

Man is not a beast, unless he chooses to degrade himself into beastliness. Man and woman are creatures which *Genesis* prescribes to be “made in the image of God,” to rule the universe accordingly. The experimental evidence supplied to our powers of Reason confirms *Genesis* on this account. Such, not the beastly creature of Thomas Hobbes’ and John Locke’s rants, is the true nature of men and women. We are essentially creatures of ideas, of knowledge. When our minds are employed in the manner our true nature prescribes, and we are acting according to those principles of Reason, we are capable of great contentment in the simple fact of being our true selves. When we men and women discover our true nature, and act accordingly, we act with great passion, but also a serene contentment, the contentment of certainty that we are living lives of a quality which triumphs over death.

Yet, when we follow Hobbes, Locke, Mandeville, Hume, Bentham, and Mill, we are never happy. For us, then, jaded pleasures guide us to expanding frontiers of perversity, like Oscar Wilde’s fabled Dorian Gray. There is no happiness, no contentment, but only momentary excitements, each banging and flashing like fireworks, before the old boredom returns, more insatiable than before.

The happiness which was deplored by the refer-



President Kennedy addresses a crowd of 35,000 at Rice University in Houston, during his tour of U.S. space installations.

“The mid-1960s Tavistock report complained, that the U.S. space program was inspiring an excess of rationality and optimism within the U.S. population, and argued, successfully, that, for this reason the space-program must be cut back sharply.”

enced Tavistock report on the Apollo program’s effects, can be traced to a joyful sense of participation in a society of which the future must admire. It is a sense of living in a world brightened each morning by beautiful, and also powerful ideas. It is a society, in which a child, asked, “What are you going to be when you grow up,” responds with eyes filled with the happiness of a big little person’s optimism.

The material benefits great programs afford, are necessary; but, it is the beauty of discovering those ideas which make such programs possible, which is the true inspiration of entire peoples. Sail on, Columbus! Discover, once again, the secret of being human for those you leave behind.

Is Confucianism Compatible with Science?

by Mike Billington

Aug. 7—This author has argued for the past three decades¹ that, while there are profound differences between the cultural histories of the Chinese and European civilizations, and between the Confucian view of man and nature as opposed to the Judeo-Christian view, there is nonetheless a fundamental commonality in the nature of the conflicts in ideas which characterize the internal developments and retardations of human progress in the cultures of these two sides of the Eurasian continent.

That fundamental coincidence lay in

verse, and to apply those principles, through the technology of machines, to perfect the natural world and improve the quality of life for an ever-expanding level of population.

In European culture, this division is expressed in the conflicting views of Plato versus Aristotle, with the great Platonists (e.g., Nicholas of Cusa, Kepler, Leibniz, Schiller, Riemann, and Einstein) being those who generated every great era of discovery and cultural achievement. In China, the ancient conflict between the discoveries of Confucius and Mencius as opposed to the Legalist and Daoist tendencies, is parallel to the Plato-Aristotle divide, while the great Confucian minds such as Shen Guo and Zhu Xi drove the scientific and artistic discoveries of the Confucian Renaissance in the Song Dynasty (960–1279). It is precisely the new Confucian Renaissance taking place today in China that has generated perhaps the greatest transformation and development of a nation in all of his-



Confucius (551-479 B.C.)



Mencius (372-289 B.C.)

the battle between those who view man as an animal, who must submit to nature as it presents itself to the species, as an animal must, as opposed to those who see man as defined by that which distinguishes human beings from the animal—the creative power of mind, unique to the human species, which gives Mankind the power to discover new physical principles of the uni-

verse, following the nightmare of the Legalist “Great Proletarian Cultural Revolution” from 1965 to 1975 in the last decade of Mao Zedong’s life.

Lyndon LaRouche on Scientific Method

The appraisal of “values,” like the appraisal of beauty, is not a matter of opinion or taste. These concepts must be looked at from above—from what the genius of the 15th Century Renaissance, Nicholas of Cusa, described as “the Mind of God.” Lyndon LaRouche, in his [essay](#) “On the Subject of Metaphor” in the Fall 1992 issue of *Fidelio* magazine, addressed the

¹ See “Toward the Ecumenical Unity of East and West: The Renaissances of Confucian China and Christian Europe,” in *Fidelio*, Summer 1993, pp. 4-35; “The Taoist Perversion of Twentieth-Century Science,” in *Fidelio*, Fall 1994; and “The Deconstructionist Assault on China’s Cultural Optimism,” in *Fidelio*, Fall 1997, pp. 26-66.

question of the scientific method required for both the discovery of new physical principles of the universe and the composition of truly creative and beautiful works of art:

Lurking among the numerous accomplishments of modern science, there is the absurd, but popular delusion, that “physical science” is both “materialist” and “objective.” The worst, and most widespread forms of this delusion assume, first, that scientific method is essentially statistical, and that “mathematical science” is associated with measurement of forces acting along a straight-line pathway between two points.... The proof, that such definitions of “objective science” are absurd, is elementary; that proof is given as a central feature of this author’s introductory course in Leibniz’s science of Physical Economy.² We summarize the background considerations, point by point:

1. If man were a mere animal, that is, like a baboon, a creature innately disposed to what is called “primitive hunting and gathering” modes of social reproduction, at no time could the living human population of this planet have exceeded about ten million individuals

2. The increase in the human population, and the associated improvements in life-expectancy and standard of existence, are the cumulative benefit of what we may identify most simply and fairly as “scientific and technological progress.” The measure of this function of progress is an



Plato (428-348 B.C.) (left) and Aristotle (384-322 B.C.), in a detail of *The School of Athens* by Raphael.

increase in the potential population-density of the human species; this represents a higher *per-capita* standard of living and longevity, combined with a decrease in the total number of hectares required to sustain an average individual human life.

3. These improvements are expressed functionally through a succession of successful, radical changes in human productive behavior.... These changes in the behavior of successive levels of upward development of society are analogous in form or function, and effect, to successful, upward biological evolution of species among the lower forms of life.

4. Thus, the problem of both discovering and choosing a *Type* of sequential ordering of thought-objects, corresponding to a negentropically ordered succession of revolutionary scientific modifications in known scientific principles, is a *subjective matter*. It is a matter of discovering which subjective *Type* of creative-mental generation of thought-objects corresponds to a negentropic sequence of increase in man’s cultural potential for increasing potential population-density.

Thus, from this point of view, the subject of *science* is that higher-order of thought-object—a *transfinite*—which correlates formal scientific progress with rate of increase of this science-driven rate of growth of a culture’s potential population-density. In other words, man will fully increasing mankind’s power to perpetuate ever-more successfully his own species’ dominating existence within the universe.

This view is in contrast to the popularized materialist *mythos* of so-called “objective science,” of man as the contemplative mathematician-observer.

2. See Lyndon LaRouche, “In Defense of Common Sense,” Chapters II-IV; and “The Science of Christian Economy,” Chapters II-IV and VI, in *The Science of Christian Economy*, The Schiller Institute, Washington, D.C., 1991.

Plato—Confucius and Mencius

The Allegory of Plato's Cave in *The Republic* captures Plato's concept of scientific method. To discover the laws governing the universe, it is essentially meaningless to rely on the senses, to "measure" things according to their physical attributes as apprehended through the senses. Rather, like the shadows on the wall observed by those in Plato's cave, cast by firelight from people and activities taking place behind them, our sense perceptions of things and events are but the shadows of complex phenomena connecting everything and every action to virtually everything else in the universe.



Plato's Cave, attributed to Michiel Coxie the Elder (1499-1592).

Understanding nature, and discovering previously unknown principles of nature, depend profoundly on the uniquely human capacity to recognize contradictions in mankind's current state of scientific knowledge, then formulate original hypotheses to explain higher-ordered principles than those previously known, which reconcile the apparent contradictions, based on examinations of the harmonies underlying the phenomena. Such discoveries, when confirmed through practice over time to advance the potential population density, transform the entire body of knowledge specific to that stage of human development.

Plato wrote, in his autobiographical "Seventh Letter," after consideration of the idea (not the form) of a circle:

For in learning these objects it is necessary to

learn at the same time both what is false and what is true of the whole of Existence, and that through the most diligent and prolonged investigation; ... and it is by means of the examination of each of these objects, comparing one with another—names and definitions, visions and sense perceptions—proving them by kindly proofs and employing questionings and answerings that are void of envy—it is by such means, and hardly so, that there bursts out the light of intelligence and reason (*nous*) regarding each object in the mind of him who uses every effort of which mankind is capable.

We will see later the parallel understanding of the genius of the 12th Century Song Dynasty Renaissance, Zhu Xi.

Contrast Plato's concept with that of Aristotle, and you will immediately see why Aristotle was so beloved by oligarchs of all ages. From Aristotle's *De Anima*:

Since, according to common agreement, there is nothing outside and separate in existence from sensible spatial magnitudes, the objects of thought are all in sensible forms, both abstract objects and all the states and affections of sensible things. Hence, no one can learn or understand anything in the absence of senses, and when the mind is actively aware of anything, it is necessarily aware of it along with an image,

for images are like sensuous contents.... While in respect of all the other senses we fall below many species of animals, in respect to touch we far excel all other species in exactness of discrimination. That is why man is the most intelligent of all animals.

Man is intelligent due to the sense of touch. How can such idiocy be tolerated for all these centuries? Probably because Aristotle also asserts in his *Politics*: "For that some should rule and others be ruled, is a thing not only necessary, but expedient. From the hour of their birth, some are marked out for subjugation, others for rule." Totally unscientific, but most pleasing to oligarchs.

Plato lived from 428 to 347 B.C. Confucius lived a

century earlier, from 551 to 479 B.C., while his greatest follower, Mencius, lived at about the same time as Plato, from 372 to 289 B.C. I find the most perfect expression of Confucius' understanding of Mind and of the capacity of Man to comprehend the laws of the universe in an even more ancient poem from the *Book of Poetry*, quoted by Mencius, about which Confucius said: "The author of this poem knew indeed the principle":

Heaven, in creating Mankind,
Created all things according to Law,
Such that people can grasp these laws,
And will love virtue.

—*Mencius*, Book 6, Part 1, Chapter 8

Mankind, the poem asserts, is uniquely capable of mastering the laws of the universe, adding that discovering these laws comes from and inspires a spiritual quality, that of loving virtue. Virtue here is not just doing good or being kind, it is the advancement of knowledge of the principles that govern our universe, and applying them to the benefit of mankind.

Mencius addressed the difference between sense perception and true knowledge directly. Asked why, although all humans are human, some become great while others are petty (little), Mencius responded:

Those who follow their greater part become great. Those who follow their petty part become petty. The senses of hearing and seeing do not think, they are misled by things. Things interact with things and lead them astray. It is to the mind (heart) that is given the office of thinking. It is through thinking that man achieves virtue (truthfulness). If he does not think, he will fail to do so. This (the mind and the senses) are what Heaven has given us. If one stands fast on what is greater (the mind), then what is lesser (the senses) will not be able to take it from him.

—*Mencius* Book 6, Part 1, Chapter 15

A scholar of the 18th Century, Feng-shen Yin-te, is famous for a poem called "The Microscope," from 1798, which reflects this Mencian concept:

With a microscope you can see the surface of things.
It magnifies them but does not show reality.
It makes things seem higher and wider.
But do not imagine that you are seeing the things themselves.

But China also had its own "Aristotles." Chinese history continues to this day to be characterized by debates between Confucians and followers of Legalists

and/or Daoists, the two major schools of thought in Ancient China opposed to the Confucians. Xun Zi (298–238 B.C.), whose ideas gave rise to the Legalists, countered Mencius, rejecting his view that man is born essentially "good" due to the creative powers of the mind, arguing instead that man is born with nothing but "greed, envy, hate, and sensual passion" (sounding very much like Adam Smith!) such that "the nature of man is evil."

Like Aristotle, who argued that man is born without any inherent mental qualities, so, also, Xun Zi relegated the mind to passively recording sense perceptions, while "knowledge" was deemed merely the compilation

and organization of sensory data. Knowledge of the infinite, of Heaven, was impossible as well as useless, argued Xun Zi: "If man longs for what is in Heaven, then he is deluded. Only the sage does not seek to understand Heaven.... The really skilled man has things he does not do; the really wise man has things he does not ponder."

Although Xun Zi encouraged a pragmatic approach to using existing technology, he renounced real science, which derives from the investigation of underlying, unseen causes. In fact, he denies such unseen causes even exist: "You vainly seek into the causes of things. Why not appropriate and enjoy what they produce? Therefore I say—to neglect man and speculate



Xun Zi (298-238 B.C.).



The Daoists Lao Zi (left) and Zhuang Zi (Chuang Tze), rejected the idea of science itself.

about nature is to misunderstand the facts of the universe.”

As to the Daoists, Lao Zi and Zhuang Zi (Chuang Tze), much beloved by the back-to-nature cults in the West, they did not so much reject the scientific method of Plato and Mencius, of hypothesis and cognition over sense perception, but rejected the idea of science itself. Lao Zi’s infamous poem, beloved by British intelligence profiler of China and its history, Joseph Needham, reads:

Banish wisdom, discard knowledge, and the people
will be benefited a hundredfold.
Banish benevolence, discard righteousness, and
the people will be dutiful and compassionate.
Banish skill, discard profit, and thieves and
robbers will disappear.
Banish learning, and there will be no more
grieving.

Zhuang Zi (369–286 B.C.) expressed his hatred of science and technology in his description of an imagined meeting between Confucius and a peasant who is scooping water with a cup from a trench to irrigate his field. Confucius says: “If you had a machine here, in a day you could irrigate one hundred times your present area. The labor required is trifling as compared with the

work done. Would you not like one?” He describes a well-sweep, whose foot-driven pulley with wooden scoops lifts water from an irrigation ditch. The Taoist peasant denounces Confucius, insisting that one who is cunning with instruments must also have a scheming heart, cannot be pure and incorrupt, and is thus not a fit vehicle for the Dao. “It is not that I do not know of such things,” he says, “I should be ashamed to use them.”

The Scientific Method of the Renaissance—China and Europe

The greatest eras of scientific development and

population growth in China and in Europe fell a few centuries apart—the 11th and 12th centuries in China, during the Song Dynasty, and the 15th and 16th centuries in Europe. In both cases, a major spur to the many discoveries in science and art was the revival of classical culture—in Europe, the revival (or rediscovery) of Platonic Greek thought, and in China the reconstitution of Confucianism, sometimes called Neoconfucianism. I will examine here the underlying scientific method which drove these bursts in human knowledge and nation-building in China and in Europe.

Shen Guo (or Shen Gua, 1031–1095) was a scientific, military, and political genius who was associated with the great reformer Wang Anshi (Wang An-shih, 1021–1086). Wang had been appointed to the Hanlin Academy and brought in to the capital Kaifeng in 1068 (about the time of the Norman conquest of England), at a time of near bankruptcy of the federal government and severe poverty among the peasantry.

The peasants were subject to the usury of private landowners and merchants, often paying 100% interest on loans between planting season and the harvest. From various positions in the government, including first privy councilor to the Emperor, Wang Anshi implemented policies mandating government intervention into the economy, many drawn from Mencius. Mencius had famously said:

There are people dying from famine on the roads, and you do not issue the stores from your granaries. When people die, you say, “It is not owing to me; it is owing to the year.” In what does this differ from stabbing a man and killing him, and then saying, “It was not I; it was the weapon?”

Wang Anshi’s “New Policies” were extensive. He reestablished the ancient “Ever-Normal Granaries” (government storage of grain in order to keep prices stable and to counter periods of crop failure), and launched a government loan system to provide 20% credit to farmers. He set up coordinated trading centers in every part of the country to protect against regional shortages. He oversaw the government construction of dykes and irrigation systems, while taxes were assessed depending on the fertility of the soil and access to water. Land reclamation and measures to control rivers were implemented. He rebuilt the military, and reformed the examination system to emphasize an understanding of the principles of the Confucian classics rather than rote memorization, adding topics related to contemporary law, science and medicine.

Shen Guo was the key scientist designing and implementing many of Wang Anshi’s reforms. The great China scholar Nathan Sivin wrote, “I evaluate Shen’s life as a case study in the reconcilability of Confucianism and science, which the conventional wisdom among Sinologues for over a generation has tended to place in opposition.” Shen’s accomplishments, both before joining the central government and while working with Wang, were legion. As reported by Sivin (in the *Complete Dictionary of Scientific Biography*, 1977), they included:

- He reclaimed several hundred thousand acres of swampland for agriculture, based on his own cartographic survey, deploying fourteen thousand men in the



Wang Anshi (1021-1086), a great reformer.



CC photo/Hans A. Rosbach
A bust of Shen Guo (1031-1095) at the Beijing Ancient Observatory.

project. He calculated that the expanded grain output and protection from floods returned a tenfold profit on the cost of the project within a year.

- His study of astronomy led to the proof of the sphericity of the sun and the moon based on the phases of the moon, and documentation and explanation of the retrogradation of the lunar nodes. He became Director of the Astronomical Bureau in 1072, where he conducted a major reform of the calendar based solely on the sun, eliminating existing references to the moon. He wrote: “As for the waxing and waning of the moon.

Although some phenomena such as pregnancy and the tides are tied to them, they have nothing to do with seasons or changes of climate; let them simply be noted in the almanac.”

- He established a daily monitoring of the heavens using new measuring instruments over a five-year period, although the project was disrupted by political intrigue. He designed a new gnomon to fix the solstices; a new armillary sphere, and a new clepsydra to measure the times of observation. He determined that the polar star was variable, and that the then-current pole star rotated around the celestial pole by a 3-degree arc. (He did not explore the precession.)

- Shen is thought to be the first to use a compass, which he used in mapmaking, completing an atlas of China in 1087 (which has not survived) on a 1:900,000 scale. His work on the celestial pole also allowed him to determine that the compass did not point to true north or south.

- Shen discovered climate variability by observing

petrified bamboo in a region too far north for bamboo in his own time. He wrote: “Can it be that in antiquity the land was lower and the climate moister, suitable for bamboo?”

- Shen discovered shells “running horizontally through a cliff like a belt,” concluding that “This was once a seashore, although the sea is now hundreds of

miles east. What we call our continent is an inundation of silt.... This mud year by year flows eastward, forming continental land.”

- Shen studied the relationship of numerical relations and the musical scales. He wrote two chapters on mathematical harmonics and stringed instruments, the resonance of octaves and strings on different instruments, as well as composition and performance.

Most important for our purposes here is Shen Guo’s direct reflection (in his *Dream Pool Essays*, composed during his retirement) on his own scientific method. Sivin emphasizes this, in part as a refutation of the British scientist and China scholar Joseph Needham (with whom Sivin collaborated for several years), who argued that Confucianism was incompatible with science. (Needham went so far as to argue that Daoist alchemy was the source of the scientific discoveries of ancient China. For this author’s refutation of Needham, see his 1995 [obituary](#) in the April 21, 1995 issue of *EIR*.) Despite his certification as a biochemist, Needham did not himself understand what science is.

It is useful to quote from Nathan Sivin’s insight into this issue with regard to Shen Guo, in which he specifically differentiates Shen’s method from that of the positivists, insisting that true science takes place in the mental process of examining the causality taking place behind the phenomena:

[The Chinese] sense of cumulative enterprise in mathematical astronomy did not imply the positivistic conviction that eventually the whole pattern could be mastered. Instead from the earliest discussions there was a prevalent attitude that scientific explanation—whether in terms of number or of abstract qualitative concepts, such as yin-yang—merely expressed, for human purposes, limited aspects of a pattern of constant relations too subtle to be understood directly. No one expressed this attitude more clearly than Shen. In instance after instance he emphasized the inability of secular knowledge to encompass phenomena: the reason for magnetic declination, why lightning striking a house can melt metal objects without burning the wooden structure, the way in which every constant and every mean value obscure continuous variation of every parameter. In his official proposals on the



Public domain

A replica of a Ming Dynasty armillary sphere in the courtyard of the Ancient Observatory in Beijing.

armillary sphere, he argued that measure is an artifact, that it allows particular phenomena to be “caught” (*po*) in observational instruments, where they are no longer part of the continuum of nature. That Shen saw as the condition of their comprehensibility.

Shen Guo also wrote commentaries on the works of Confucius and Mencius. He referred directly to the passage by Mencius quoted above, regarding those who rely solely on sensory perception rather than the creative powers of mind as “small men.” He reflected on passages in the *Book of Changes* to the effect that (in Sivin’s paraphrase): “understanding is a matter of the clarity and divinity within one’s mind,” and that this divinity, for Shen, is “the moral center of the individual.”

Shen was particularly fascinated by strange occurrences which could not be explained by the current state of knowledge, such as tornados, and the fact that lightning striking a house melted the metals without burning the wood. When he could not discover the underlying principles, he explicitly posed that there had to be intelligible causes, but that it would be up to future generations to discover them.

Shen relied on his belief in the coherence, but non-linearity, of the universe, including the mind itself. He formulated scientific hypothesis through metaphor, like Kepler, whose fundamental discoveries about the nature of the solar system expressed in his laws of planetary motion were predicated on a belief that the har-

monic relationships in music must, of necessity, exist in the relationships of the heavenly spheres as well. So also, Shen Guo, who was the first Chinese to intently study the motions of the planets, hypothesized an explanation for the apparent retrograde planetary motion similar to the Ptolemaic epicycles, but rather than Ptolemy's circular epicycles, Shen suggested that the planets follow the course of a willow leaf.

We look forward to future researches that will shed further light on the thinking of this great genius of almost a millennium ago, from another culture than ours.

It is useful here to note Kepler's insight into the superiority of a creative discovery in the mind, as opposed to simply learning something through observation. Galileo published his *Sidereal Messenger* in 1610, describing the results of his observation of the heavens after looking through a telescope for the first time. He was the first to observe the moons of Jupiter and the phases of Venus, confirming that not all bodies circle the Earth, and that Venus circled the Sun. Kepler, upon reading the report, responded with a letter, *Conversation with Galileo's Sidereal Messenger*, in which he expressed his delight in hearing of the new observations, but added:

What Galileo recently saw with his own eyes ... had many years before not only [been] proposed as a surmise, but thoroughly established by reason.... Surely those thinkers who intellectually grasp the causes of phenomena, before they are revealed to the senses, resemble the Creator more closely than the others, who speculate about the causes after the phenomena have been seen.

It is of note that the Jesuits who were preparing to travel to China in 1618 attempted, over a period of years, to get help from Galileo in preparing documents to take with them to China, but to no avail. When the request was extended to Kepler, he responded with a wealth of material, and maintained correspondence with the Jesuits in China throughout his life.

Zhu Xi, Cusa and Leibniz

The Song Dynasty Renaissance of the 11th and 12th centuries culminated in the work of Zhu Xi (Chu Hsi, 1130–1200), whose dramatic advancements in Confucian ideas served as the bedrock of the education system throughout the following Imperial dynasties. Zhu Xi had studied the works of Shen Guo, and it could be said that his formulation of a new philosophic framework of the Confucian canon was predicated on the scientific method developed by Shen Guo, which itself drew on the concepts of Confucius and Mencius regarding man and nature.

This author has elaborated elsewhere the parallels between Zhu Xi and the creative genius of the European Renaissance, Nicholas of Cusa (1401–1464). A leading follower of Cusa, the 17th–18th century polymath Gottfried Wilhelm Leibniz, upon studying the works of Confucius and Zhu Xi, as translated by the Jesuit missionaries then in China, concluded that the philosophic view of man and nature underlying the scientific method of these Confucian scholars and scientists was both consistent with the Christian view developed during the European Renaissance, and, in particular, that Zhu Xi's notion of "Principle" (Li) was coherent with his own notion of the "Monad."³

Both Zhu Xi and Leibniz coined terms to represent the Platonic and Mencian notion of an unseen reality behind the appearances, connecting every object and every action to a dynamic coherent universe. Zhu Xi gave a new meaning to the term Li (理), meaning "Principle," signifying a universal, eternal Principle (Li), sometimes called the Supreme Ultimate, which contains all things in the created universe, indivisible, beyond time and place, and prior to all created things. But he emphasizes that Li is also present in all created things, governing the order of things and events. In order to understand the nature of anything, to grasp the



Johannes Kepler (1571-1630) discovered the laws of planetary motion.

3. See "The Deconstructionist Assault on China's Cultural Optimism," in *Fidelio*, Fall 1997, pp. 26-66; and "A 'Grand Design': Kepler and Renaissance in China," in *21st Century Science & Technology*, Summer 1996, pp. 51-64.



Portrait by Andreas Scheits, 1703



Gottfried Wilhelm Leibniz (1646-1716), conveyed his study of Confucius and Zhu Xi to Europeans in his journal, Novissima Sinica, first published in 1697.

principle of it, one must investigate the relation between the individual li and the universal Li.

Leibniz wrote “The Monadology” in 1714. This was 17 years after his publication of *Novissima Sinica*, (*News from China*) in 1697, in which he analyzed the writings of Confucius and Zhu Xi for his European audience. His use of the term Monad was certainly informed by his understanding of Zhu Xi’s notion of Principle (Li), about which Leibniz had written:

The first principle of the Chinese is called Li, that is, Reason, or the foundation of all nature, the most universal reason and substance; there is nothing greater nor better than Li.... [It] is not at all capable of divisibility as regards its being and is the principal basis of all the essences which are and which can exist in the world. But it is also the aggregation of the most perfect multiplicity because the Being of this principle contains the essences of things as they are in their germinal state. We say as much when we teach that the ideas, the primitive grounds, the prototypes of all essences are all in God.

Leibniz defines the Monad as “simple substance..., by simple we mean without parts,” but which is continuously changing. No two Monads are alike, as no

two things in the universe can be exactly alike. All composites, he asserts, are made up of such Monads. He essentially defines the soul as such a simple substance, and states that animals as well as humans have a soul, but of a different nature, since animals have perception but no creativity.

That Leibniz was reflecting on Zhu Xi’s Principle (Li) (among other ideas of his own and others) is clear from the following from the “The Monadology”:

God alone is the ultimate unity, or the original simple substance [monad], of which all created or derivative monads are the products, and arise, so to speak, through the continual lightning-like sparks of the divinity from moment to moment, limited by the receptivity of the creature to whom limitation is an essential.

Philosophy and Scientific Method

Those who cling to Aristotelian thinking often argue that the philosophic outlook of a person is distinct from his or her scientific outlook and research. I would argue that this dishonest assertion is due to the inability to explain why those with a philosophic view of the world consistent with that I have described as Platonic and Confucian have made essentially every truthful scientific discovery throughout history—if you understand

“discovery” to mean a discovery of a universal principle of nature, rather than merely an observation of something never seen before, as with Galileo’s telescope observation.

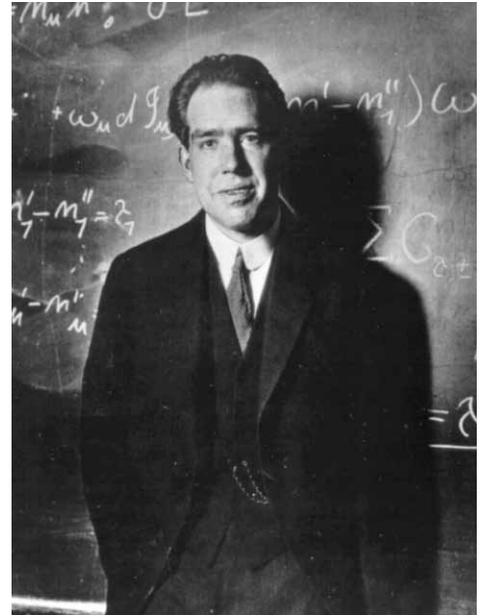
Kepler was confronted with this problem when virtually every scientific school of his day was willing to accept the rather absurd idea of the Ptolemaic epicycle to explain the retrogression of the planetary paths, using the argument that the epicycle theory served well enough for forecasting (although this was also false). Kepler, using the mind rather than mere observation, and based on the Platonic notion of the lawfulness and coherence of all phenomena in the universe, hypothesized the elliptical paths around the sun, and the cause for the placement of the orbits in the solar system based on the harmonies within the musical scale, and then carried out the necessary crucial experiments to confirm the hypothesis.

Similarly, Albert Einstein confronted the Copenhagen School of Niels Bohr and Werner Heisenberg in the effort to explain the apparent contradictions—the wave-particle paradox—in the propagation of light. At the famous 1927 Solvay Conference of the world’s leading physicists, Bohr argued that there is no answer to the problem, because of Heisenberg’s so-called “Uncertainty Principle”—that at the atomic level the phenomena can not be observed, even with instrumentation, since the particles involved in the act of observation impact the phenomena themselves. Therefore, Bohr argued, the best we can do is a statistical analysis of such phenomena and calculate the probabilities of possible outcomes—i.e., if we can’t see it, we can’t know it. Bohr wrote in his 1932 *Light and Life*:

This very situation forces us to renounce a complete causal account of the light phenomena and to be content with probability laws based on the fact that the electromagnetic description of energy transfer [i.e., classical mechanics] remains valid in a statistical sense.



Albert Einstein



Niels Bohr

Einstein, a Platonist, responded that “God doesn’t play dice,” and spent much of his life trying to find a unified field theory that would explain the nature of light in a unified manner. Like Shen Guo, he believed that if he failed to discover the higher-ordered principle, that simply meant it would require future generations to make the discovery, since a cause had to exist and to be intelligible.

Wang Yangming

A brief note on the “Aristotelian” counter to Zhu Xi’s concept of Principle (Li) will further illuminate this issue. Zhu Xi had boldly applied his discovery of the concept of Principle by positing that a final sentence had been “accidentally” left out of the famous “Great Learning” (大学) from *The Book of Rites*. The passage reads:

The ancients, wishing that all men under Heaven keep their inborn luminous virtue unobscured, first had to govern the nation well; wishing to govern the nation well, they first established harmony in their household; wishing to establish harmony in their households, they first cultivated themselves; wishing to cultivate themselves, they first set their minds in the right; wishing to set their minds in the right, they first developed sincerity of thought; wishing to have sincerity of thought, they first extended their knowledge to the utmost.



Zhu Xi (1130-1200)



Wang Yangming (1472-1529)

To this, Zhu Xi added his “rediscovered” concluding sentence:

The extension of knowledge lies in fully apprehending the principle of things.

In other words, sense perception alone is inadequate in order to extend knowledge, and thus would lead to insincere thoughts, minds set in the wrong direction, a lack of self-cultivation, disharmony in the family, poorly governed nations, and obscured inborn luminous virtue. True knowledge required understanding the causes and the Principles (Li) underlying phenomena. The Supreme Ultimate doesn't play dice.

To this, a later official, Wang Yangming (1472–1529) in the Ming Dynasty, who is unfortunately lumped together with Zhu Xi under the category of “Neo-Confucianism” (which is as foolish as linking Plato and Aristotle as co-thinkers in “Greek thought”), set out to prove Zhu Xi wrong.

Arguing in like manner to the anarchists of today that there is no good or evil, and that knowledge only comes from action, Wang Yangming rejected Zhu Xi's addition to *The Great Learning*, insisting that Zhu Xi's Principle (Li) embracing all things, did not exist, that coherence of the universe outside the individual mind did not exist. To prove this, he and a friend determined to fully examine the bamboo in his father's garden, to discover if the bamboo's “principle” could be ascertained. After several days of such navel-gazing, both

fell sick and retired, concluding that Principle (Li) did not exist.

The conflict between Wang Yangming and Zhu Xi remains a serious and intense issue within China today, as does the Plato-Aristotle issue in the West. The poisonous British Imperial philosophy, embracing the colonial “geopolitics” of zero-sum, Darwinian survival of the fittest, and the reductionist mechanism of the likes of Bertrand Russell, must be confronted and destroyed, to be replaced with a new Renaissance for humanity as a whole.

The potential for such a new Renaissance is within our grasp, despite the apparently insurmountable “perfect storm” of a deadly pandemic, mass starvation, an economic and financial tsunami, and the mounting threat of nuclear confrontation and world war. And yet three space-ships are now on their way to Mars, a medical revolution is in the works in the drive to find a vaccine for COVID-19, and there is a discussion taking place between world leaders to hold a Summit of the heads of state of the permanent members of the UN Security Council—Donald Trump, Vladimir Putin, Xi Jinping, Emmanuel Macron and Boris Johnson.

Such a meeting is absolutely necessary, both to avert a war, and to collaborate in combating the virus, bringing economic development at long last to the former colonized nations of the world, and to establish a new international financial system which can foster peace through development.

The deteriorating relationship between the United States and China is orchestrated by the forces of Empire who will go to any extreme to prevent such a new Renaissance. The anti-scientific, Aristotelian, Legalist way of thinking has created the insanity of the Green New Deal, the anti-human intention to reduce the human population, to sustain the bankrupt financial system through austerity and genocide. A scientific method based on the recognition of the divinity of man through the gift of creative reason can and must be embraced for this moment of crisis to result not in global destruction, but a new Renaissance based on the common aims of Mankind.

Artemis and the True Science of Human Advancement

Aug. 16—Today, the LaRouche PAC held a webinar on the critical opportunity that now exists for effecting profound revolutions in mankind’s understanding of science and the universe, as well as for unleashing powerful and rapid industrial and scientific advancement in the United States, and every nation on Earth.

The LaRouche PAC description of the event read as follows:

Michael Steger, Kesha Rogers, Brian Lantz and Ben Deniston will advance Lyndon LaRouche’s drive to lift humanity into an incredible future. Already, the Artemis program is the greatest endeavor of exploration in human history, and represents an evolutionary leap in mankind’s existence in the Universe, something only equivalent to the emergence of life onto land from the primordial oceans 500 million years ago.

But as the political establishment, intelligence community, and mainstream media are all well aware, this program—as Apollo before it—is critical to the restoration of a pro-growth, industrial and manufacturing-based United States economy, and to a new global system based not on monetary globalization, but based on the industrial development of all nations and people. Therefore, this effort is up against the Empire. Join the fight for this future.

In her remarks to fellow participants, Kesha Rogers

demonstrated the critical importance of NASA’s Artemis program to land the first woman and the next man on the Moon by 2024, both for America and all of humanity. She quoted from remarks by President Trump at the signing ceremony for Space Policy Directive 1, on Dec. 11, 2017:

The directive I am signing today will refocus America’s space program on human exploration and discovery. It marks an important step in re-



NASA

The 2017 Class of Astronauts participates in graduation ceremonies at the Johnson Space Center, Jan. 10, 2020. This is the first class to graduate under the Artemis program. They are now eligible for assignments to the International Space Station, Artemis missions to the Moon, and ultimately, missions to Mars.

turning American astronauts to the Moon for the first time since 1972, for long-term exploration and use. This time, we will not only plant our flag and leave our footprint, we will establish a foundation for an eventual mission to Mars, and perhaps, someday, to many worlds beyond.

Brian Lantz then delivered a *tour de force* on the



LPAC-TV



LPAC-TV

In the webinar, Kesha Rogers and Brian Lantz put forth Lyndon LaRouche's drive to lift humanity into an incredible future.

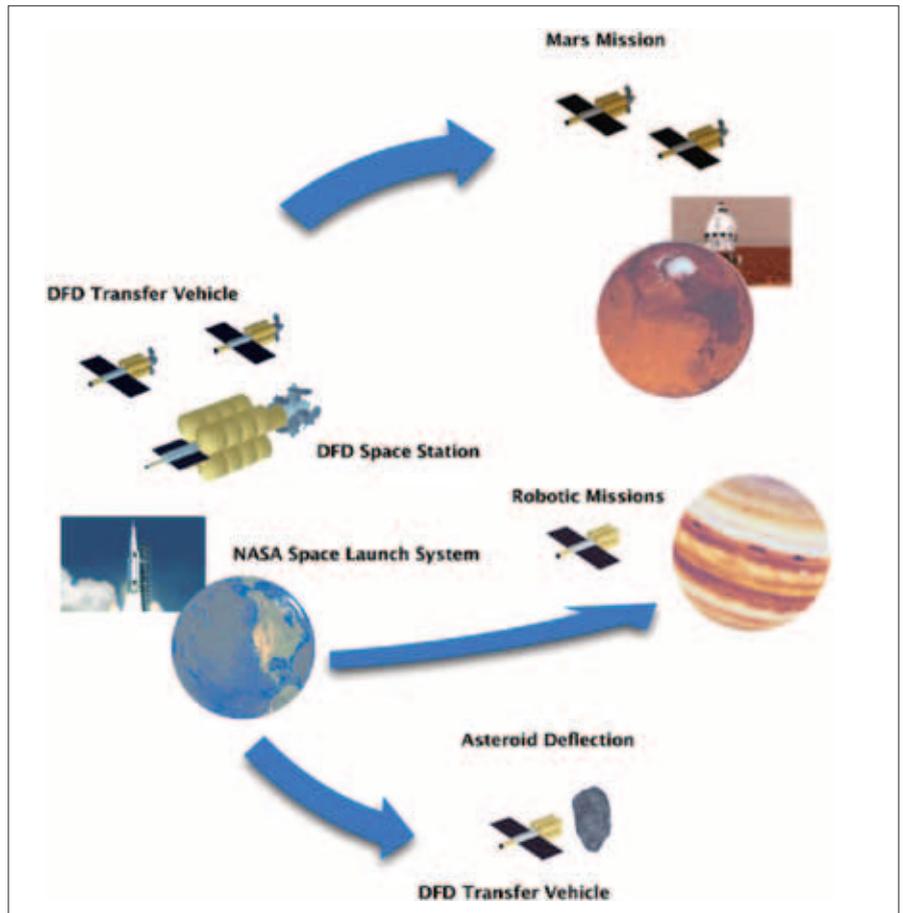
incredible scientific and technological challenges posed by the Moon-Mars mission, how those challenges are now being met, and how this can be used to bring about dramatic new opportunities for America's young adults through a "Space CCC" program.

Ben Deniston explored how an aggressive Moon-Mars mission, combined with further concurrent space exploration, will pose axiomatic scientific challenges to mankind's understanding of the universe. He referenced the seminal [work](#) by Lyndon LaRouche, "The Science and Technology Needed to Colonize Mars," originally published in 1986, to clarify the key issues:

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.

The implications of the discussion that took place at this event are wide-ranging and provocative. The full video is available [here](#).



NASA

Brian Lantz used this NASA graphic to discuss a number of other future roles for Direct Fusion Drive (DFD) in building out mankind's interplanetary infrastructure platform over the coming decades, in addition to getting astronauts safely to Mars and back at 1g acceleration/deceleration.

III. The Truth About Bretton Woods

Let Us Make for Ourselves an Order That Guarantees the Long-Term Survivability of Our Species

by Helga Zepp-LaRouche, President and Founder of the Schiller Institute

We present here an edited transcript of Mrs. Zepp-LaRouche's keynote address to an all-day Spanish-language Schiller Institute videoconference, August 15, 2020, titled "Towards a World Summit of Powers in September: The LaRouche Plan for a New Economic and Security Architecture for the Planet." The video of her presentation can be viewed [here](#). Subheads and embedded links have been added.

Let me greet you here from Germany. This event is taking place at an unprecedented moment in history. If you look at the world situation in its complexity today, I think you will agree that we are confronted with a situation beyond the comprehension of most people only a couple of months ago. We are confronted with a pandemic. This pandemic is not yet under control by any means. We have, as a consequence of that pandemic, an incredible economic collapse, some say the largest since the end of World War II. Especially in the developing countries, where 60% of all people work in the informal economy—meaning that they're living from hand-to-mouth—a lockdown immediately threatens them with starvation.

We have the danger of famine, which is becoming all the greater because of a collapse of agricul-

ture. In Africa and Asia, many countries are threatened with a locust plague, the likes of which has not been seen for several decades. In many countries people have lost trust in their governments, in their leading institutions, because in many parts of the world, the people feel that their governments don't represent their interests in the face of this crisis.

Where will the solution come from under these extraordinary circumstances? Can it come from protests, demonstrations? Obviously not. Can it come from the

existing institutions—the G7, the G20? Well, that is very unlikely. My late husband Lyndon LaRouche campaigned for many years to defeat the powers that be, which are responsible for this crisis—this is the British Empire located in the City of London and Wall Street, and naturally their collaborators around the world. In order to have a power against it, which can change the agenda and establish a new system, the four most powerful nations of the world must unite—the United States, China, Russia, and hopefully India.

Tensions between the United States and China are rising. All kinds of reasons are being given: that China supposedly wants to take over the world; that China is responsible for the Covid-19 pandemic. The reality is that China is



EIRNS/Stuart Lewis
COVID-19 testing in Leesburg, Virginia, May 21, 2020.

rising to become a leading power, if not *the* leading power in the world, while not threatening to replace the United States as a hegemon. Nevertheless, we are on the verge of a potential war between the two largest economies, the United States and China. This is why I raise the question of where the solution will come from in these circumstances. In the beginning of January of this year, I issued a call that it must be minimally the United States, Russia, and China that must overcome geopolitics and establish common rules to meet the challenges which confront all of mankind.

A few days later, independent of my call, President Putin of Russia called for a summit of the Permanent Five countries of the UN Security Council to have a discussion and work out principles for how to guarantee the long-term survival of civilization, how to give the world principles so that the dangers which we confront right now can be overcome.

One of the purposes of this conference is to bring together all the countries from Latin America and the Spanish-speaking world to play a role in that. But before I come to the point of what needs to be done to accomplish that, I want to say that what is needed is a chorus of international voices—of governments, of individuals, of institutions all working together to demand a solution to this crisis from the top. We need a complete change of system. Let me review who we are, since many people on this program as participants or viewers may not be aware of the crucial role the LaRouche organization and Lyndon LaRouche played in this fight.

The Schiller Institute

Given the fact that we have today the very famous date of the 15th of August, this is not only Ferragosto in Italy, but it is also the day when, 49 years ago, President Richard Nixon ended the Bretton Woods system as established in the postwar period. He decoupled the dollar from gold; he ended the system of fixed exchange rates and replaced it with floating exchange rates. Not many people, if any, other than my late hus-



Russian President Putin has called for a five-power summit to meet mankind's challenges.

kremlin.ru

band Lyndon LaRouche, recognized the historical significance of that move. He had studied the systemic flaws of the Bretton Woods system as it had existed before. When Franklin D. Roosevelt died, the Bretton Woods system was not carried out as he had intended, but it was more designed by Winston Churchill and President Harry Truman, who was really a little man completely influenced by Churchill.

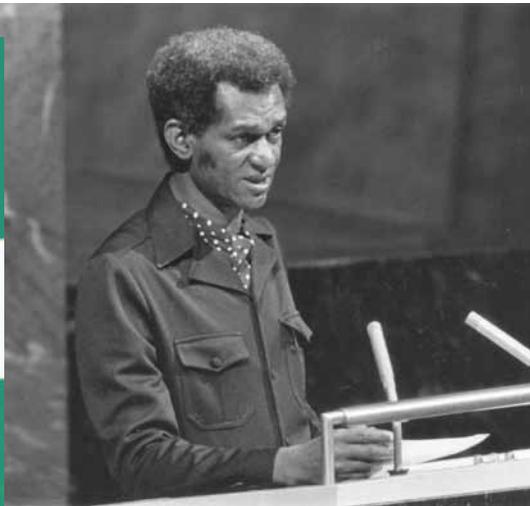
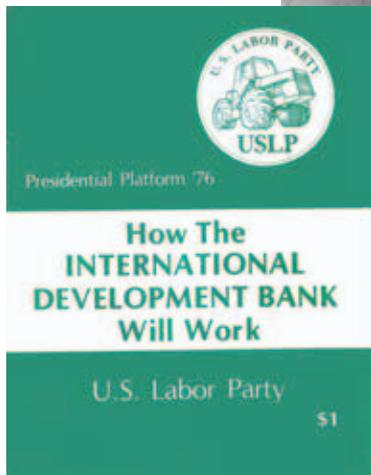
The Bretton Woods system, as implemented, left out the most important aspect, namely,



President Richard Nixon suspends the direct convertibility of dollars into gold, thus ending the Bretton Woods system, August 15, 1971.

that Roosevelt had intended it to be used to overcome the underdevelopment of the developing countries and increase the living standard of the entire world population, as the precondition for peace and a stable order for the postwar period. That was left out, and therefore, when Nixon made these moves, my husband immediately recognized the direction of the powers that be of the City of London, of the Wall Street financial powers. He said that if you continue on this path, that is, to implement monetarist policies, then you will have the danger of fascism, the danger of a new depression, the danger of war. Or, you will establish a completely different new, just world economic order.

Lyndon LaRouche also immediately recognized



EIRNS

Fred Wills, Guyana's Minister of Foreign Affairs, presented LaRouche's International Development Bank proposal to replace the IMF to the UN General Assembly in New York City on September 8, 1976.

that the policies being conducted by the IMF at that moment and the World Bank—the infamous conditionalities—were denying the developing countries the ability to invest in health systems, infrastructure, and education systems. So, he commissioned a Biological Holocaust Taskforce, with the task of investigating the impact of these policies of the IMF on developing countries. After having done intensive studies, he said that these policies were bringing about the danger of pandemics, because you cannot continue to lower the living standard of entire continents over a long period of time without inviting the re-emergence of old diseases and the development of new pandemics.

He immediately started to provide solutions. One of the most existential, fundamental solutions he proposed was on April 27, 1975 when, after a trip to Iraq, where he had met with many leaders of developing countries, he gave a press conference in Bonn [West Germany], proposing the formation of the International Development Bank (IDB) which was to replace the IMF. That concept would have worked, and immediately people associated with Lyndon LaRouche all over the world started to discuss that with the Non-Aligned Movement for one entire year. LaRouche's proposal would have established an international development bank to provide \$400 billion in credit every year in long-term, low-interest credit for well-defined projects of industrialization in Africa, in Latin America, in Asia.

It would have started the kind of technology transfer which, given the fact that this is now 45 years ago, if implemented would have transformed all these coun-

tries into blossoming gardens. That idea was very well-received by the countries of the Non-Aligned Movement, who basically adopted LaRouche's entire proposal in their final resolution in Colombo, Sri Lanka, in 1976. That was three-quarters of the human race saying, "We want a New World Economic Order."

At that time, the Foreign Minister of Guyana, Fred Wills, presented the IDB proposal to the UN General Assembly in New York. There was widespread support for it, and it could have been implemented. Well, it was not, because you had the biggest backlash from the City of London, from the Brit-

ish Empire—which is essentially all the central banks, investment banks, insurance companies, hedge funds, and generally the military-industrial complex associated with these financial powers. And you had the biggest destabilization against Indira Gandhi, against Mrs. [Sirimavo] Bandaranaike from Sri Lanka. Zulfikar Ali Bhutto, the Prime Minister of Pakistan, was killed. As Henry Kissinger stated, which we published at the time, through documents that are unchallenged to the present day, Kissinger said, "We will make a bloody example of Bhutto," because he challenged this present system. Also, President Gen. Juan Velasco Alvarado from Peru was destabilized.

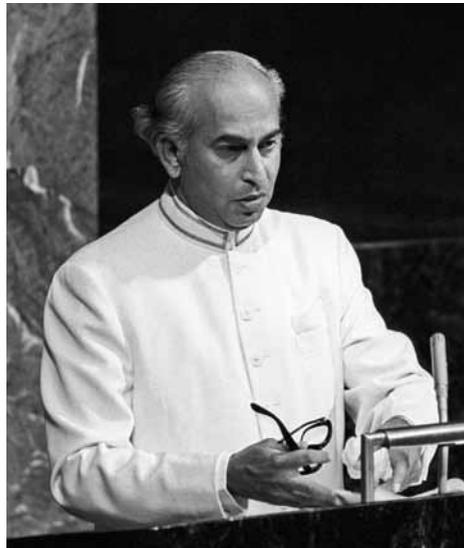
Comprehensive Development Plans

But my husband and his movement continued to fight. The first comprehensive development plan for Africa, we presented in a big conference in Paris in 1976. In 1975 my husband had already proposed a development plan for Southwest Asia, called the Oasis Plan. This was the idea to develop fresh water through nuclear energy desalination of large quantities of ocean water, and otherwise deploying other modern technologies as they are used right now in Israel and some of the Gulf states.

In 1982, my husband was invited by President José López Portillo to come to the defense of Mexico when the peso was under attack; huge amounts of capital flight took place. He wrote a program for the development of the entirety of Latin America, called *Operation Juárez* which, like the Africa plan, started from the as-



UN
Indira Gandhi, Prime Minister of India.



UN
Zulfikar Ali Bhutto, Prime Minister of Pakistan.

veloping countries; and stop using these countries as proxy partners in wars between the superpowers.

This policy was continued with Lyn's and my proposal for what to do after the collapse of the Soviet Union, namely, to build a Eurasian Land-Bridge connecting the populations and industrial powers of Europe with those of Asia. And to use that New Silk Road to connect with all these other development projects.

The Empire Strikes Back

These were very concrete projects. They could have been implemented by the European

assumption that both Africa and Latin America had no infrastructure to speak of, due to the colonialist tradition. So, the first step of the industrialization of these two continents would have to be the development of large-scale infrastructure projects: ports, railways integrated with highways, production of energy, distribution of energy, communications systems—all as the precondition for the development of industry and the industrialization of agriculture.

In 1982, we also worked with Prime Minister Indira Gandhi of India, on a 40-year development plan for India, which she started to implement until she was assassinated. It was continued by her son, Rajiv Gandhi, and in a certain sense, that same idea of bringing technology transfer to the developing countries was also the core idea of the Strategic Defense Initiative, which my husband had worked on, which was adopted by the Reagan Administration. The SDI was a revolutionary concept to dissolve the military blocs of NATO and the Warsaw Pact; develop new technologies to make nuclear weapons obsolete; use the new technologies from the military area in civilian applications as a gigantic science driver and use that to increase the productivity of the world economy and then transfer that technology to the de-

nations, by the United States, by the industrialized countries of Asia, such as Japan. But they decided to go in the opposite direction. Already in the beginning of the 1970s, at the same time my husband was talking about the New World Economic Order, Kissinger wrote something called NSSM-200 (National Security Study Memorandum 200), promoting the idea that any kind of development of the developing sector had to be stopped; especially in population-rich countries. They should be “encouraged” (to put it diplomatically) to reduce their



EIRNS/Fernando Quijano
In the course of a September 1979 visit to Mexico, Lyndon LaRouche visited the Teotihuacán pyramid site. He is seen here surrounded by Mexican school children.

populations through birth control, through limited access to raw materials, because these raw materials belonged to the United States, according to Kissinger.

At the same time, the Club of Rome launched an incredible campaign about the so-called limits to growth, based on a fraudulent computer model, where the end result was programmed first—namely that you had to stop growth and go to zero-growth in order to then say that all countries had to go for Green ideas, for zero-growth. That was really the beginning of this very negative ecology movement which now dominates much of Europe, and which is also prevalent in the Democratic Party in the United States, and among some other circles.

At the same time, the U.S. Federal Reserve, from about 1973 on, started to push the idea of a controlled disintegration of the world economy, an idea promoted by the Trilateral Commission and implemented by the Jimmy Carter administration from 1977 on. That whole thing was really an effort to bring the world back under the control of the British Empire, keep the Third World in a colonial status, and run the world increasingly under the control of the Anglo-American establishment or the Anglo-American special relationship.

That factor, of the Anglo-American control of the world, is something every patriot and every world citizen should study. There is no better way than to look at what Kissinger actually said when he, on May 10th, 1982, went to Chatham House in London and actually bragged that he *de facto* always briefed the British much better than he informed his own government. He really revealed himself as a British agent and his activity pointed to the manipulation of U.S. policy by the British ever since.

That blatant admission of Kissinger that he was *de facto* working as an agent of this Empire, caused my husband to write an absolutely profound [article](#) in 1982 called *The Toynbee Factor in British Grand Strategy*, which I advise every participant in this conference to study, because it explains a lot of what is going wrong in the world today. It describes as the “Toynbee factor”

the manipulation of the American establishment, but also of the general public. How to turn people into hedonists who follow their impulses, and how to cause an estrangement of the citizen from a rational comprehension of the major national policy issues which determine their lives and their futures.

It was that policy which was implemented after the collapse of the Soviet Union by the neo-cons in the United States—the Project for a New American Century—to try to create a unipolar world. Once the Soviet Union had disappeared, so did the need to keep up technological progress to be combative with the Soviet military.

The oligarchy went fully in the direction of deregulation of the financial system and the abolition of Glass-Steagall. And after Glass-Steagall was abandoned, China was invited to join the World Trade Organization (WTO) with the firm expectation that that would lead to China adopting the values of the Western liberal economic system of Western democracy.

And the dream or utopia of Francis Fukuyama, the American historian, about the end of history, was supposed to prevail and the whole world become submissive under the control of the system of the British Empire by just submitting to the rules of that system.

At that time also, the Green agenda was escalated, which later was announced as the great transformation of the world economy. The decarbonization, the elimination first of nuclear energy, then all fossil fuels, which has, to the present day, greatly influenced many countries. That Green policy has been adopted almost completely by the European Union.

China Goes in the Right Direction

But there was a problem. China and many developing countries recognized that under that system, they would not have a chance. So, following the Asia crisis in 1997, but especially after the big financial crisis of 2008, China took a completely different policy direction. With Deng Xiaoping’s opening and reform policy



EIRNS/Stuart Lewis

Henry Kissinger's idea that any kind of development of the developing sector had to be stopped, especially in population-rich countries, became official U.S. foreign policy in 1974.



NASA

China takes the road to development. Above, Deng Xiaoping (center foreground) and his wife Zhuo Lin are briefed by Johnson Space Center Director Christopher C. Kraft (right foreground) on February 2, 1979. At right, Xi Jinping announces his New Silk Road worldwide development initiative in 2013.



after 1979, China had already started to go on a policy of scientific and technological progress, of innovation, to lift with that policy 850 million of its own population from poverty. That process has created an already vast and growing middle class, where the living standard has become better and better.

Then, in 2013, President Xi Jinping announced in Kazakhstan the New Silk Road. The idea was to revive the spirit of the ancient Silk Road, of connecting the Eurasian continent through the exchange of ideas, of cultures, of goods, of technologies. That policy and its associated construction projects was at first completely neglected by the mainstream media and the think-tanks of the West. But China continued to forge ahead, offering to the developing sector that model of overcoming

its own underdevelopment. China started to build six major Eurasian infrastructure corridors. And railroads and other infrastructure in Africa, in Asia, in Latin American countries. This basically would have worked, because it was not geopolitically motivated. Instead, China offered from the very beginning for this to be a win-win policy, inviting the United States and European countries and everybody else to participate in this New Silk Road conception.

This functioned to a certain extent quite well, but then from about 2018 onward, all of a sudden, all major think-tanks from the Western countries started to paint China as an authoritarian regime, and Xi Jinping as a dictator. China only wants to replace the United States as the world hegemon, it was proclaimed. This was expressed in the first statement of security doctrine of the United States in 2018. The first major such speech was given by Vice President Pence, and was followed by speeches to this effect by [FBI head] Christopher Wray, by [National Security Advisor Robert] O'Brien, by [Vice President] Mike Pence, by [Secretary of State Mike] Pompeo—who made several speeches to this effect, portraying China as the big danger.

Ever since, military tensions have escalated in the South China Sea, along the Chinese coast. This is becoming quite dangerous to world peace. It should be clear that if the two largest economies in the world start to clash, the danger is that this will get out of control and in the worst case, even lead to a nuclear war and the extinction of civilization, which many are aware of, including the Russians.

The Role of the Schiller Institute Today

That is why we in the Schiller Institute have demanded that the policy be radically changed. If you look at the present combination of problems, we are in an existential crisis of civilization. Only if the major powers work together do we have any hope to solve the crisis. Even the combined industrial capacity of all countries together is not quite sufficient to solve it.

We are therefore attempting to orchestrate the situation so that every country starts to discuss this as if they are the ones who will determine the outcome of this history. In all likelihood, hopefully this P-5 summit will occur in September. It must be way ahead of the U.S. election because if you don't change the parameters before, the danger is that there will be chaos, an escalation of the pandemic, and provocations of all kinds as we have seen in many parts of the world, which may escalate.

This summit of the permanent five member countries [of the UN Security Council] must adopt a New Bretton Woods system. A new credit system which connects to what Franklin D. Roosevelt had in mind when he proposed his version of the Bretton Woods system—what Lyndon LaRouche has worked out in great detail over the decades. This New Bretton Woods system must replace the casino economy, re-implement Glass-Steagall banking separation, and establish a national bank in every country. *And then, through agreements among these national banks, establish a new credit system.*

It's not the coronavirus which has caused this pandemic. The proof of that is that China succeeded, between January and March—in two months of very rigorous methods of isolating, tracing, quarantining, social distancing, building 22 hospitals in a few weeks to treat its victims—in containing the virus, and practically bringing it under control in Hubei province. China has now restarted its economy, after having defeated the pandemic.

Just imagine if every country would have had a health system like China and was able to mobilize like China did; just imagine that if every country—Mexico, Haiti, Peru, and all the other countries—Mali—all would have had capabilities like China or like it used to be the case with the Hill-Burton standard in the United States, or as the German and French health systems were before the privatization of the health systems started, the epidemic would have been stopped! It never would have become a pandemic!

So the problem is not that China announced this too late. The fact is that China announced it sometime at the end of January, that it was a pandemic. but then most Western governments, like the German government, they waited for weeks and weeks before they got production of masks, ventilators and other equipment started. So it was not China not informing the world, it was the arrogance of the Western countries to not think that it could ever arrive in their countries, like German Health Minister Jens Spahn, who said, “Oh, this virus will never come to Germany.” What foolishness!

A Worldwide Modern Healthcare System

So if every country, therefore, would start now to build, with international cooperation, modern healthcare systems, hospitals, training medical personnel, increasing the number of doctors and nurses, and med techs, not only this pandemic, but the danger of new

pandemics—which are absolutely around the corner at any moment—could be coped with, without massive loss of life.

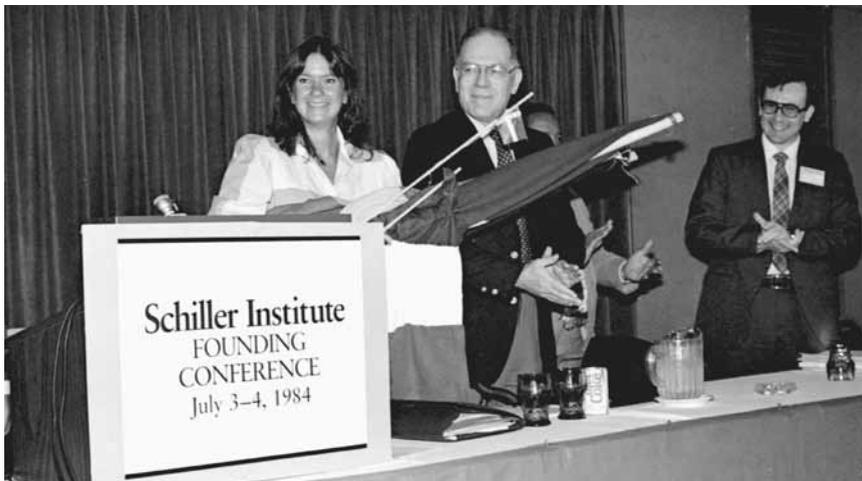
So, if you want to make the human race safe, the building of such a world system is the first step. Of course, you cannot build hospitals and have the necessary equipment without water, without energy, without infrastructure, so the building of the new health system must become the beginning of the construction of a new world economic order, the kind of development I was talking about—that we have been fighting for, for almost 50 years. And now, because of the Belt and Road Initiative, the New Silk Road perspective, it is possible to be realized; we just have to get the United States and the European countries to stop their geopolitical opposition and join hands.

All countries will be judged by future history—if we have one—by how they reacted to this crisis, if they were able to summon the greatness to overcome their petty geopolitical concerns and join hands to work on the new world economic order. The question is: Can we create a world in which human beings can live? Some years ago, Xi Jinping was at a big party convention. He announced a plan for China, that by the year 2050, China will be a modern country, democratic, and culturally advanced, and the people of China will live happy lives, and that model should also bring happiness for all nations on this planet.

The Fundamental Right to Pursue Happiness

Happiness is a fundamental human right of all human beings. It just happens to be in the Declaration of Independence, where it basically says, that the right to life, liberty and the pursuit of happiness is an inalienable right for all people. When founding the Schiller Institute 36 years ago, I looked around in all the documents, to find what would be the best charter for the Schiller Institute. I found that the Declaration of Independence was one of the best documents to express the purpose of the Schiller Institute's efforts. I changed only a few words, maybe six words, to replace “American colony” with “all countries,” and the “British Empire” to make it applicable for all countries in the world.

The idea that we have to have economic development and make sure that every single human being has the right to happiness, not in the sense of a good life, a happy moment for the hour, but meaning in the tradition of Leibniz, to be able to develop all the potential-



EIRNS/Stuart Lewis

Helga Zepp-LaRouche selected the U.S. Declaration of Independence as the model for the Charter of the Schiller Institute. Shown are Helga and Lyndon LaRouche at the founding conference of the Schiller Institute, July 3-4, 1984.

ties which are in each human person, to develop all creative potentials so that each human being can contribute in the best way to the development of the common good of society as a whole, and all of mankind, and in that way be in correspondence with the harmonic ordering of the universe, by increasing the level of creativity, not only of mankind, but of the laws of the universe at large.

That idea of a harmonic development of all nations, that if every single nation develops its potential, and regards it as in its self-interest to develop the potential of the other nations—that idea already exists as a concept in Nicholas of Cusa, who wrote that harmony in the world can only exist if you have the best possible development of all microcosms, as a precondition for harmony in the macrocosm. This is the idea of Franklin D. Roosevelt that all human beings must have a better living standard, be free of want, especially of material want, is the precondition for peace.

I think this is eminently possible if we were now to unite, and say—in light of the pandemic, the economic crisis, the famine, the danger of war—we have to join hands and develop: Southwest Asia, which has been destroyed by twenty years of meaningless, endless wars that have killed millions, leaving the countries destroyed; Africa, which is absolutely smashed right now by the combination of these crises; and Latin America, which is not able to cope with this crisis on its own. That it is the moral obligation of the leaders of the world to change this situation right now. We would then have the basis for a new security architecture, if

all countries were to work together on such a new world economic order. Only if you have a common economic interest, is there any hope that you can have a security architecture that will integrate every single country.

Now, the big mistake after the collapse of the Soviet Union, was that no effort was made to integrate Russia into such an international architecture. The present threat to decouple China and the countries associated with China, from the present economic system, is absolutely detrimental to world peace. That idea should be replaced by the idea that the future of humanity is in a new

system of international relationships, where the sovereignty of every country is respected, where the different social security systems are respected, and where the countries work together for the common aims of mankind, such as a crash program for the realization of fusion power, international cooperation in space, and to extend the common aims for the next hundred years.

A Summit to Pursue the Common Aims of Mankind

The gravity of the crisis makes such a vision absolutely realizable. We want the five permanent powers of the UN Security Council to adopt, in principle, such an orientation. China has offered, repeatedly, as recently as a week ago, to the United States to cooperate on the fight against the pandemic; Russia has offered cooperation in the distribution of a vaccine, making sure the whole world has access to it in the quickest possible way. There are these offers. In order to realize all this, a complete break must be made from geopolitics. For a new paradigm to blossom, it needs a chorus of international voices who have to express their deep desire and need to go in this direction.

I think this is an absolute necessity, but I think it's also absolutely realizable, because we are in a world revolution. The old system is not to be saved, nor can it be saved. It all comes down to this: Can we make for ourselves an order that guarantees the long-term survivability of our species? That is what I wanted to leave with you, and where I'm asking you to cooperate.

New Understanding of the Bretton Woods Agreements Opens the Door to the Four Powers Dialogue

by Gerry Rose

We present here an edited version of Gerry Rose's presentation to the weekly LaRouche PAC National Town Hall Webcast of May 2, 2020. The video can be viewed [here](#). Subheads and embedded links have been added by Mr. Rose.

There have been three works recently produced on the Bretton Woods system—one in 2014, called *Forgotten Foundations of Bretton Woods: International Development and the Making of the Post-War Order* by Eric Helleiner; another brilliant [study](#) by Richard Freeman in *EIR*, “The Good Neighbor Policy and Brazil: Roosevelt’s Bold Creation of the Anti-Entropic Bretton Woods System,” on how in fact the United States worked with Brazil in the period of 1941-44; and a third [study](#) by Paul Gallagher, “LaRouche’s Physical-Economic Method and a New Bretton Woods System,” also in *EIR*, comparing the performance of the U.S. economy from roughly 1935, under Franklin Roosevelt, up until 1975, with the next period following the end of the Bretton Woods system. The history, documentation and arguments contained in these three works make an irrefutable case for a return to the Bretton Woods!

What is stunning about these three works is that they provide a fundamentally new way of understanding the implications of the 1944 Bretton Woods Agreement. Both Helleiner and Freeman present for the first time the irrefutable evidence that what was intended by FDR for Bretton Woods was the end of all British colonial methods and the rapid development of the former European colonies, in a global partnership of sovereign nation-states.

Helleiner and Freeman also demonstrate that this pro-development policy was derived from the American school of economics, of Alexander Hamilton, Friedrich List and Henry Carey. These two works put together the documentation in a way that it has never been put forth before. This has enormous implications. Bretton Woods was supposed to be predominantly an anti-colonial return to development economics based



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President Franklin Roosevelt delivered his Four Freedoms speech as his annual State of the Union Message to Congress, on January 6, 1941.

on the Hamiltonian sovereign issuance of credit for industrialization for every nation of the planet. Or, as Roosevelt repeated in his 1941 *Four Freedoms* speech, “Everywhere in the world! You think not! Think again!”

A Present Difficulty

One difficulty which arises today in discussing these matters is reflected in informal discussions, which *EIR* representatives have conducted over a number of years with leaders from China and Russia. Representatives of

these nations have pointed to how the Bretton Woods system—and the domination of the dollar within that system—was used post-1945, to exploit poorer nations and systematically prevent economic development. They also point to the undeniable fact that the Bretton Woods system was used by Churchill and Truman against China and against Russia, as part of the Cold War. All of this has created skepticism, particularly in Russia and China, as to the wisdom of returning to a Bretton Woods approach.

Additionally, among many poorer nations, the IMF and the World Bank, institutions created at Bretton Woods, are today synonymous with brutal conditionalities and British liberal free trade. These current-day practices are actually the exact opposite of Roosevelt’s design.

The staggering importance of the three works cited above is that they blow apart the *myth* that the Bretton Woods agreement was an instrument of the Cold War! It was the exact opposite of that! Roosevelt’s design was all inclusive, and if Roosevelt had lived and his original intention had been followed, it is clear both Russia and China would have been part of the Bretton Woods arrangement.

As should become clear to you in reading through this article, Roosevelt, and his allies, insisted on a Grand Design for Development for every nation on the planet. It was in the years following the death of Roosevelt and the targeting of and removal of his allies, that the actual original content of Bretton Woods was erased from memory.

LaRouche’s Insight

Lyndon LaRouche, in a 1997 [paper](#) titled, “Overthrowing Axiomatic Assumptions,” identified that Bretton Woods was not a set of rules,—it was an intention, one clearly understood by Roosevelt, to end British free trade and British (and French, Dutch, Portuguese and Spanish) colonial methods.

Today, if we are going to successfully navigate our



IMF
Assistant U.S. Treasury Secretary, Harry Dexter White (left) and John Maynard Keynes, honorary advisor to the U.K. Treasury, at the inaugural meeting of the International Monetary Fund’s Board of Governors in Savannah, Georgia, March 8, 1946.

way out of the current world crisis, there’s going to have to be what Lyndon LaRouche called a “Four Powers agreement.” That agreement has to be pivoted on a new world monetary and economic system, and a fundamental revolution in our idea of wealth. This will require a return to Franklin Roosevelt’s original intention at Bretton Woods.

What Eric Helleiner does in *Forgotten Foundations of Bretton Woods*, is to demonstrate that what happened between 1941 and 1944, and what happened at the Bretton Woods conference in 1944, was all anchored in Franklin Roosevelt’s commitment,—a commitment to end colonial rule globally. Roosevelt knew, because of his role in World War I, as well as in the events leading to World War II, that both of those wars were caused by British imperial interest.

He knew that, and he unambiguously stated that, as his son, Elliott, discusses in his book *As He Saw It*. Elliott Roosevelt was an eyewitness to the major negotiations between Roosevelt, and Churchill and Stalin.

The clarity with which Helleiner develops the actual intention of the Bretton Woods negotiations will come as a revelation to readers today. The three cited reports, taken together, expose the phony history that the Bretton Woods system grew out of a “discussion among equals” between Harry Dexter White and John Maynard Keynes.

Even Ben Steil’s sycophantish book, *The Battle of Bretton Woods: John Maynard Keynes, Harry Dexter White, and the Making of a New World Order*, reveals that the American delegates Henry Morgenthau, Jr. and White imposed on the British Empire the dominance of the dollar and gold, directly against British insistence that there be no international arrangement which did not recognize the British Empire, as it then existed under British policy dominance. The British were determined to maintain the inviolability of the “Sterling Bloc,” which set imperial preferences that no international agreements for credit and exchange controls could violate. Such “untouchable” British prerogatives

all ended at Bretton Woods,—but that was part of Roosevelt’s larger plan from the beginning!

Roosevelt’s Plan

One of the most stunning interventions ever made by an American President was taken by Franklin Roosevelt in 1941. It is important to realize the context of this intervention. The German *Wehrmacht* had overrun France, it had overrun most of Europe, the Russians were retreating, and Britain was being bombed. At the nadir of this crisis, Roosevelt made a speech to the nation, later to be remembered as the “Four Freedoms” speech. It was the State of the Union speech.

Roosevelt knew that most likely the United States was going to get into a war very soon. The “Four Freedoms” speech provides a very precise insight into his thinking at that time. It is very reminiscent of Lincoln’s Emancipation Proclamation, in the sense that any sane nation, having a war forced upon it, has to define a mission worthy of the sacrifices that a great people will be called upon to make.

Roosevelt says:

Certainly this is no time for any of us to stop thinking about the social and economic problems which are the root cause of the social revolution which is today a supreme factor in the world.

For there is nothing mysterious about the foundations of a healthy and strong democracy. The basic things expected by our people of their political and economic systems are simple. They are:

Equality of opportunity for youth and for others.

Jobs for those who can work.

Security for those who need it.

The ending of special privilege for the few.

The preservation of civil liberties for all.

The enjoyment of the fruits of scientific progress in a wider and constantly rising standard of living.

These are the simple, basic things that must never be lost sight of in the turmoil and unbelievable complexity of our modern world....

Then—I’m skipping a little bit here—at the end of his speech, he discusses the Four Freedoms:

The first is freedom of speech and expression—everywhere in the world.

The second is freedom of every person to worship God in his own way—everywhere in the world.

The third is freedom from want—which, translated into world terms, means economic understandings which will secure to every nation a healthy peacetime life for its inhabitants—everywhere in the world.

The fourth is freedom from fear....

This was not empty rhetoric, because what Roosevelt did, is he took these Four Freedoms, and he rammed them down Winston Churchill’s throat. He knew he was going to be meeting Churchill in August



The “Four Freedoms” are cut in stone at the Franklin Delano Roosevelt Memorial, Washington DC.

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1941, in Argentia Harbor off Placentia Bay, Newfoundland, and what he insisted upon was that the United States would not join Britain in any war, unless it signed on to the Four Freedoms. FDR knew quite well that the British were the major perpetrators of two world wars, and the colonialist insanity that led to those two wars, World War I being explicitly about who got what colonies; and the second war was a follow-on to the first, with the British actually funding Hitler. That’s another story. But Roosevelt knew all of this. And he told Churchill at Argentia:—You will sign the Atlantic Charter, and we will hold you to it.

Ending the British Empire

Now, I want to read a second piece to give you a sense of what this was really about. These quotes are from *As He Saw It*. This, in my opinion, could be produced as a play. Elliott Roosevelt was quite insightful.

Here is his capture of the confrontation at Argentia in August 1941 of Franklin Roosevelt with Winston Churchill over ending the British Empire:

“Of course,” he [FDR] remarked, with a sly sort of assurance, “of course, after the war, one of the preconditions of any lasting peace will have to be the greatest possible freedom of trade.... No artificial barriers.... As few favored economic agreements as possible. Opportunities for expansion. Markets open for healthy competition.”... Churchill shifted in his armchair. “The British Empire trade agreements,” he began heavily, “are—”

Father broke in. “Yes. Those Empire trade agreements are a case in point. It’s because of them that the people of India and Africa, of all the colonial Near East and Far East, are still as backward as they are.”

Churchill’s neck reddened and he crouched forward. “Mr. President, England does not propose for a moment to lose its favored position among the British Dominions. The trade that has made England great shall continue, and under conditions prescribed by England’s ministers.”

“You see,” said Father slowly, “it is along in here somewhere that there is likely to be some disagreement between you, Winston, and me. I am firmly of the belief that if we are to arrive at a stable peace it must involve the development of backward countries. Backward peoples. How can this be done? It can’t be done, obviously, by 18th-century methods. Now—”

“Who’s talking 18th-century methods?”

“Whichever of your ministers recommends a policy which takes wealth in raw materials out of a colonial country, but which returns nothing to the people of that country in consideration. *Twentieth-century* methods involve bringing industry to these colonies. *Twentieth-century* methods include increasing the wealth of a people by increasing their standard of living, by educating them, by bringing them sanitation—by making sure that they get a return for the raw wealth of their community.”

Then Churchill goes wild, and the next day, Churchill says this to Roosevelt:

“Mr. President,” he cried, “I believe you are trying to do away with the British Empire. Every idea you entertain about the structure of the post-war world demonstrates it. But in spite of that ... in spite of that, we know that you constitute our only hope. And *you* know that *we* know it. *You* know that *we* know that without America, the Empire won’t stand.”

So with the Atlantic Charter, which embodies the Four Freedoms, Churchill was forced to sign on the dotted line!

The reason I go through this is that the Bretton Woods system, which was developed in 1944, came out



National Archives

President Roosevelt meets with Prime Minister Churchill in Argentia Harbor in Newfoundland. FDR insisted that the U.S. would not join Britain in any war, unless it signed on to his Four Freedoms. The result: The Atlantic Charter. Here, they are aboard HMS Prince of Wales, Aug. 14, 1941.

of a series of commitments and intention by Franklin Roosevelt to end colonial rule. There was no question in his mind,—and he had also said as much in other places—that there must be a commitment to develop all countries. Remember his insistence, “anywhere in the world”—*not some, all*—and his Freedom from Want. In one of his speeches in America, he also made a point that every person has an inalienable right to healthcare, which I think is a very critical point.

Roosevelt knew that unless you changed the dominant system of looting raw materials from less-developed countries, and looting their labor to extract those

raw materials—crimes that formed the bedrock of the British Empire—then you would have wars. And he knew the First World War and the Second World War were the product of never having gotten rid of the colonial empires.

The Basis of the Good Neighbor Policy

In 1941 the Axis powers were making moves to recruit certain countries to join them in a postwar Nazi, or Axis world. Roosevelt knew that if you allowed such colonial backwardness to continue, the Nazis would likely succeed. More importantly, as Helleiner demonstrates conclusively, and as does Freeman in a more devastating way, Roosevelt and his team had a profound working knowledge of the principles of American System economics. It was known, in a very precise way, that this was the only basis on which you could end colonialism.

This became clear in very dramatic discussions, both in Cuba and then as it was implemented in Paraguay. Harry Dexter White and his team had discussed with Cuba that for a nation to industrialize, it cannot just be a raw materials producer. It didn't quite work with Cuba, but it did with Paraguay. These countries were absolutely clear that without industry they were at the mercy of British free trade. That's what "free trade" really is, and always has been—the idea that "We set the price, and that's the price you're going to get." That's predatory free trade.

In 2020, our farmers are feeling the effects of that "free trade" policy right now, at the hands of the British-run cartels.

The question was, how to finance industry. In discussions with Cuba, and later with Paraguay, the idea emerged that there would be an Inter-American Development Bank (IDB) and that Inter-American Development Bank would make loans, for infrastructure projects and scientific projects, but mainly for infrastructure, to develop industries in Ibero-American countries.

The issue came up: who should run the bank? And I'm going to read you what Morgenthau said, because Wall Street, quite literally,—and the Federal Reserve—insisted that any bank would be run by a supra-national authority that would determine whether the loans were good or not.

The other thing, by the way, was that if a country owed debt, Roosevelt said "forget it." That's not going to be the basis on which loans were going to be made.

Wall Street insisted, "If they pay off all their debts, then we'll make a loan." Roosevelt said "No, not going to happen."

Now here is Morgenthau talking about the Inter-American Development Bank. He was then Secretary of the Treasury:

Why bother with them [i.e., Wall Street]? They have made their recommendations, and I just don't accept them. We have created an instrument here, and given it enormous powers for good and evil, and for us to turn it over at this stage, to the banking groups, it seems to me we're just going back to all the old evils that we wish to avoid. This bank [the Inter-American Development Bank], if it is successful, if it lives up to the expectations with respect to power, can have a very profound degree of influence on small countries, and whether that shall be democratically used, in the sense to obtain objectives of the government ... or whether it shall be merely a bankers' attempt to use that to serve not only their individual purposes, but the general philosophy they represent [i.e., British, liberal free trade].

So it was very clear that the only path out of colonialism would be the kind of credit system and the kind of stabilization of currency which was allowed by the Inter-American Development Bank, to industrialize economies, create infrastructure in these economies, and in large part create the basis upon which a stable developing country can be what's called a "full-set economy."

This was done. I encourage you to read Richard Freeman's extraordinary article on what we did with Brazil. For Brazil, with an enormous hydroelectric power potential, it was very clear that America's Tennessee Valley Authority project was the template to get out of backwardness.

What's stunning, and it lets you know Roosevelt's commitment as early as 1943, is that the United States made a \$100 million loan to Brazil. Half of it would go for stabilization, and the other half would go for massive infrastructure, particularly in hydroelectric power.

How was all that infrastructure funded? Brazil didn't go to any Wall Street bank to get a loan. It was funded by the Export-Import Bank of the United States (EXIM), in

which the Reconstruction Finance Corporation bought the bonds that EXIM issued for the \$100 million. The only thing that the United States demanded, was that the capital goods and the expertise be gotten from the United States. It was one of these “win-win” cooperation projects. Paramount in the project was physical economic development. As Freeman writes:

The effort of Morgenthau and Harry Dexter White and others was to create a monetary system and an economic system in which each country in Ibero-America could industrialize! This industrialization was the real issue at Bretton Woods, not the stabilization funds for their currencies. It was around the issue of control of the Inter-American Development Bank that the long-term credit would be issued. This control had to be by nationalist governments.... The actual discussion in both places [Cuba and Paraguay] was about stabilizing the currency so that the central Government could issue credit for industrialization.

Freeman goes on to detail the unbelievable rate of growth of Brazil after that. Of the Brazil project, Freeman states:

For the first time, perhaps for any nation in history, the United States willingly transferred not just goods, but its science and technology, in entire scientific-technological packages, at very low cost, or in several cases for free, to the Brazilian nation. This scientific-technological principle would be infused directly into the Brazilian economy and mind, and would be deployed to upgrade every major Brazilian manufacturing, infrastructure, and agricultural sector.

So there you have it—a very unabashed commitment to ending the colonial methods of the British Empire! If every nation on the planet had its own industrial capability, had its own agricultural capability of a high-technology sort, then no nation would be subject to the free market whims and looting of the British Empire.

At Bretton Woods

I want to conclude with the kind of discussions that took place at Bretton Woods. First of all, Roosevelt and Dexter White brought representatives of 14 Ibero-American nations into Bretton Woods, all of whom had been involved in the discussions and the projects. They were totally committed to this development perspective.

The British, in the words of Lord John Maynard Keynes, called the Bretton Woods meeting “a monkey house”(!), because there were 14 nations from Ibero-America, as well as nations from Africa. The second largest delegation was from China. Up to that point, British racists had never had to negotiate as equals with “colonial underlings.” That’s the way the British thought, but they knew they were outvoted.

Helleiner does us a really wonderful favor by re-



Courtesy of The Mount Washington Hotel & Resort

U.S. Treasury Secretary Henry Morgenthau opens the Bretton Woods International Monetary Conference at the Mount Washington Hotel in New Hampshire, July 1, 1944.

counting that the Central European participants, particularly the Polish central banker Leon Barański, proposed at Bretton Woods that the Danube River become the TVA for Europe. Even more stunning was the delegation from India, which proposed a “Bombay plan,” to create an international board to study where to place TVAs worldwide! This, from India, mind you—still under British rule. That’s what they proposed at Bretton Woods!

In another stunning aspect of the Bretton Woods discussions, China came in with the 1918 program of Dr. Sun Yat-sen, which called for the industrialization of China, focused on railroads, on roadways and water management. They told the other delegates that, were

China a stable, growing economy, it would afford stability for pretty much the whole world. Interesting: this proposal was put forth by the national government of Chiang Kai-shek, but both Mao Zedong and Zhou Enlai, who were not in the Kuomintang, supported it. It was a proposal for international loans, at low interest rates, vectored on infrastructure *per se*,—that’s all it could be used for. Had China’s proposal been taken up, it would have created a China based upon the American System, at that point! Had Roosevelt lived, I think that would have gone through.

So went the actual discussions at Bretton Woods. Many Eastern Europeans were quoting Frederick List and Henry Carey on the need to industrialize every nation on the planet!

Then What Happened?

The second Roosevelt had died, on April 12, 1945, Winston Churchill, and this little, little man Harry Truman, declared the Cold War. And what did they do? They would not use either the IMF or the World Bank,—institutions created at Bretton Woods—to end colonial-



World Bank

Britain’s John Maynard Keynes sabotaged FDR’s intention to use the IMF and World Bank to end colonialism. Here he is addressing the conference, July 4, 1944.

ism as FDR had intended. Instead, they used the IMF and the World Bank, and certain other credit-issuing agencies, to develop Germany and Japan, and because of the Korean War they allowed Japan to re-industrialize. This was all part of Churchill’s Cold War game-plan, and so what got implemented was the exact opposite of what the Bretton Woods system was intended to be.

What happened to Harry Dexter White, FDR’s representative at Bretton Woods? The second Roosevelt was dead, Wall Street and its friends in the media and FBI, red-baited Harry Dexter White. An [EIR article](#) by David Shavin, “When the United States Offered the ‘Belt and Road’ to China,” points out that Henry Wallace, who had been FDR’s Vice President, was in the middle of the agricultural and high industrial programs for China, was also red-baited out. The entire Roosevelt team that was totally committed to the end of Imperial rule and the development of all countries on this planet, industrializing all countries on this planet, was ousted. Wall Street used the Red scare to take out the best of Roosevelt’s team.

What jumps out at you from the three studies reviewed here is the *unfinished business of Bretton Woods*. Our New Bretton Woods proposal must complete the unfinished business of the previous Bretton Woods. But it is critical to recognize that it was all there at the original Bretton Woods, and it was beautiful.



Harry S Truman Library

Winston Churchill, with the help of the little man, Harry S Truman, steered the world into a Cold War, allowing the British to continue to enforce colonialism. Here they are conferring in the Oval Office, during Churchill’s visit to the United States. January 5, 1952.

Lyndon LaRouche Put FDR's Bretton Woods System on the Agenda of Any Summit of Major Powers

by Paul Gallagher

The following prepared remarks were delivered on the LaRouche PAC's weekly "Town Meeting" webcast Aug. 15, 2020.

The Bretton Woods international credit and currency system was never what President Franklin Roosevelt intended it to be. But the destruction of that system triggered by President Richard Nixon's actions 49 years ago today, has proven a half-century disaster for the United States and other industrial economies, and for the world. From the day Nixon began Bretton Woods' destruction, Lyndon LaRouche denounced and called for reversing that grave error, and in one way or another proposed a new, FDR Bretton Woods for the agenda of every major summit conference—including the five-power summit being prepared now, of leaders of the UN Security Council Permanent Five.

As early as the Eisenhower Administration, at the beginning of 1957, LaRouche, working as a business consultant and not yet organizing a political movement, forecast a serious recession for later that year, which occurred as he forecast. He explained in the 1960s that the fundamental problem he saw bringing on that U.S. recession, was that under Ike the United States was pouring its considerable economic surplus and technological advances achieved under Bretton Woods conditions, into a domestic "consumer boom" of automobiles, appliances, suburban homes and so forth, forming a financial debt bubble.

What Eisenhower needed to do, LaRouche said, was what FDR had done before the war and would have done after it: Export surplus as capital goods exports to Latin America, Eurasia, and Africa for industrial and technological development. That understanding, rooted in LaRouche's knowledge of and support for FDR's

Hamiltonian capital investment policies, enabled him, as an unknown economist, to forecast the severe 1957-58 recession other economists did not see coming.

Ten years later, LaRouche had organized a small but passionately committed political group and intervened to try to convert the anti-Vietnam War mass protests into a movement for "Third World" economic development against British and French colonial methods. He saw that the two sudden British devaluations of the pound sterling, in 1967 and 1969, were threatening to disrupt the entire structure of Bretton Woods; earlier that decade he had already forecast that if this happened, financial crises would break out and depression



In its August 31-Sept 3, 1971 issue, the LaRouche movement's national newspaper accurately reported the profound consequences for the nation and the world of ending the Bretton Woods monetary system.

could follow. He continued warning of this through the late 1960s.

Did depression follow the destruction of Bretton Woods, as LaRouche warned? The worldwide growth in real economic product per capita, which was 3.5% per year in the 1950s and 1960s, fell to 2.0% per year in the 1970s and 1.4% per year in the 1980s, according to the World Bank. The share of this product going to labor reached a peak of 52% in 1970 and has shrunk to 41%

now in the United States and other trans-Atlantic industrial countries; it fell by almost 5% in the 1970s alone. The oil hoaxes of 1973 and 1979 caused a lowering of economic activity and incomes around the world; those hoaxes were inseparable from the replacement of the U.S. dollar—the reserve currency of the Bretton Woods system—with the Eurodollar and Petrodollar of the floating-exchange-rate system. Inflation averaged 9% per year in the 1970s in the United States.

In the United States, Nixon followed his “pulling the plug” on Bretton Woods with wage and price controls, starting a drive to lower wages which reduced labor’s share of GDP by 5% just during the 1970s. And this with economic growth itself collapsing; GDP growth went to less than 1% in 1973-75, and again in 1979-80. By that time Nixon’s 1972 brainwave, the “Southern strategy,” was long since in effect, and American industrial jobs were going to lower wages in the South, then under Henry Kissinger’s “Caribbean Initiative” and similar schemes, to still lower wages in Latin America. This started a half-century of eliminating productive industrial employment and making the population pay the costs of Wall Street’s “bubble and bust” speculation.

LaRouche’s clearest action came after Nixon’s Aug. 15, 1971 action removing the dollar from its gold-reserve basis, and LaRouche’s announcement, in our newspaper days later, that this meant the destruction of the Bretton Woods system. LaRouche’s movement then released its Emergency Reconstruction Program, which stated:

It is not only human but in our self-interest that we, along with the entire advanced sector, contribute at least 5-10% of the annual product of the advanced sector for the immediate upgrading of living standards and the



India’s Prime Minister, Indira Gandhi, became one of LaRouche’s greatest collaborators in organizing for great projects of long-term economic development. Here she speaks at the National Press Club in Washington, D.C. on July 30, 1982.

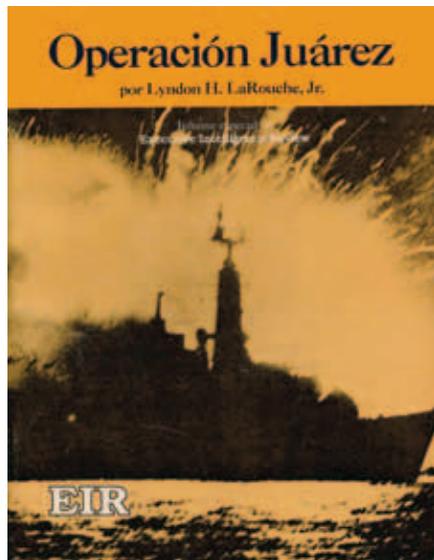
development projects in underdeveloped countries, was adopted by the summit of Non-Aligned Nations chaired by India’s Indira Gandhi in Sri Lanka. Mrs. Gandhi became one of LaRouche’s great collaborators in organizing for great projects of long-term economic development in the underdeveloped nations—the core of Franklin Roosevelt’s post-War Bretton Woods idea.

So you can see that Lyndon LaRouche did not begin to organize for a new Bretton Woods conference and a new Bretton Woods financial and credit architecture only in the 1990s, or only in support of the Eurasian Land-Bridge or New Silk Road projects. Rather, from this day in August 1971, the day the City of London achieved the destruction of Bretton Woods by Nixon’s grave mistake, LaRouche was organizing to put FDR’s *intended* Bretton Woods credit plan on the agenda of every major summit that occurred. This included the Cancún International Summit in 1981, for which LaRouche wrote detailed proposals and “instructions”; the UN Special Session on developing-sector debts in 1982, the target of his *Operación Juárez* on Hamiltonian debt reorganization, and so forth.

economic development of the underdeveloped nations.

It also proposed a “national thermonuclear power development program,” which led to formation of the Fusion Energy Foundation and introduction in 1978 of the Magnetic Fusion Engineering Act which became law in 1980.

In 1975 LaRouche had made a visit to Iraq and was gratified to see that Iraq pledged \$35 billion to support implementation worldwide of an Emergency Agricultural Production Act if launched by the United States. In 1976 LaRouche’s International Development Bank proposal, specifically to provide credit for



This is what Helga Zepp-La-

Rouche proposes to push into the likely upcoming summit of leaders of the UN Security Council Permanent Five members.

And in his writing, “The LaRouche Gold Proposal,” of September 1981, he made very clear that it was necessary that the U.S. dollar return to a gold-reserve basis immediately.

What Was Included, and What Missing

Here is LaRouche’s strategic view of Bretton Woods, set down in 2000, in his article, “Trade Without Currencies”:

In this set of circumstances, policy-shapers should study more carefully the ... underlying principle behind the approximately twenty-year, 1945-65 success of the post-World War II, Bretton Woods fixed-exchange-rate system, especially as that system operated in relations among the U.S.A., Western Europe and Japan.... Include attention to the fact that the way in which the system was implemented, after President Roosevelt’s most untimely death, was vastly inferior to what the result would have been, both morally and economically, had Roosevelt’s intentions not been significantly overturned by the successor, Truman Administration. As much of Roosevelt’s intentions which were actually adopted, worked to great benefit for both the U.S.A. and Western Europe, at least up through the middle of the 1960s. The question now ... is: What are the crucially successful features of that fixed-exchange-rate system, which are fully applicable, as a matter of principle, to the vastly different world conditions of today? Today, we must add the warning, that such cooperation be based upon a true, essentially global partnership with those nations which have been, until now, the continued victims of the legacy of colonialism, including the neo-colonial practices presently inhering in the common practice of the presently bankrupt IMF system....

This is clear. The soul and core of FDR’s idea of

Bretton Woods—high-technology infrastructure development projects across Eurasia, Africa, and Ibero-America—was cut out after his death by Churchill’s control of Truman, by anglophile John J. McCloy’s taking over the World Bank and emasculating it. The successful elements for America, Europe and Japan remained: Glass-Steagall bank separation in most of those nations; exchange controls and the option for capital controls, to keep exchange rates stable; limitations against major nations’ export of capital for speculative purposes or any purposes except capital investment and trade.

All these principal regulations, the City of London banks violated, repeatedly and more and more flagrantly through their “offshore” centers and their cre-



EIRNS/Alan Yue

On December 2, 1971, at Queens College in New York, Lyndon LaRouche discredited all of Keynesianism in a debate with Abba Lerner, the leading Keynesian economist, who was brought to the point of asserting, “If [Hjalmar] Schacht’s programs had been carried out, they wouldn’t have needed Hitler.”

ation of the Eurodollar market, until they could drive Nixon to pull the pin on the grenade and blow Bretton Woods up. As the 2017 documentary, “The Spider’s Web” by an English financial journalist shows, this was to make the City “Britain’s Second Empire.”

LaRouche’s Debate

Several months prior to President Nixon’s Aug. 15, 1971 move as a City of London tool to destroy Bretton Woods, he had told an NBC News interviewer, “I am now a Keynesian in economics.” The interviewer, Howard K. Smith, reported he was flabbergasted to

hear this. John Maynard Keynes was thought of as the celebrated economist favored by liberals and progressives; Milton Friedman as the economist for conservatives like Nixon; and moderates and centrists might prefer the leading “textbook economist” of the period, Paul Samuelson and his “built-in stabilizers”—which Nixon was about to expose as non-existent in a crisis.

Smith said Nixon’s comment prepared him for the “August shock” when Nixon broke Bretton Woods; because Keynes and Keynesians considered gold-reserve backing for the U.S. dollar or any other currency, as well as fears about excessive national debts, to be 19th-Century anachronisms of no importance in the 20th.

Then in December 1971, four months after Nixon’s move, it was the subject of the only occasion in which a leading professional economist ever debated LaRouche. LaRouche was suddenly notorious for having warned through the later 1960s that this break was coming; he had suddenly commanded an audience of nearly 1,000 students and teachers when he spoke at Columbia University in September.

After the LaRouche-Lerner debate, at Queens College in New York on December 2, before another large audience, no other such economist would be allowed to give the confirmed forecaster LaRouche the opportunity to destroy modern monetarist economics, the way Abba Lerner did. Professor Lerner of New York University was considered a more brilliant and penetrating Keynesian economist than Keynes himself. And he supported both Nixon’s abandonment of the gold reserve for the dollar, and his imposition of wage and price controls, which Lerner said would increase employment.

LaRouche drove home the warning that Nixon’s destruction of the Bretton Woods system in favor of free-floating currencies and speculation, would bring in “Schachtian economics” of Nazi Germany in the 1930s, where Hjalmar Schacht from 1934 to 1937 was both Hitler’s central banker and his economics minister. Professor Lerner said that Hitler had done “the right

thing” by printing money in disregard of gold reserve or national debt. He referred to, “Adolf Hitler, who in fact increased prosperity in Germany, gave people jobs; and if it’s so, I don’t think it is funny, for it was very unfortunate, for these good things led people to support him.” Pushed further by LaRouche, Lerner pronounced that “if Schacht’s programs had been carried out, they wouldn’t have needed Hitler.”

The audience was horrified; LaRouche was confirmed in his warnings and proven the man to be evermore avoided and suppressed by monetarist economists.

In the following years of the early 1970s, LaRouche and his movement published numerous unique analyses of what “Schachtian economics” really was and how it was indissolubly linked to Nazi concentration camps and masses of people worked to death and murdered.

This LaRouche-Lerner debate, crucial in the growth of Lyndon LaRouche’s movement, could have occurred today; and if it did, would be equally crucial in the drive to establish a new Bretton Woods. Keynesian economists still today—and they are dominant in the profession—point to policies of Hjalmar Schacht in Nazi Germany as models for nations, including developing nations (!). And more important, Schacht is the central banker who

is the model for today’s central bankers and their furious money-printing.

Schacht and the Central Banks

Hjalmar Schacht was a protégé of the British central banker from 1920–44, Privy Councillor Montagu Norman, later Baron Norman. Schacht raised funds and campaigned hard and publicly for two years to bring Hitler’s Nazis to power in the March 1933 parliamentary election, which made Lerner’s remark about “not needing Hitler” ridiculous as well as shocking. Schacht definitely thought he needed Hitler to carry out Schacht’s economics. Schacht was greatly admired by the British John Maynard Keynes at that time, and ob-



Hjalmar Schacht, Adolf Hitler’s economics minister and head of the Reichsbank.

viously still by Keynesians like Abba Lerner 30 years after the Holocaust, because Hitler and Schacht had “work creation” policies for full employment.

Hjalmar Schacht, as Hitler’s economics minister and head of the Reichsbank, pioneered large-scale central bank money printing, in partnership with the biggest financial and industrial corporations, to “create work.” Keynesian economists today continue to propose printing money on any scale, however large, in order to create employment, without regard to whether that employment increases the productivity of the labor force and advances the scientific and technological powers of the nation.

Remember the Keynesian who was Obama’s chief of the Council of Economic Advisors, Christina Romer of the University of California at Berkeley. In her first testimony to Congress, at the depth of the Great Recession in mid-2009, she pronounced FDR’s New Deal a failure; told Congress that the Federal Reserve was the key institution for any recovery; and promised that the Fed’s quantitative easing then just underway, plus Obama’s so-called “Stimulus Act” to rehire laid-off workers, would bring unemployment down below 8% by the end of 2010.

She was wrong; it remained at about 10%. But more important, no productive mission for the nation’s workforce was involved in this “work creation”; the



House Committee on Education and Labor

Dr. Christina Romer, the Keynesian Chair of President Obama’s Council of Economic Advisors, pronounced FDR’s New Deal a failure.

only new infrastructure plan was to build wind farms and develop better solar panels for the roofs of homes. It was at this point that Obama said the United States didn’t need any “fancy technologies like fusion power.”

Schacht did this money-printing and “work creation,” which Keynes admired so, with a difference; he had a mission when, as president of the Reichsbank, he took over the German economy for the Nazis in 1933. He launched his central bank’s money-printing scheme, called Mefo Bills, in partnership with the biggest financial and military-industrial corporations. Within three years, using his central-bank money printing, military arms production rose from 2% of Germany’s GDP, to 20%, already four times the role defense production plays in the American economy today.

And Schacht went on from there, with the “work creation” increasingly taking place in the compulsory work camps of the Nazi Labor Front, until he became alarmed by the inflation he was creating and told Hitler, in late 1938, to slow down the war buildup. Hitler then fired him as president of the Reichsbank—which Schacht used to escape conviction when he was tried at Nuremberg.



rustwire.com

One of the Carrie blast furnaces that formed part of the Homestead Steel Works in Pittsburgh, Pennsylvania. Its abandonment in 1982 reflected the U.S. side of world deindustrialization.



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A massive array of solar panels near the airport in Munich, Germany. Such Green installations of low energy-density occupy large amounts of land throughout Europe.

Schactian Regime Change Today

Today, after nearly 50 years of London and Wall Street domination of more and more speculative, deindustrialized economies and huge ratios of debt to productive activity, we face central banks like the Fed, Bank of England and European Central Bank which prop up and completely control financial markets, and are now moving to take over government spending and substitute for it, as Schacht did in Nazi Germany. This is referred to among central bank circles as “regime change,” since that term was introduced one year ago at the 2019 bankers’ conference at Jackson Hole, Wyoming.

Again, the central banks have Wall Street and corporate partners in this “regime change,” led by the huge fund management company BlackRock, Inc., which introduced the term “regime change” at that bankers’ conference. BlackRock is managing the money-printing schemes of both the Federal Reserve and the European Central Bank.

And again, the central banks have a mission for their money printing. It is to stamp out the fossil energy-related industries, denying them investment; to shift private investment and “government” spending, including big new carbon taxes, into “green finance,” “green bonds,” wind and solar industries, and “energy-saving” technologies. In short, to create a gigantic new “green

finance bubble” to get London and Wall Street banks through the current waves of corporate bankruptcies.

In the process, they are seeking to take our national economies back centuries into the past, in terms of the productive power of the dominant technologies. We will never explore the Solar System on wind turbines, but rather on nuclear and fusion-powered rockets.

Franklin Roosevelt’s New Deal policies—which Obama’s Keynesian economics chief Christina Romer was so sure were a failure—were the direct opposite of those of Schacht which Keynes and the Keynesians still admire. Like Roosevelt’s intended plan for the Bretton Woods system, they had their origin in Alexander Hamilton’s principles. They did not rely on central-bank money printing but on the U.S. Treasury’s ability to issue debt for productive projects to

American citizens and institutions. They were based on advancing the productivity of workforces through new infrastructure building that required invention and technological advances.

In fact, FDR’s New Deal made the 1930s and 1940s the decades of fastest growth of technological productivity known in American economic history. They were the start of a longer period known as the “golden age of American productivity,” which stretches into the early 1970s, when it was ended by the City of London’s destruction of Bretton Woods.

So we come back to Lyndon LaRouche, writing in 2000 on the need for a new Bretton Woods:

That policy, as it had been intended by Roosevelt, should become the basis for new forms of cooperation between those sections of the world’s economy which have the basis to provide advanced technologies, and less-developed regions. This policy orientation provides the mission-orientation which a new, fixed-exchange-rate, world monetary system must adopt ...

And we organize a chorus of voices internationally, to urge that policy on the hopefully upcoming summit of the leaders of America, China, Russia, France and Britain.

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