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# The Coming World Strategic Architecture

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# The Coming World Strategic Architecture

**EDITORIAL**

# The New Strategic Architecture Requires U.S.-Russia-China Cooperation

by Michael O. Billington

Feb. 4—Heated exchanges between Russian officials and neo-con and neo-lib officials and media in the U.S., continue to exacerbate tensions between the two nuclear superpowers. Helga Zepp-LaRouche addressed these tensions today, noting that the world needs a new strategic architecture, but that it cannot work unless a common economic and cultural mission is adopted, and geopolitics rejected. If the West joins the New Silk Road paradigm, then, and only then, will the new strategic architecture work.

President Putin and Foreign Minister Lavrov have insisted that Russia will not engage in an arms race, but, within the existing defense budget, will respond to President Trump's withdrawal from the INF treaty "with military-technical means." This is how Russia responded to President G.W. Bush's withdrawal from the ABM treaty—mobilizing the scientific and technical capacities of the nation to create weapons which could circumvent the ABM systems which the U.S. was placing around Russia's borders. Indeed, on March 1 last year, Putin revealed the successful development of a nuclear submarine torpedo, a hypersonic glide vehicle launched from an ICBM, and a hypersonic missile launched from a MiG 31 interceptor, among others weapons, all aimed at neutralizing the potential which the U.S. intended to achieve with its enhanced ABM system—i.e., to deny the U.S. a "first strike" capacity in which our ABM system would thwart a Russian nuclear response.

We must not make the mistake of opposing the Russian development of these new technologies, nor opposing the U.S. development of the new technologies required for the new missile defense systems announced Feb. 1 by President Trump. Rather, we must encourage such expansion of human knowledge, but insist that it be done in collaboration with Russia, and also with China, and, most important, that the new technologies be jointly applied to civilian needs as well.

As long ago as 1977, *EIR* issued a document titled "From Detente to Entente—A U.S. Policy For the SALT Talks," the Strategic Arms Limitations Treaty talks. Reviewing the efforts of some imperial-thinking forces to adopt an arms agreement which restricted technological development in frontier areas of human knowledge, the *EIR* document concluded: "The U.S. should not embark on the futile course of attempting to banish innovation from arms development. Instead, an international agreement (or a sequence of such agreements) for nuclear energy development should prominently contain a clause providing for far-reaching scientific collaboration, exchange of information, and actual joint research and development efforts, especially in the various areas of fusion research."

This was the seed crystal for Lyndon LaRouche's proposal to President Ronald Reagan for a space-based anti-missile system to be developed jointly by the U.S. and the USSR—an idea which Reagan adopted under the name Strategic Defense Initiative (SDI). The basic

concept is even more valid, and more urgent, today, with the added necessity that the space-based systems be made capable of diverting asteroids threatening the Earth—a proposal issued to the U.S. by Dmitri Rogozin (now head of the Russian space program, working closely with NASA chief Jim Bridenstine) in 2011 under the name Strategic Defense of Earth (SDE). With Trump now mandating a new space-based missile defense system, it is essential that this program, pushing ahead on the frontiers of scientific knowledge and capacities, be carried out internationally and applied also to the economic development of mankind as a whole.

Is this a Utopian dream? The British, whose intention is to preserve the Empire through the geopolitical division of East and West, and those in the UK and the U.S. frantically trying to bring down President Trump through Russiagate lies, would have us believe so. Recall what President Trump said on Feb. 1 while announcing his plan for missile defense:

> We stand ready to engage with Russia on arms control negotiations that meet these criteria, and, importantly, once that is done, develop, perhaps for the first time ever, an outstanding relationship on economic, trade, political, and military levels. This would be a fantastic thing for Russia and the United States, and would also be great for the world.

We are in a moment known as a *punctum saliens*, a jumping-off point, in which the leap could either be forward to a new Renaissance, or backwards into a new Dark Age. The spirit of the New Silk Road has created the context in which many nations around the world —potentially all nations—are working together towards achieving the common aims of all peoples through scientific and technological progress. This requires that President Trump be liberated from the treasonous Russiagate scam in order to realize his best intentions, to rebuild the United States and contribute to global development.

Our task is to bring the American people to embrace as a ONE, the totality of LaRouche's program: the Four Laws, the New Silk Road, the SDI and SDE, and the New Bretton Woods. This answers their fears and gives them the optimism required to act on their true humanity.

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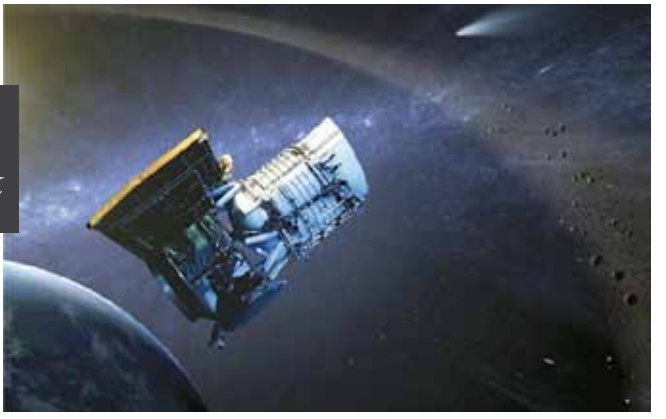
## Cover This Week



NASA/JPL-Caltech

*An artist's rendering of the Wide-field Infrared Survey Explorer, or WISE spacecraft, in orbit around Earth, hunting for asteroids and comets.*



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# I. A Moment of Decision

BRIT PAWNS ATTACK TRUMP

## The Roger Stone Case and the 2019 'Worldwide Threat Assessment'

by Harley Schlanger


Feb. 1—On January 25, a pre-dawn raid, conducted by more than twenty FBI agents—brandishing heavy weaponry and wearing body armor—was carried out against longtime Donald Trump ally Roger Stone. Let us be very clear—this action was, and is, intended to send a chilling message to anyone wishing to speak out for or defend President Donald Trump. The threat is clear: "If you persist in defending Trump, you may yourself become a target of an out-of-control special counsel."

While the use of such heavy-handed tactics might be justified in dealing with a notorious terrorist, a violent narcotics trafficker, or a murderous psychopath, in this case the militarized raid was deployed against a well-known, successful political consultant, who played a leading role in helping Trump win the 2016 election. Stone was charged in a seven-count indictment with such crimes as "lying to Congress." Robert Mueller's team chose this terror tactic to further intimidate him, after more than nearly two years of leaks and innuendo, as part of a campaign to harass and bankrupt Stone, hoping it would cause him to "flip," to bear false witness against Trump, to protect himself and his family.

One of Stone's attorneys pointed out that Mueller's show of force against Stone, which was captured by a CNN camera crew that claimed it just happened to be on the scene, due to a "hunch" that something might happen, was completely unnecessary. Usually, in such cases, a call is made to the target's attorney, and arrangements are made to surrender one's self to authorities. Harvard Law Professor Ronald Sullivan, who headed the Public Defender's Office in Washington, D.C., told the *Washington Post* that "all citizens should be concerned" about Mueller's tactics, as he found it "extraordinarily odd that they didn't allow" Stone to surrender.

Prominent civil liberties attorney Alan Dershowitz commented that, like most of Mueller's indictments, Stone has been accused of so-called "process crimes."

White House/Pete Souza

*John Brennan*

FBI

*Robert Mueller*

LBJ Library/Jay Godwin

*James Clapper*

The charges have nothing to do with the purpose of the investigation which, as initially defined by Deputy Attorney General Rod Rosenstein, was to determine if there had been collusion by Trump or members of his campaign with Russian nationals, who they charged with meddling in the election. Dershowitz has pointed out that the majority of the crimes alleged by Mueller's team to have been committed by Trump officials, concern events *after* the election, and in response to the investigation. Dershowitz added that the purpose of the indictment of Stone "was to get [Stone] to cooperate against Trump." The charges against Stone were generated, in part, from Mueller's thuggish practice of intimidating people—in this case Randy Credico and Dr. Jerome Corsi, former associates of Stone—to turn them against the targeted person.

It must also be pointedly asked: If lying to Congress is such a heinous crime, deserving of such harsh treatment, why has the FBI ignored blatant lies told to Congress by former Director of National Intelligence James Clapper about the extent of NSA spying; or former CIA Director John Brennan on CIA torture; or Robert Mueller himself, when he was FBI Director, who was accused by former Senator Bob Graham of engaging in "aggressive deception" to cover up for Saudi terror cells operating on American soil responsible for the 9/11 terror attacks?

Publicly, Mueller alleges that he is operating on the hypothesis—one that was first put forward by British intelligence officials and picked up by Obama intelligence operatives Brennan, Clapper and Comey, and then pursued by various corrupt officials of the FBI and the Justice Department (DOJ)—that Stone provided the Trump campaign with advance notice of the WikiLeaks dump of incriminating Clinton campaign documents. In doing so, they assert that Stone may have been the link between Trump and the Russians who, according to the Mueller narrative, acted under Putin's direction to hack the documents and make them available, to aid Trump's campaign. In the absence of any hard evidence of either "meddling" or "collusion" to prove any of this, Mueller is using "process" indictments to build a case against Trump. Roger Stone continues to insist that he had no advance knowledge of the source or the content of the WikiLeaks disclosures, and will not lie to implicate Trump.

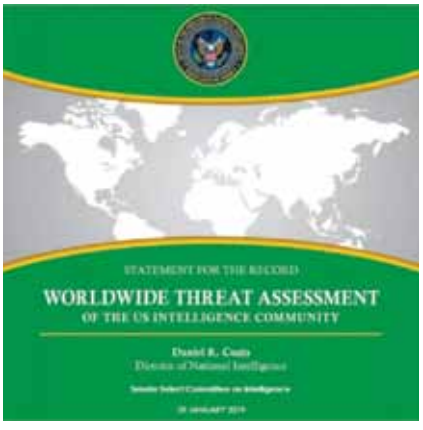
## The Real Issue Behind Russiagate

As investigative researcher Barbara Boyd has demonstrated in her three-part series on the London intelligence operation behind Russiagate, the legal and political vendetta against Trump has never been about "Russian meddling" or "Trump collusion." The 2016 election of Donald Trump flowed from pent-up anger in the population about being lied to by the Bush and Obama administrations, anger about costly and useless wars they conducted based on lies, and trillions of dollars of financial swindles in which the government protected and rewarded the swindlers, at the expense of the citizenry. Trump said he would end the endless wars, reverse the free trade agreements which have accelerated deindustrialization of the United States, and stop bailing out speculators. He also pledged to seek cooperative agreements with Russia and China, a decisive break with the provocative poli-


dni.gov

*Director of National Intelligence Daniel Coats delivers opening statement to the Senate Select Committee on Intelligence on the 2019 "Worldwide Threat Assessment."*

cies of the previous administrations and those supported by Hillary Clinton. A Trump presidency was seen, correctly, as a threat to the Old Paradigm of geopolitical conflict designed to benefit the City of London and its Wall Street and Brussels allies.




Even before Trump was elected, the prospect that he might do what he said led to the launching of the "Trump is Putin's puppet" narrative against him. His initial successful summits with Xi Jinping, President Putin, and North Korea's Kim Jong-un drove the British geopoliticians into an hysterical flight forward. The military-style deployment in the raid against Roger Stone shows the lengths they are prepared to go, to remove Trump. Stone's biggest crime, in their eyes, is that he has refused to be intimidated, that he has continued not only to vociferously defend Trump against Russiagate charges, while exposing the corruption of his enemies, but he has openly organized to build support for Trump's efforts to establish peaceful cooperative relations with Russia and China.

Less than a week after the raid at Stone's home, the coup plotters escalated against Trump's policies, with the January 29 release of the 2019 "Worldwide Threat Assessment." Incredibly, this latest round of sabotage came from officials within the Executive Branch of the government. The presentations by Director of National Intelligence Daniel Coats, CIA Director Gina Haspel, and FBI Director Christopher Wray before the Senate Select Committee on Intelligence were sharply negative about Trump's diplomatic initiatives, criticizing both his policies and the results of those policies. For example, Coats and Haspel contradicted Trump's statement that a breakthrough is possible during an upcoming summit with North Korea's Kim, saying that North Korea has no intention of giving up its nuclear weapons. They criticized Trump's decision to withdraw troops from Syria, insisting that ISIS still has thousands of fighters in Syria and Iraq, who would take advantage of a U.S. withdrawal, adding that they are planning to strike in the U.S., which will be made vulnerable by Trump's actions.

What we are witnessing is warfare within our government institutions, with the British-directed war-hawks focusing their attacks on Trump's efforts to improve relations with Russia and China, nations who they insist represent the greatest threat to U.S. national security. Wray, for example, asserted that "the Chinese counter-intelligence threat is more deep, more diverse, more vexing, more challenging, more comprehensive and more concerning than any counter-intelligence threat that I can think of." Coats warned that the commitment of Russia and China to their own sovereign development, and to sharing that development through the Belt and Road Initiative, when combined with the general advances in new technol-

ogies being developed and applied internationally, threatens the post-World War II geopolitical system established under Churchill and British direction after the death of Franklin Roosevelt. In other words, they concur with the British House of Lords that the greatest threat to the West is the breaking of the "Special Relationship" between Britain and the U.S., which is at the heart of the crumbling post-Cold War liberal order.

In an obvious sign that the "Worldwide Threat Assessment" was written to defend the collapsing neoliberal global system, it launches an absurd attack on China's Belt-and-Road Initiative, stating that China, "through its Belt and Road Initiative, is seeking to assert China's model of authoritarian capitalism as an alternative—and implicitly superior—development path abroad."

White House/Tia Dufour

*President Trump, meeting with Chinese Vice-Premier Liu He, other officials and members of the trade delegations in the House Oval Office on January 31, 2019.*

Among the threats identified in the 42-page report is the charge that both Xi Jinping and Vladimir Putin "view strong indigenous science and technology capabilities as key to their country's sovereignty, economic outlook, and national power." President Trump, however, in his UN General Assembly address last September, stated that he does not consider other nations' pursuit of their national interests a threat, but something which they *should* do. "The Worldwide Threat Assessment," together with the testimony of these three leaders of the intelligence community, demonstrate that at least these individuals—and likely others within the intelligence community—are determined to thwart Trump's peace initiatives.

Trump, who has worked closely with Xi Jinping in achieving progress with North Korea, and is hoping for a broad trade deal with China before a March 1 deadline, was less than pleased with the fulminations of his intelligence staffers. He tweeted that they are "naive." He cited progress versus ISIS in Syria, said negotiations toward a peace agreement in Afghanistan are "proceeding well … after 18 years of fighting," and that the "North Korea relationship is the best it has ever been with the U.S." Asked if he has confidence in Haspel and Coats to give him good advice, he said bluntly, "No, I disagree with certain things they said. I think I'm right. Time will prove me right, probably."

Yet the "chicken hawks" in both parties rallied to defend the attacks on Trump. Senate Minority leader Chuck Schumer, a New York Democrat, called on the intelligence officials to "stage an intervention" with Trump, adding that Trump's comments were "extraordinarily inappropriate and will undermine public confidence in the U.S. government's efforts to protect our national security." He said that Coats, Haspel and Wray should "insist on an immediate meeting … to educate him" about why he is mistaken. Among Republicans, Senate Majority Whip John Thune praised Coats, and Sen. Mitt Romney said he has "full confidence in our intelligence community."

## Targeting China

As Trump fends off attacks from his national security team, corrupt elements in the Department of Justice and State Department have carried out another assault on his diplomatic efforts. While his trade negotiators are meeting in Washington with top Chinese officials, and a meeting is scheduled between Trump and Chinese Vice Premier Liu He, who leads

the Chinese delegation, two separate indictments were handed down, one in Seattle and one in Brooklyn, both against China's Huawei telecommunications conglomerate. The indictments—which include a total of 23 counts, ranging from alleged theft of robotic technology filed in Seattle, to violating sanctions against Iran and bank fraud in Brooklyn—follow the December 1, 2018 arrest of Huawei's CFO Meng Wanzhou in Vancouver, Canada.



Office of the President of Russia

*Meng Wanzhou, CEO of Huawei, in 2014.*

The line against Huawei is that it is acting as an "arm of the Chinese state," and its devices could be used for spying. Again, there is cross-party neo-con support for the attack on this successful tech firm. Sen. Chris Van Hollen, a Maryland Democrat, declared that Chinese telecom companies "represent a fundamental risk to American national security." Anti-Trump Republican Senator Ben Sasse said that Americans are "grateful" for the arrest of Meng and praised the DOJ for its actions in pursuing her arrest and extradition.

In this assault on Huawei, once again, the British hand is present. The current targeting of Huawei was triggered by an investigation launched by Britain's National Cyber Security Center (NCSC), a branch of Government Communications Headquarters (GCHQ). It was GCHQ which first called attention to what it described as suspicious Russian cyber activity related to the 2016 election, and GCHQ Director Robert Hannigan came to the U.S. to present the "evidence" to the CIA's John Brennan. It was during Hannigan's tenure at GCHQ (2014-2017) that the NCSC was established.


GCHQ © Crown Copyright 2016

*Robert Hannigan, former director, GCHQ.*

Further, the attacks on Huawei follow a pattern of British operations against the efforts of Trump to work with China. His first meeting with Xi on April 7, 2017 occurred as British and French leaders joined with his national security team in demanding a strike against Syria, allegedly for Syria's use of chemical weapons. The arrest of Meng last December coincided with Trump's summit with Xi at the G20 summit in Buenos Aires, and this latest attack on Huawei occurs as the pivotal U.S.-China trade negotiations are underway. Trump has said that negotiators should separate the Huawei legal assault from the trade talks, and reports are that the talks are progressing well. Still, the timing of the legal assault against Huawei again shows that the anti-Trump coup plotters will continue with their reckless drive to disrupt his diplomacy, in defense of their dying order, even if it means war.

# Caught! Notes on Robert Mueller and the Demise of BuzzFeed

by Barbara Boyd

Feb. 1—Washington has been awash in speculation as to why the supposedly taciturn Robert Mueller emerged from behind his supposed steel curtain of silence on January 18, to condemn a story in *BuzzFeed* as completely false. The fake news was that the Special Counsel had documentary evidence demonstrating that President Donald Trump instructed his ne'er-do-well former attorney, Michael Cohen, to lie to Congress. The entire news cycle from the time of the fake *BuzzFeed* story's release on Thursday January 17, to Mueller's knock-out punch on Friday night, featured Democratic members of Congress and Senators, Obama Administration intelligence officials, and their journalist groupies in the news media fulminating that this was it, impeachment was imminent, the President was toast.


BuzzFeed News

REPORTING TO YOU

THE MONEY TRAIL

**President Trump Directed His Attorney Michael Cohen To Lie To Congress About The Moscow Tower Project**

Trump received 10 personal updates from Michael Cohen and encouraged a planned meeting with Vladimir Putin. Update: The office of the special counsel is disputing BuzzFeed News' report.

Jason Leopold, BuzzFeed News Reporter

Anthony Cormier, BuzzFeed News Reporter


npr WAMU

POLITICS

Mueller's Office Disputes BuzzFeed Report That Trump Told Cohen To Lie To Congress

January 18, 2019 · 1:08 PM ET

LAUREL WAMSLEY PHILIP EWING

Michael Cohen, former personal lawyer to Donald Trump, leaves federal court in New York on Aug. 21, 2018.

*BuzzFeed*, the leak point for the crazed, fake, British intelligence Christopher Steele dirty dossier about Donald Trump, has had its gossip clickbait model modified in recent years to include a so-called "investigative" unit, led by Ben Smith, formerly the editor of *Politico*. In the weeks before the Mueller-Michael Cohen fiasco, this unit had been exposed as a favored instrument of the Integrity Initiative, a British military intelligence psy-op and propaganda deployment geared to convincing the people of the United States and Europe of the necessity for war with Russia. Their endeavors are funded by Facebook, the Smith Richardson Foundation, and the U.S. State Department, in addition to the British government. Among the goals of this deployment is to ensure that Donald Trump


C-SPAN

*Andrew Weissmann, FBI General Counsel.*

CC/Internet Education Foundation

*Deputy Attorney General Rod Rosenstein.*

never gets a second term, now an openly declared foreign policy of the British, per the December 2018 House of Lords Report, *U.K. Foreign Policy in a Shifting World Order*. Since the Mueller-Cohen fiasco, *BuzzFeed* has laid off 15% of its staff and appears headed to its demise.

In thinking about this, it's first necessary to dispense with the myth that Robert Mueller is taciturn about leaks. That is utter nonsense. Mueller is a veteran of political persecutions in which leaks are employed strategically to destroy a target and to influence the grand jury, before anyone is even indicted, and the jury thereafter. For example, in the LaRouche Boston prosecution that Mueller supervised, Mueller's minions collaborated on a television special, on CBS's "West 57th" prime-time weekly news broadcast, the night before jury selection was originally scheduled. The program alleged, through one of Mueller's witnesses for the government in the trial, that the LaRouche defendants were responsible for assassinating Swedish Prime Minister Olof Palme in February 1986, an absolutely false and inflammatory claim that originated with the East German intelligence service, the Stasi. When the initial Boston jury selection date was postponed due to unrelated case developments, "West 57th" re-aired the segment, again on the eve of jury selection, scrubbing its originally scheduled show.

Veteran defense lawyer Sidney Powell confirmed on the "Mark Levin Show" January 27, that pre-trial destruction by press is a central element of Mueller's arsenal, having experienced these tactics personally through Mueller's chief henchman, Andrew Weissmann, in the Arthur Andersen-Enron cases.

In the same interview, Sidney Powell said the reason why Mueller refuted the *BuzzFeed* story was because *BuzzFeed* had left Mueller's fingerprints all over the story. Mueller had to conduct a cover-up. Indeed, when *BuzzFeed* reporters Jason Leopold and Anthony Cormier said that their story was based on two sources fully versed on what Mueller's office had, they drastically limited the potential targets for any criminal leak investigation. Most leak investigations are plagued by the existence of a multiplicity of potential leak points.

A further complication for Mueller, also caused by Leopold and Cormier pointing so specifically to their sources, is found in the ongoing prosecution of Natalie Mayflower Sours Edwards in the Southern District of New York. A complaint accuses this former employee of the Treasury Department of two counts of conspiracy to make unauthorized disclosures of "Suspicious Activity Reports" (SARs) related to Paul Manafort, Rick Gates, accused Russian "lobbyist" Maria Butina, the Russian Embassy in Washington, and a suspected Russian money-laundering entity. It is a felony to leak these IRS reports. All of the SARs allegedly leaked by Sours Edwards concern people Mueller is involved in prosecuting. One Deputy Attorney General, Rod Rosenstein, is supposedly in ultimate charge of both the prosecutors in the Sours Edwards case, and Mueller. The leak point for Sours Edwards? *BuzzFeed*. The reporters who were leaked to? Jason Leopold and Anthony Cormier.

So, one part of the Justice Department prosecutes a leak to Leopold and Cormier; the other leaks to Leopold and Cormier. A very, very, awkward and exposed position here for the man that some in Washington paint as the embodiment of rectitude, morality, and true justice.

# Historic U.S.-China Agreement Being Negotiated

by William Jones

Feb.3—Last week, an anxious world saw a light at the end of the tunnel with the conclusion of the latest round of trade talks between the United States and China, and the meeting of the U.S. President with the Chinese delegation. At that meeting it was crystal clear that the President really *wants* an end to the trade conflict and would like to establish a good working relationship between the two countries. Trump wants to put the U.S. economy on its feet again.

White House/Shealah Craighead

*President Trump greets China's Vice-Premier Liu He in the Oval Office, after two days of trade talks on January 31, 2019.*

By contrast, the Democratic leaders in the Congress, House Speaker Nancy Pelosi and Senate Minority Leader Chuck Schumer, together with the neocons, want to put the brakes on China's startling economic development which has brought 800 million people out of poverty.

Comments by President Trump, in the Oval Office meeting, indicate his real desire to achieve an agreement as well as his great respect for the Chinese leader, Xi Jinping, who is being portrayed by the U.S. media as a power-hungry dictator:

> The relationship is very, very good between China and the United States. And the personal relationships are very good, with the Vice Premier, with myself and President Xi, and with our representatives. It's been very, very good. And, you know, you read a lot of things. Sometimes you hear good, sometimes you don't hear good. But I will say that I think that the relationship that we have right now with China has never been so advanced. I don't think it's ever been better. But I can you tell you for a fact, it's never been so advanced.

Trump also highly praised Chinese Vice Premier Liu He, who was leading the delegation:

> I just want to say the Vice Premier is a friend of mine. He has become—he is truly one of the most respected men in Asia, one of the most respected men in all of China, and, frankly, one of the most respected men anywhere in the world. And it's a great honor to have you with us.

Liu He was carrying a letter from President Xi to President Trump, which Trump characterized as "a beautiful letter," and requested that it be read for all present at the meeting to hear. In the letter, President Xi wrote:

As I often say, I feel we have known each other for a long time, ever since we first met. I cherish the good working relations and personal friendship with you. I enjoy our meetings and phone calls in which we could talk about anything. It falls to us to work together and accomplish things meaningful for the people of our two countries and the world at large.

CC/Jeremy Elson

*Boeing's aircraft factory in Everett, Washington. China has purchased many Boeing airplanes in the past.*

## Trade Talks Making Progress

President Xi also expressed the hope that the talks would result in progress in resolving the present crisis.

And they certainly did. China came prepared with a number of far-reaching proposals that were music to the ears of America's farmers—and the U.S. President—by committing to purchase five million tons of soybeans from the United States. "That's going to make our farmers very happy," Trump said. "That's a lot of soybeans. That's really nice." China made other purchase agreements in the meeting that will go a long way in helping to alleviate the trade balance problem.

But the issue of trade has always been something of a red herring. China is quite willing to buy much more from the United States, but it has come a long way from being a low-wage producer for the world market, having transformed itself into a major producer of high-value products. It is in the area of high-tech that China has the greatest need today rather than soybeans or even Boeing airplanes, of which they have purchased many. But the tough restrictions that the U.S. Congress has placed on China's purchasing of such products—and those restrictions are becoming more stringent, not less—keep them out of reach for Chinese customers.

The trade talks went on for a day and a half, with the first day concentrating, it seems, on the trade issue per se. The second day dealt with the more difficult issue of China's alleged, forcing of technology transfers, restrictions and bureaucratic hurdles facing foreign investors, and the very mechanism of China's industrial policy, as well as the role of State-owned enterprises in the Chinese economy.

President Xi has already committed the country to continue the opening up policy initiated by Deng Xiaoping 40 years ago, and many of the restrictions to foreign investment that continue to exist in China are being reduced in tandem with an increased opening of the Chinese economy. This is a policy which President Xi deems necessary for China's continued development. Some of these measures, including legislation on new investment regulations which would make it easier for foreign firms to set up businesses in China, are being fast-tracked, and could be ready by the time of the next National People's Congress in March. And many other items will no doubt be agreed to in an attempt to resolve the conflict with the United States.

## But Some Want to Sabotage

Some on the U.S. side have talked about putting a lid on China's technological advances in order to maintain U.S. leadership, i.e., hegemony, in the field

Creative Commons/Lorie Shaull

*Rep. Nancy Pelosi (left) and Senator Chuck Schumer, to her left.*

of high-tech. But China will not dismantle a system which has been instrumental in modernizing their country. While State-owned enterprises will be reformed in order to make them more effective and profitable, and more space will be allotted to private industry in the Chinese economy, China will not dismantle these companies that have served the economy so well. Massive privatization and "shock therapy" reforms are definitely not on the agenda. Nor will they cease attempting to reach new frontiers in their technological development, which is the right of all nations interested in their own future well-being.

While President Trump has given some hardline China-bashers like Peter Navarro a "seat at the table" in the trade negotiations, dismantling Chinese industrial policy is not on Trump's agenda. Will a compromise be achieved that both sides can live with? That remains to be seen. But even the crusty trade hawk, U.S. Trade Representative Robert Lighthizer, when asked by the President to give his opinion at the White House meeting, had to admit that progress had been made in the talks, while at the same time curtly mumbling something about the need for "enforcement, enforcement, enforcement," an issue that even Vice Premier Liu He agreed was important. That is, enforcement of whatever agreement is finally decided upon by the two presidents.

Public Domain

*Peter Navarro*

## Trump and Xi to Meet This Month

And while negotiations will continue through the month of February, the decision will now shift into the court of the two presidents, to be finally resolved at their next summit meeting later this month. While much can happen in the interim to sabotage the progress being made, such as the campaign of the Justice Department against the Chinese telecommunications giant, Huawei and Huawei's Vice President Meng Wanzhou, the desire of the two presidents to establish a good working relationship between our two nations is the critical element in extracting the world from the present crisis mode.

Not surprisingly, the same government institutions that are most adamantly attacking China and its leader, namely the Department of Justice and the Democratic leadership in the U.S. Congress, not to mention George Soros, are the same ones attacking the U.S. President. And a successful trade agreement between the United States and China would help throw a monkey-wrench into both these operations and would be the ideal win-win situation that both presidents desire.

# Agapē as Policy: General Douglas MacArthur and Japan

by Diane Sare

Feb. 4—What will the world look like when the United States finally joins the One Belt One Road initiative launched by China's President Xi Jinping in 2013?

That is a question that has tickled, taunted, and tormented me over the last few years, as the New Paradigm, long advocated by Lyndon and Helga Zepp-LaRouche, makes soaring leaps in Africa and Asia, while the collapse of the trans-Atlantic world accelerates to what will surely be a resounding doom. The tension between these two coinciding (for the moment), worlds is now at the breaking point.

When one ponders the horrific state of mind of the majority of young Americans, and the degeneracy of their pot-smoking parents, who are making arguments for legislation that is approaching the advocacy of cannibalism (is that perhaps the end result of cannabis?) one is caused to consider whether a great moment is once again going to find a people who are too depraved to seize the opportunity to transform mankind.

For example, the former German Deputy Defense Secretary, Willy Wimmer, cautioned those who are calling for the impeachment of President Donald Trump, that Donald Trump is very likely the only thing standing between them and World War III. Wimmer is very clear, at least, that the ultimate success of China's President Xi Jinping's initiative to end poverty worldwide by 2050—as propelled by a commitment to scientific progress and creativity—depends on what happens here in the United States, in the relatively very short term.

Army Signal Corps

*General MacArthur arriving at Atsugi airdrome near Tokyo, Japan on August 30, 1945.*

**Human Progress Depends on a Few Precious Individuals**

The progress and long-term survival of the human species depends on those few precious individuals who have managed to muster the courage to actively love mankind, and most importantly, to love mankind's potential. Jeanne d'Arc and Martin Luther King, Jr. come immediately to mind, but I would add that the extraordinary success of the American Revolution against the bestial world outlook of the British Empire, a success expressed in our Declaration of Independence and the Preamble to the Constitution, created an "American Culture" that produced several such individuals, who were quite conscious of their philosophical roots, including Abraham Lincoln, Franklin D. Roosevelt, and Douglas MacArthur, to name a few, culminating in the person of Lyndon LaRouche, who is to date, the pinnacle of "American Culture" or, dare I say "American Exceptionalism"?

Because of Lyndon LaRouche's extraordinary life, through his scientific breakthroughs in the field of physical economy, and eight presidential campaigns, providing presidential leadership, and building an international philosophical association, there is a very good possibility that the United States will ultimately move in the needed direction, but that depends on the American people regaining their sense of cultural optimism about the potential the future holds, and thereby finally recognizing the foul and evil stench of the dying British Empire, and collaborating




National Archives & Records Administration

*When MacArthur arrived in Japan, millions were homeless, food and medicine were sparse to non-existent, and the destruction was extensive. Shown here (left) is a makeshift "home," and a view of the bombed out Nihonbashi business district of Tokyo (center) in 1946. Many second generation Japanese-American (Nisei) women went to work for American government agencies during the occupation (right).*

with the LaRouche Movement to crush it.

To that end, please now reconsider LaRouche's words from a 1986 paper, "Truth is Beauty and Beauty is Truth," published in the January 25, 2019 *EIR*:

> Although the principles of art so adduced, seem to be particular to western Europe and the Americas, they are true principles, nonetheless. If the person encultured in this western European civilization wishes to understand the artistic works of Asian cultures, that person will find that the principles seemingly only specific to the Augustinian tradition are truly universal ones. That person will be enabled to discover, that by situating the notion of art rigorously in terms of his own cultural experience, he acquires in this way the power to comprehend art universally.
>
> The most beautiful aspect of Christianity is presented first in the opening chapters of the Gospel of St. John; later following St. Paul, this truth and beauty is affirmed and elaborated by St. Augustine. The clarification of the Latin Nicene Creed with the Filioque, captures the essence of this.

## Agapē Is the Unifying Principle

LaRouche continues:

> The Logos (conventionally referred today by today's Christians as the "Holy Spirit") is the essence of Reason, as we have identified the higher-order laws of the universe here. Yet, this is not abstract reason; without the active role of a certain quality of love, agapē, reason dies. This quality of love is the essence of Reason. It is, at once, love of God, and also a kind of love toward mankind made concrete by Jesus Christ as God's love toward mankind. Whom God loves, we love, and in that fashion. The flow of perfect Reason and perfect Love from Christ toward mankind, as from the Creator, is the common essence of science and art.
>
> This love toward mankind is focussed on that aspect of the individual personality which distinguishes mankind absolutely from the lower species: the "soul," the development of the divine spark of potential for scientific reasoning.

This principle of agapē is the unifying principle embodied by all great leaders, including military leaders, whose intent in war is not to kill the most people (as the sick Robert Strange McNamara enforced in Vietnam, a war which the U.S. did not win), but to save the most people, and their posterity, even if it means giving one's own life to do so.

This was the mindset of General Douglas MacArthur, whose father had been an important military leader in Abraham Lincoln's Union Army from a tender age.

According to General George Kenney, the Commander of the 5th Air Force under MacArthur in the Pacific during World War II, MacArthur had a picture of President Lincoln, with the following quote from Lincoln, which he hung in every office he ever occupied:

> If I were to try to read, much less answer, all the attacks made on me, this shop might as well be closed for any other business. I do the very best I know how—the very best I can; and I mean to keep doing so until the end. If the end brings me out all right, what's said against me won't amount to anything. If the end brings me out wrong, ten angels swearing I was right would make no difference.

Royal Navy/W.G. Cross

*Douglas MacArthur reading the surrender terms to the Japanese representatives aboard the* USS Missouri *in Tokyo Bay on September 2, 1945.*

Lincoln's Presidency was the embodiment of those principles expressed in our founding documents, referenced above. As brutal and bloody as the War of the Rebellion (misnamed the "Civil War") was, and as treasonous as the Confederacy was, Lincoln had already expressed in his Second Inaugural Address his intent to forgive the South ("with malice toward none, with charity for all") before the war had been won. As far as he was concerned, losing that war against the British-orchestrated Confederacy was not an option, and happily, his Generals Grant and Sherman were of the same opinion. President Lincoln's intent was to secure the peace, but not a peace of oppression, but a peace worthy of the dignity of mankind, for the future potential of mankind.

When the Confederate Army surrendered at Appomattox, great care was taken by General Joshua Lawrence Chamberlain, on the President's behalf, to afford the surrendering soldiers a dignified submission of their arms and flags, which was not well received by some, but created the possibility for the nation to "bind up its wounds" as Lincoln had intended. While the soldiers were marching back from Appomattox, burying their dead as they went, and remembering the bitter battles, the word came that President Lincoln had been assassinated at Ford's Theatre in Washington, D.C., even before the victory parade was held. Because of Lincoln's commitment to this principle, and the culture created by his leadership, the nation survived, and even prospered, although much impaired relative to what might have been.

## MacArthur as Supreme Commander in Japan

When General MacArthur first landed in Japan at Atsugi Airdrome, which had been a hotbed of Kamikaze fighters, after the surrender (but before the signing ceremony, which was two weeks later, on board the *USS Missouri*) General George Kenney was surprised by MacArthur's order that all the American soldiers should remove their pistols, which they habitually carried. Kenney writes:

> There were about 15 Jap divisions within a few miles of us that had not yet disarmed. If the Japs didn't really mean what they had said about surrendering, those pistols wouldn't do us much good. We left them behind. It turned out later that MacArthur's instinct for figuring out the workings of the Oriental mind was still paying off. A number of Japs told me afterward that the sight of all those generals and officers walking around unarmed in a country of seventy million people, who only a few days before were enemies, made a tremendous impression on the Japanese. It told them more than anything else that they had lost the war.

The situation in Japan at the end of the war was a delicate one. General Kenney described the population as sullen and depressed. The Emperor had been venerated as a God, more than as a man, and the announcement of the surrender was a great shock to the culture and identity of the Japanese people. As a result of the war and blockade, millions were homeless, and food and medicine were sparse to non-existent. Two nuclear bombs had been dropped on major population centers on orders of President Truman, in spite of the likelihood that Japan was about to surrender due to the blockade. Because of the lack of communications, not everyone was aware of the extent of the devastation in Hiroshima and Nagasaki. That was probably fortunate. If action were not taken immediately to address the immiserated state of the population, with millions of soldiers returning from battle, Kenney feared that a rebellion could erupt, and keeping over 70 million people under martial law did not seem like a viable prospect.

U.S. Army/Gaetano Faillace

*Gen. MacArthur and Emperor Hirohito meeting for the first time at the U.S. Embassy in Tokyo, on September 27, 1945.*

MacArthur, who had visited Japan with his father in 1905, was acutely aware of the challenge he faced as the "Supreme Commander" overseeing the occupation of Japan. He wrote in his autobiography, *Reminiscences:*

> Because I had been given so much power, I was faced with the most difficult situation of my life. Power is one thing. The problem of how to administer it is another. My professional military knowledge was no longer a factor. I had to be an economist, a political scientist, an engineer, a manufacturing executive, a teacher, even a theologian of sorts. I had to rebuild a nation that had been completely destroyed by war. Whatever my ethical teachings had been, whatever my basic character was, whatever the concept of mankind that lay within my soul, I would have to bring into this political, economic, and spiritual vacuum concepts of honor, justice, and compassion. Japan had become the world's great laboratory for an experiment in the liberation of a people from totalitarian military rule and for the liberalization of government from within. It was clear that the experiment in Japan must go far beyond the primary purpose of the Allies—the destruction of Japan's ability to wage another war and the punishment of war criminals. Yet history clearly showed that no modern military occupation of a conquered nation had been a success.
>
> If any occupation lasts too long, or is not carefully watched from the start, one party becomes slaves, and the other masters. History teaches, too, that almost every military occupation breeds new wars of the future.... My doubts were to be my best safeguard, my fears my greatest strength.

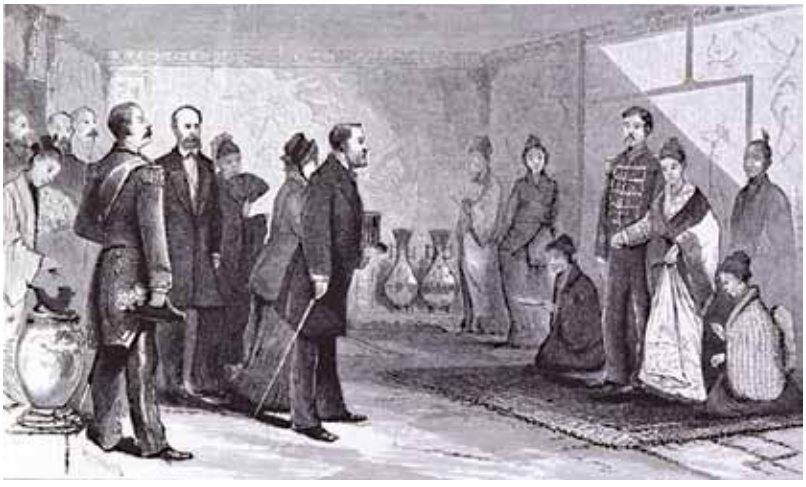
## Justice Is a Universal Principle

Once again, Aristotle's view of the human soul as a "blank slate" was refuted, as the people of Japan demonstrated that justice is indeed a principle universally abiding in the human identity, no matter how remote it seems from the prevailing opinion. Instead of being a source of rage and resentment, the war crimes tribunals had a moralizing effect on the population, as the perpetrators of hideous deeds were located and held accountable for their crimes. MacArthur absolutely refused to put the Emperor on trial, as the Soviets and others were demanding, not intending to humiliate the Japanese people any further. As absolutely barbaric and savage as the Japanese soldiers had been toward the peoples they conquered, and toward their American prisoners of war, MacArthur exercised care to not allow any sense of revenge to prevail, but rather, of justice, and the population responded favorably.

Clearly, many of the Japanese people had themselves been victims of the fascist regime in Japan, with

thousands having been thrown into prison for "political" crimes, including those who represented a pro-American outlook, probably including friends of MacArthur's father, and people associated with them. MacArthur released the political prisoners, including the Communists, declared freedom of the press, and gave women the right to vote.

There were, of course, many economic measures taken, from the immediate task of getting food and medical supplies to the population, to breaking up family monopolies, and establishing many new manufacturing firms and businesses. There was a direct relationship between Franklin Roosevelt's "New Dealers," including credit from the Reconstruction Finance Corporation, and the reconstruction of Japan. Through all of this General MacArthur was acutely conscious that the Japanese people had to be responsible and engaged in the future direction of their nation. The occupation had to be short lived, and the change in Japan's culture, economy, and government had to endure, as the legacy of the Japanese people themselves, and not evaporate the moment MacArthur left.



*U.S. President Grant has an audience with Japan's Emperor Meiji and his Empress on July 4, 1877.*

Others have written much more about the specific policy actions taken by General MacArthur to "unleash the passion of the Japanese people," as LaRouche's late collaborator Don Phau was investigating before his death. I will not attempt to itemize any of that here. What provoked me upon reading General Kenney's account of MacArthur, was that I had never considered the extraordinary cultural shift in Japan, which occurred in such a short time. That is, that a totalitarian military dictatorship, which had engaged in hideous war crimes abroad, and brutal repression of its own people, could become in less than five years a peaceful, industrial power.

## Earlier U.S.-Japan Contacts

It is true that MacArthur's occupation was not the first relationship that Japan had had with the United States. In 1852, President Millard Fillmore had sent Commodore Matthew Perry to open a commercial relationship with Japan—which was only trading with the Dutch and China—at the time of the British Opium Wars against China. President Fillmore was certainly thinking about curtailing the British Empire's reach into Asia, and Perry's mission was ultimately a success.

Later, in 1871, Emperor Meiji, in consultation with U.S. President Ulysses Grant, sent his Junior Prime Minister, Iwakura Tomomi, and his Assistant Minister for Foreign Affairs as Ambassadors to the United States for the purpose of "reforming and improving" the Japanese economy. Later, they had a crucial meeting with economist Henry Carey, who sent back his book, *Principles of Social Science*, to be translated into Japanese.

For a full discussion of the importance of Tsuyoshi Inukai and Henry Carey in Japan see Asuka Burke's article, in the February 9, 2018 issue of *EIR*.

Clearly these historic ties between American System proponents in the United States, and their Japanese collaborators contributed to the success of the American occupation.

However, the crucial factor in the success of the "liberation of the people of Japan" was MacArthur's embodiment of the universal principle of , as LaRouche expresses it in the paragraphs above. That quality of sublime anguish is expressed in MacArthur's self-doubts about whether he will be able to accomplish the "liberation of the Japanese people" through a military occupation. Because of his personal commitment to that principle, and the resonance of that principle in the hearts of the Japanese people, despite the vicious opposition to his approach from London, and Moscow, and the repeated efforts of President Truman to bring him out of Japan prematurely, General Douglas MacArthur succeeded. Japan has become a scientifically advanced, peaceful power, and more than 70 years later has not engaged in another war. This is an important lesson for Americans today.

ZEPP-LAROUCHE WEBCAST

# To Shut Down the Coup Against Trump, Exonerate LaRouche!

*This is the edited transcript of the Schiller Institute's January 31, 2019 interview with its founder, Helga Zepp-LaRouche, by Harley Schlanger. A video of this webcast is available.*

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

We're in the midst of an escalating coup effort that's being run against President Trump, on a number of fronts, but I think we'll start with the most prominent one yesterday, the "Worldwide Threat Assessment" presented by his intelligence team, CIA Director Gina Haspel, FBI Director Christopher Wray, and Director of National Intelligence Dan Coats. They all seem to be contradicting Trump on every single strategic issue. So, Helga, why don't we begin with that?

## Fake News: 'Worldwide Threat Assessment'

**Helga Zepp-LaRouche:** Yes. This is indeed the same cast of characters who are working with British intelligence in the coup against Trump. The President of the United States is the one who has the mandate to set policy. It is quite amazing that all of these heads of intelligence are contradicting him, in every single positive initiative that President Trump has taken.


C-SPAN

*Dan Coats, Director of National Intelligence.*


C-SPAN

*Gina Haspel, CIA Director.*


C-SPAN

*Christopher Wray, FBI Director.*

For example, Dan Coats emphasized and repeated the line that Russia and China are mortal threats to U.S. interests and security. This was one day before President Trump was to meet with Vice Premier Liu He in the context of the U.S.-China trade relations. So, it's really poisoning the environment.

Coats said "we currently assess that North Korea will seek to retain its capabilities and is unlikely to completely give up its nuclear weapons and production capabilities;" that Russia is already planning to interfere in the U.S. 2020 elections; that China represents a huge cyber threat—and on and on.

On North Korea, Trump countered by tweeting: "Time will tell what will happen with North Korea, but at the end of the previous administration, relationship was horrendous and very bad things were about to happen. Now a whole different story. I look forward to seeing Kim Jong Un shortly. Progress being made-big difference!"

Countering Coats' statement that ISIS has not been defeated, Trump tweeted, "When I became President, ISIS was out of control in Syria & running rampant. Since then tremendous progress made, especially over last five weeks. Caliphate will soon be destroyed, unthinkable two years ago."

*Chinese Vice Premier Liu He (left, third from the top) and members of his delegation for the U.S.-China trade talks January 30, 2019 at the White House, meeting with U.S. Trade Representative Robert Lighthizer (right, fourth from the top) and his senior staff.*

## Get Off the Psycho Roller Coaster

Let me interject one reflection: The world is absolutely tumultuous—many of our supporters have said that they feel like they are on a roller coaster. Think back to when you were younger (or if you are still young), and you took a roller coaster ride. At every point of the trip, your viewpoint changes completely—one time you are up, then you are down, you're turning—it's very difficult to figure out a cohesive picture. Many people today have this acute feeling of being on a roller coaster, that the world is completely in disarray and nothing makes sense.

But, if you leave aside all these seemingly confusing predicates, and concentrate on the fact that it is the collapse of the so-called "liberal democracy" system, and the collapse of the paradigm of geopolitics—of the efforts of people who are trying to keep the world in a geopolitical confrontation for purposes of manipulation that you are experiencing. The favorite game of the British Empire throughout its existence is chaos. Understand that it really is the fight of the old paradigm trying to keep the world in destabilization, versus the new paradigm of an emerging new system of international relations, spearheaded by China. We are living at time when a completely new set of international relations in the context of the so-called "Belt and Road Initiative," or the New Silk Road is growing.

With that as a parameter, it is much easier to figure out current history. With such a perspective it becomes very clear that all the people who are right now attacking Russia and China as the biggest threat are wrong. Russia and China are not a threat. China has offered cooperation. China has a policy of new state-to-state relationships among the major powers, including to the United States. It is really very important that you not be confused.

The show was really given away by George Soros at the World Economic Forum in Davos, Switzerland where he said: "China isn't the only authoritarian regime in the world, but it's undoubtedly the wealthiest, strongest and most developed in machine learning and artificial intelligence. This makes Xi Jinping the most dangerous opponent of those who believe in the concept of open society."

The "open society" is really the synonym for an abusive neo-liberal model of economy, that values the policy known as "everything goes," and that promotes regime-change and color revolution—everything we have seen in the assault against the countries of the former Soviet Union and Eastern Europe. That is really something you have to keep in mind. Think about Soros, and then you get a sense of how this whole thing works.

## Neocons Provoke Trump: Syria, Huawei CFO

**Schlanger:** You mentioned the provocations before the trade talks, the fact that Coats singled out China for special attack. Also Christopher Wray from the FBI said that all of their offices in the United States are on alert to look for Chinese spying operations. Well, right on cue, as Chinese and American negotiators were meeting in Washington, starting yesterday, two sets of indictments came down concerning the Huawei investigation, one in Seattle and one in Brooklyn, with the charges that Huawei is a cell phone company preparing very sophisticated spying operations into the United States. I find that somewhat ironic, coming from people connected to the National Security Agency, who have, as Edward Snowden pointed out, reams of data on every single phone call made!

This is the pattern, isn't it? Whenever there are discussions—Trump meeting with Xi Jinping—for exam-

ple, during their first meeting at Mara-Lago, we had the Syrian attack; when he was meeting with Xi in Argentina, Huawei's CFO Meng Wanzhou was arrested in Canada. All of this is part of the pattern of this coup operation.

*Juan Guaidó*

## It's a Coup All Right!

**Zepp-LaRouche:** Absolutely. Many people understand that. Many more are starting to get a sense that there is such a coup. From our experience, in the last days, what really shook people up in the United States was the arrest and indictment of Roger Stone, an old friend of President Trump's. Many people realized that this is all orchestrated especially with former CIA head John Brennan announcing, on the same day, that many more names will be named. Even the *Washington Post* had to admit that in all of Mueller's investigation, he has yet to produce one shred of evidence of Russian collusion. All the so-called "crimes," including those of Paul Manafort and Michael Cohen, are so-called "process crimes," having nothing to do with Russia or collusion, but rather people lying to Mueller investigation interrogators—"crimes" that would never have happened, had there been no investigation.

More and more people are really starting to see that there is a coup going on. And it is really something which has to stop. The best way to stop it, as we discussed last week, is to sign the appeal to President Trump to exonerate my husband, Lyndon LaRouche. The same apparatus that conducted the persecution and prosecution against him in the 1980s, is the very same apparatus that covered for the actual criminals who carried out the attacks of Sept 11, 2001, and it is also the same apparatus that is going after President Trump right now. Help us make this a very loud appeal for the exoneration of my husband. This appeal will help people sharply focus on the problem and how it can and must be rectified.

President Trump should declassify all the Christopher Steele documents, make the British role clear to all. This whole process can be stopped, but it requires urgent action.

**Schlanger:** One aspect of the Stone arrest was the heavy-handed deployment of FBI agents, brandishing powerful weapons, wearing body armor,—sending a chilling message, "Don't speak up against Mueller, don't defend President Trump, or this could be you, next."

## Who Is Juan Guaidó?

Speaking about coups, we have information on the operation being run against Venezuela, with the support of people including Vice President Mike Pence, Secretary of State Mike Pompeo, and National Security Advisor, John Bolton, along with others that cross party lines. This guy who's been chosen as the "interim president," Juan Guaidó, seems to come right out of the Project Democracy/color revolution operation mold.

**Zepp-LaRouche:** Actually, he was a very unimportant, middle-level person, who has been groomed for a very long time by the National Endowment for Democracy, USAID, the International Republican Institute, and the National Democratic Institute for International Affairs. All of these institutions are cut-outs for the intelligence community—and are all part of Soros' global regime-change/color revolution apparatus.

Juan Guaidó in 2005 belonged to a group of Venezuelan students who went to Serbia, where they participated in the Center for Non-Violent Action and Strategies (CANVAS), an outgrowth of another organization called Otpor (Resistance), which was part of the color revolution apparatus involved in the toppling of Slobodan Milošahević in 2002.

These operations are all known to Russia and to many other countries in the world. Right now, there is a clear dividing line: On the one hand there are those countries—the United States, Canada, Israel, and the Europeans—that immediately endorsed this self-proclaimed "interim president," claiming that Nicolás Maduro did not win the election. They all support the idea expressed by German Foreign Minister Heiko Maas, who went out of his way to demand that Maduro had to declare early elections in one week!"

A number of other countries, Russia, China, Turkey, Mexico, Uruguay, and some others, said: No, the prin-

gob.mx

*Andrés Manuel López Obrador, President of Mexico.*

ciple of the UN Charter applies—the determination of who the President is and the outcome of the election in Venezuela, is entirely a matter for the Venezuelan people to decide.

The Venezuelan crisis situation is being staged in another effort to entrap President Trump. Trump was approached by Sen. Marco Rubio and other elected officials from Florida. This crisis is an effort to prevent any kind of cooperation, especially also in Ibero-America, where the Silk Road perspective does exist and is growing stronger.

Mexican President López Obrador wants to cooperate with President Trump on infrastructure investments in all of the Central American countries as part of a joint effort to stop the migrations. This approach is in the right direction. I agree with Pope Francis—not all the time, but in this instance—when he said: "What is it that scares me? Bloodshed and civil war."

China has pointed to the worse-case scenario—a possible repetition of what happened in Syria, many years of civil war, which then would explode into the whole Ibero-American continent.

So, it's really important that people look at the history, and not fall for the narrative being peddled, based on the surface of the percussive events. The British Empire has been meddling in Venezuela, in particular, for a very long time: They had ties to Hugo Chávez, related to the deal Chávez had on drug trafficking with the Colombian narcoterrorists, the so-called "Revolutionary Armed Forces of Colombia," (FARC). The FARC is really a gang/countergang intervention that people should not fall for.

There is a very useful article, "The Making of Juan Guaidó: How the U.S. Regime Change Laboratory Created Venezuela's Coup Leader," by Max Blumenthal and Dan Cohen, posted in a blog called *Grayzone* that goes into the long history. We will produce some documentation, based on previous studies in our own publications. We will update these materials to demonstrate clearly that the situation is not what it appears to be. For sure, it's not an issue of Democracy, and it is not just a question of oil, even though that is being portrayed now as the big issue. It is the old paradigm trying to prevent the new paradigm from emerging. As long as you keep that as a concept, it will all be much more comprehensible to you.

**Schlanger:** Among the supporters of the coup in Venezuela is the International Monetary Fund (IMF). The so-called "interim president" has said he would bring the IMF in. This has been the pattern in Central and South America: It never works. The idea that the International Monetary Fund is concerned with the well-being of the people of Venezuela is a joke and most people in the region know that.

The other point you made that's really important, Helga, is the Chinese involvement in Central and South America. Go to our website and look at that. Chinese presence could fit perfectly with President Trump's discussions with López Obrador of Mexico for an infrastructure solution there.

## Brexit

Helga, you mentioned the sad state of Europe, the fact that the major European countries are supporting the coup. We see there a complete mess—and there's more to say on Brexit. Let's start with that, because, there, inside the country that houses the City of London, is a complete and total mess!

**Zepp-LaRouche:** It seems there's no solution. There was a funny cartoon in one of the German papers this morning, showing two parakeets repeating the same line many times. One is shouting "No border in Northern Ireland!" and the other, "Negotiate, negotiate!"

There is no solution in this present combination, and as of now, the British Parliament has not agreed to extend the date beyond March 29, when the UK is

scheduled to leave the European Union (EU). That day could be extended, were all 28 EU members to agree to do so. It may happen at the last moment, but I think that the condition of the financial system is so precarious that one cannot exclude that the Brexit chaos will be used to blame the larger chaos on Brexit, when in reality the whole banking system is bankrupt, not just the City of London.

## Federal Reserve Stops Tapering

One sign of that is the fact that the U.S. Federal Reserve Bank has stopped tapering; it stopped the marginal, incremental increases in interest rates, realizing that if the federal funds rate was raised more, that would have the potential to blow out the whole system.

While U.S. Federal Reserve Bank has stopped increasing the interest rate, the European Central Bank, Bank of England, Bank of Japan and even the People's Bank of China are all continuing with various forms of quantitative easing. That shows you the world's financial and economic system is in a very precarious state. Only by discarding the present system and instituting the programmatic proposals my husband and put forward several years ago—global Glass-Steagall banking separation; a national bank in every country; an international credit system, and a New Bretton Woods currency exchange rate stabilization system—and then cooperating at a higher level in the Belt and Road Initiative, in joint ventures for the development of Africa, Latin America, and various parts of Asia, as well as in Europe, and the United States, will we avoid the catastrophic effects of a crash that is about to hit, not very far in the future.

## China & Russia: Perspective on a Four Power Agreement

**Schlanger:** Helga, a lot of people are suspicious of the Russians and Chinese, saying these two countries are about to set up a new financial system. But, from your discussions and your experience in these matters, are there people in Russia and China who understand the possibility, or are aware of the possibility for a Four Power arrangement, using that as the basis for a New Bretton Woods?

**Zepp-LaRouche:** That's the big question. I think the Chinese for the most part tend to be more optimistic about changing the course of history. Assuming all goes well in the upcoming Chinese trade talks with President Trump—with up to a month to actually come to a final agreement—I think that the Chinese will be able to have a positive perspective on a Four Power arrangement, leading to a New Bretton Woods agreement.

The Russians, in my experience, tend to be very pessimistic. They are looking at the possible U.S. withdrawal from the Intermediate-Range Nuclear Forces (INF) Treaty, at the overall aggressive tone against Russia, and they think there is only a very small chance, if any chance at all, that the United States will change for many years to come.

## Ending the Nuclear Weapons 'Chicken Game'

At a two-day conference in Beijing of five of the declared nuclear-armed powers—Britain, China, France, Russia, and the United States—that opened on January 30, Russia's Deputy Foreign Minister, Sergei Ryabkov pointed to the rapidly increasing strategic dangers, saying this a very dangerous situation.

Anybody in his right mind, who is not willing to risk the future existence of the human species, needs to rapidly promote dialogue and cooperation. We cannot allow this "game of chicken" to keep going. It could really blow up the whole human species.

To develop some hope that this can be change, I think the Russians need to see some signs that Americans and Europeans are willing to depart from their insane confrontation course. That change, however, cannot come from Russia; it can only come from inside America and Europe.

## Italy: Synergy with Russia & China

**Schlanger:** There was an interesting statement from Italian Senate President, Elisabetta Casellati, who was just in Russia. She talked about the importance of the European-Russian relationship. At the same time, China's Foreign Minister Wang Yi is on tour and he just had a meeting with Prime Minister Giuseppe Conte in Italy, in which they talked about the synergy between Italy and China, a term I think Undersecretary of the Italian Ministry of Economic Development, Michele Geraci first used. Clearly there are efforts from some European countries, most markedly from Italy, to move in a direction of dialogue and cooperation.

**Zepp-LaRouche:** This visit of Mrs. Casellati to the Russian Federation Council, the upper house of Rus-

sia's legislature, was very important, where she said that you cannot talk about European identity without Russia—that Russia is playing *the* most important role in a very fragile strategic balance. She called on other western countries to move in the direction of cooperation.

In general, I think the Italian government, contrary to all the vicious attacks against it by the mainstream media, is really showing the way! Wang Yi was just in Rome. He met with Prime Minister Conte, and they agreed that cooperation between China and Italy is of strategic importance, and that it will involve cooperation in industry, agriculture, and investments in all kinds of areas. China and Italy are developing a deep strategic partnership.

senato.it

*Maria Elisabetta Alberti Casellati, President of the Italian Senate.*

This is very important. Italy, despite all the bad things being said about it right now, is the only of the major western countries that is showing any sense. Both Spain and Portugal, to a certain extent, are being sane also, both want to cooperate with the Belt and Road Initiative. But if you look at the rest of Europe, it is a complete mess.

## Germany: A Colossus with Feet of Clay

I would like to mention the case of Germany. Germany is about to lose its identity and character as an industrial nation. Now, that has not yet sunk in with many people throughout the world. Most people in other countries still have the image of Germany as a key industrial power—a nation with a rich culture, and a strong economy.

In reality, Germany today is a Colossus with feet of clay because of the Green policies it had adopted, including exiting from nuclear energy, without having an alternative energy secured. Now, we have this incredible drumbeat and the government's agreement to exit from lignite by 2035 or 2038. There are some crazy people demanding that this be done by 2030. There's also a campaign to ban diesel cars in major cities.

All this is enormously expensive. Commercial energy prices are already twice that of France; the cost will be enormous. Energy costs will increase by 100-200 billion Euro in the next several years. Energy-intensive firms are already leaving Germany.

But more importantly, once the collapse of these kinds of jobs sets in, many young people will emigrate. There will be nothing left for them in science and technology in Germany. Then you will have a situation in which the demographic curve will rapidly worsen. People will begin to experience a complete collapse in living conditions.

Germany as an industrial country is absolutely at risk. All of the schemes about Industry 4.0, about having energy autarky in your own house with solar cells and a 3D printer in the basement—these crazy schemes that are being discussed have no correspondence with reality. The majority of the rest of the world is moving—the countries working with China—in a completely different direction.

Germany's condition is extremely critical. Many people are now wondering, "What is going on? Who is pushing all of this?" Even the Minister President of North Rhine-Westphalia, Armin Laschet, said, well, it's all fine and good to care about the climate, but you can only drive it so far. If you make people's lives totally miserable, you will risk provoking a Yellow Vest explosion in Germany.

I think that that is about to happen. It has only started in Stuttgart as of now. But I think, below the surface, things are brewing in Germany.

**Schlanger:** It's not just Germany; it's Europewide, it's in the United States, and it's coming from the people who imposed this British imperial, neo-liberal system, which has failed miserably! They are going to find more and more resistance. The question is, will the resistance have leadership with solutions? That's why LaRouche's Four Laws are so critical now.

Helga, is there anything else you want to talk about?

**Zepp-LaRouche:** Everyone should really seriously think this through. Reject all prejudices. Look with clear eyes at the so-called western model of "liberal de-

mocracy" that is being hailed as the best model.

## France: Police Use 'Sting Balls' on Demonstrators

Look at what's happening in France now. French President Emmanuel Macron is deploying the French police with brutal "sting-ball" grenades, which have small charges of TNT and little rubber bullets which can penetrate the skin.

Many Yellow Vest demonstrators have been struck in the eye, and have been blinded, or been deafened by exploding sting balls. This is extreme police brutality. Have you heard the European Union attack that? I haven't. They are very quick to attack "police brutality" in Africa, or in Latin America, but they have not said a word about this. So much for "Western values."

EIRNS/Diane Yue

*French President responds to Yellow Vest demonstrations with increasing confrontation. Here, gendarmes in full force on the Champs Elysées during the recent holiday season.*

A discussion on the subject of the common good is in order, we can only touch on today. Perhaps we can discuss this more in a subsequent program.

The slanders against China, as they were articulated in the December ARTE documentary, "The World According to Xi Jinping," is spreading and has led to a situation in which much of German middle-level industry is becoming more and more insecure about engaging in business with China. They are being bombarded by mass media, think tanks and the EU. These firms are intimidated by this anti-China propaganda, and really don't know how to judge China's intentions. This despite the fact that most really big corporations (including those from Germany), are all in China.

China is offering a model which for the first time is giving developing countries the ability to overcome underdevelopment. Overcoming underdevelopment is the only way that the migration crisis will be stopped. China is also offering a peaceful model of cooperation, in the tradition of the Peace of Westphalia; with a foreign policy "in the interest of the other."

## Keep a Cool Head, Act Decisively

People have to keep a cool head, to think clearly and act correctly and decisively on this battlefield of the most extraordinary information warfare, fake news, psychological manipulation, and black propaganda, all of which is intended to induce the feeling of being on a roller coaster, from which perspective it very difficult to see things from the top. You have to train your mind to see things from the top. Don't fall for this news, and that news, but look at the long arc of development, and then you will see which countries and which governments are doing something for the common good, and alleviating poverty. Then look at the countries in which poverty, a drug epidemic, and youth violence are getting worse. Read what the leaders themselves, say. Read the speeches of Chancellor Merkel, of President Trump, of President Xi Jinping, of President Vladimir Putin, and others. Read their speeches and inform your own judgment.

Read what my husband Lyndon LaRouche has written. He is a source of practically limitless wisdom. If you haven't already done so, add your name to our call for his exoneration, and get others to sign it. Let's build a world based on the beautiful ideas he has proposed.

**Schlanger:** In keeping with your idea that we should have a discussion of the common good as a concept, I recommend that people read what you've written on that subject, which is available on the Schiller Institute website. I urge people to dig into these articles and take a look at the ideas. Make it your purpose in life to ensure that governments act in the interest of the common good.

So, Helga, thank you for joining us, and we'll see you again next week.

**Zepp-LaRouche:** Yes, till next week.

INTERVIEW: JACQUES CHEMINADE

# The French 'Yellow Vest' Movement Will Not Go Away

*On February 1, Jacques Cheminade, former French Presidential candidate, founder of the French political party* Solidarité et Progrès *(Solidarity and Progress) and long-time friend and collaborator of Lyndon LaRouche, gave the following interview in English to RT's twice-weekly "SophieCo" news program hosted by Sophie Shevardnadze. The full video is available here. The following is an edited transcript of this important interview. Subheads have been added.*


*Jacques Cheminade is interviewed by Sophie Shevardnadze for the RT television network.*

**Sophie Shevardnadze:** Mr. Cheminade, the streets of Paris are getting even more colorful: with Blue Vests and Red Scarves, new movements that marched just recently to voice their frustration with the Yellow Vest protests. Is this a sign that the French are getting fed up with all the commotion? Is this the beginning of a serious pushback?

**Jacques Cheminade:** What should get our attention is not the streets of Paris, but what is happening throughout France. The Yellow Vests are a reaction against the state, against the administration, against the institutions and against President Emmanuel Macron—Macron as seen by these people who have gone to the streets, after having been forgotten for so many years. They are the forgotten majority, people who desperately desire to recover their sovereignty, and who desire a state that is *their* state. "We are the people," they are saying.

That is very important. In the provinces, the people of the Yellow Vest movement are still meeting; despite the efforts of the authorities to get rid of them, they are still around. In Paris, it's different; when they came to Paris, it was to show the ruling elites that the whole of France would come to Paris. In Paris, they encountered all those provocateurs, from the extreme left to the extreme right, and also the government, all trying to disrupt the motion of the movement. But the movement continues to exist, it's a groundswell, it's there.

These people are protesting a policy that claims that by reducing taxes on the very rich, they will invest, and profits will trickle down from the top to their level. The Yellow Vests are crying out: "It's not true!" The money stays at the top, and the leftovers also evaporate back to the upper classes of society. So they protest: "We want money back!" That's the issue.

**Shevardnadze:** We all understand what's behind the Yellow Vests. Everyone understands it. It's a popular uproar against Macron's policies for the rich; but the point is, whatever we are seeing right now in the streets of Paris, whether it's Yellow Vests or the counter-protests, with the Blue Vests and Red Scarves—those are also people, right? And they seem to be clashing with

each other. The political center has been routinely described as dead in our era of polarization, but now there are the counter-protests. Is this a sign that the center could be actually coming back to life?

CC/Thomas Bresson

*Yellow Vests demonstrators in Belfort, France on December 29, 2018.*

**Cheminade:** Well, Macron looks at politics as an omelette with an extreme left and an extreme right, and proudly proclaims: "We occupy the center." The problem is that the center is rotten. The French elites, at the center, have submitted to financial globalism.

These Yellow Vests have begun to understand that. For them, the protest started with the reduction of the speed limit from 90 kph to 80 kph some months ago—making their commutes horribly longer, to get to jobs that are very far from where they live—and they protested. Then, the price of gasoline went up when new taxes were levied, reducing most people's purchasing power. They are calling thus for a return to human dignity.

What they now understand is that something bigger than France is the real issue, and that the issue is financial globalism. They want France to reclaim the issuance of its own currency, which is now in the hands of the European Central Bank; in the hands of the world's financial markets. The Yellow Vests have a sense that if they regain that sovereignty, they can have a decent education, steady employment in small and middle-sized firms, good police protection, and a good army. They are calling for all of that and more. They want schools, they want hospitals, they want the services that France used to guarantee for all its people.

## What about the Violence?

**Shevardnadze:** The message behind Yellow Vests is a noble message, no one really disputes that, but the point is what it has turned into—the whole chaos that it has brought along. Eleven people have died at Yellow Vests protests, since they broke out in mid-November, none the result of police action. That's a lot. The level of brutality at these protests has been remarkable. How do you explain this?


**Cheminade:** France has always been a very tense country. All the social advances made in the past are being threatened today. It's not the inequality per se, but the lack of opportunity to achieve a better life. These people are protesting against that unfairness. The municipal police in the big cities were not organized to handle such protests, or were given weapons against demonstrators that were not adequate. Now they have all these Defense Ball Launchers, formerly called Flash-Balls, but now a higher performing device. And then they have




these grenades, they call them instantaneous tear gas grenades.

All this has happened because there was no coordinating agency to handle what happened. It was not expected by the people in power. I expected it. I wrote in 2009 about the anger that was coming. The anger is there now, but it has been growing for a long time. There is a tension in the whole country. People have been provoked, in a sense. It is the provocateurs who have dismantled the French social system—not those who are calling for justice and truth.

**Shevardnadze:** Tell me a little bit more about the police response. A bunch of people have lost their eyesight, and in some cases, their eyes, as a result of police using these new anti-riot weapons. At the same time, the Interior Minister is denying the charges of police brutality. Do you think that the acts of police violence are random in the heat-of-the-moment accidents, or do you feel that the security forces, a lot of whom have also been injured, are just losing their patience with the street protesters?

**Cheminade:** According to the official government reports, 1,700 demonstrators have been injured and 1,000 police. Out of those injured, 100 have been seriously hurt and eleven have died, most of the casualties resulting from encounters at the road blockades in the early days of the protests. One woman was shot in the head as she was watching from a window. Jeróme Rodrigues, one of the charismatic leaders, was hit by a Defense Ball Launcher in the head and will probably lose one eye.

This has stirred up even more discontent, because everyone is saying that the police have been given a free hand to handle the demonstrations with excessive force. I think this is absolutely true. In France, the state is like a pyramid, and this pyramid is being shaken by these demonstrators. Everyone in the pyramid is tending to overreact, and at this point, the only way out is to for the state to give the demonstrators some of what they are asking for.

**Shevardnadze:** Violence, as we all know, makes news. I guess there is no such thing as bad publicity, after all. Do you feel that the controversy is part of what has kept the movement going, bolstering its outreach—and perhaps keeping it going?

**Cheminade:** Well, the Yellow Vests started by person-to-person contacts, and then they turned to Facebook. Mark Zuckerberg, Facebook's CEO, changed the algorithms, so the Yellow Vests were able to connect among themselves in a much more efficient and faster way. It's a kind of "Battleship Potemkin" effect. Something wrong happens—the sailors are given bad meat, and there is a revolt.

What's important is what is behind the movement. Of course, the media, by filming everything, and the use of social networks—people using mobile phones to film everything—all of this has contributed to accelerating the motion. Yes, a lot of wrong things have been said by many people. And there are also various conspiratorial


*President of France Emmanuel Macron.*

views—some people claim that the Yellow Vest movement is extreme right; others are sure it is extreme left.

Still other people say that Russia organized the movement. All these competing and conflicting opinions have created an enormous amount of confusion. What I said before was an attempt to make the real issues clear.

## Macron's Fake 'Great National Debate'

**Shevardnadze:** Mr. Cheminade, Emmanuel Macron is now on a tour through the country's regions with a so-called "Great Debate"—Q&A sessions with local representatives. Do you think this is something that the Yellow Vests have forced him to do, something useful, or is he just trying to pull the rug out from under the feet of the Yellow Vests movement?

**Cheminade:** He's trying to control the debate, and he appointed two ministers to organize the debate. The Yellow Vests won't fall into the trap, it's clear. President Macron, in his letter to the Frenchmen said, and I'll read from it—"Be as it may, we cannot continue to reduce taxes without lowering the entire level of our public expenditures." So, if that's his starting point, there is no way to give a right answer to the demands of the Yellow Vests. He doesn't take into consideration the possibility of using national sovereign credit.

**Shevardnadze:** These protests were partially triggered by the "climate tax" that has now been rolled back. How much more do the protesters want to achieve? And can they?

**Cheminade:** Well, the Yellow Vests are very angry, because, as I said, the government offers something and then reneges on it. The Yellow Vests don't like this approach. It's not a compromise, it's not something positive, it's simply a sort of blackmail.

## Tax the Rich, or Issue Public Credit?

**Shevardnadze:** One of the points that has been coming up in the debate around the Yellow Vest movement is the idea that there's a need for higher taxes on the rich. Earlier I spoke to Jacob Frenkel of JPMorgan Chase, who told me that such measures end up dissuading the rich from saving and investment and thus hamper growth for all. Won't a tax on the wealthy only drive them away from France, into tax havens?

**Cheminade:** Some wealthy people have already moved out of France. The issue is not their personal wealth. The issue is not so much to tax the rich, it's to create wealth, and you create wealth by issuing public credit for the future, betting on the future. This was the policy of France after World War II, when there was nobody to tax. There was no wealth, there was nothing to sell and no money to be found. We used public credit—a bet on the future, and it worked—France was reconstructed. Russia—the Soviet Union at that time—was also reconstructed by the will of the people, issuing credit for the future. That's the issue. It's not to tax the rich as such.

## Leadership in a Different Kind of Movement

**Shevardnadze:** The Yellow Vests don't seem to have a leader. It's really hard to understand what exactly they want. There is no one person who speaks for these people. How can Macron placate them and give in to their demands, when they don't even have a go-to working group to talk to or negotiate with?

**Cheminade:** In a way it's very different, but it looks in some ways like the beginning of the French Revolution, when there were no leaders either. As a movement, these people—those who have put on the yellow vests—haven't known each other before, most have never participated in demonstrations at all. They are craftsmen,

they are middle-class people from working-class backgrounds, that's who they are. So, they found themselves together: one person saw that the king was naked, and another saw that the financial king was naked—and they said to each other: "Yes, we all think the same thing, and we want to be together, and we despise political institutions, we despise politicians." The level of respect for politicians in France is now at 9%.The most respected institutions are public hospitals, at 90%.

These people are afraid of being leaders. It's what some would call—Rosa Luxemburg had called—mass strike ferment. It's a ferment. In this ferment, there's no real leader. Some may appear as leaders, like Eric Drouet or Priscillia Ludovsky. There are some names. Others tried to launch a list for the European elections. It turned out the list was patronized by Macron, because he's counting on a list of Yellow Vests to siphon votes out of the extreme left, extreme right and out of the center-right opposition.

S&P

*Jacques Cheminade speaks with Yellow Vest demonstrators, December 2018.*

There are all these calculations, but the Yellow Vest movement is indeed difficult to characterize politically. The only way to give them a purpose is to focus on the issuance of money as credit, how that will be issued and for what. If not, the movement will remain only as a groundswell, hitting the institutions and the political world, but not going anywhere. In the United States, Trump was elected for the same reason. In Italy, the so-called "populist" government came into power. In France the ferment expresses something more; it goes more in-depth, into the fabric of society.

## The Citizens Referendum Initiative

**Shevardnadze:** Talking about the fabric of society—here you have all of these people, a lot of them united by what they *oppose*. Do you think the movement will split as soon as the time comes to decide what they will be *for*? Because right now the only thing uniting them is the "against."

**Cheminade:** Well, what unites them is also the Citizens Referendum Initiative, RIC. The Yellow Vests want that because they want *participatory* policies. They are fed up with *representative* policies. At the same time—it's very interesting—they need education. To become educated in how society functions is a long process. They know it functions in a wrong way, but they don't know how to make it function in a right way. My job as, let's say, a dissident politician, is to educate them to understand what they need to do positively. It's difficult, it will be an educational task that will take some time.

One of these Yellow Vests, in southern France, launched a petition calling for a national bank, saying there should be a referendum on that, and not as the government is trying to manipulate the situation, on abortion, for or against, or the death penalty, for and against—not on so-called societal issues; but on real issues, which is how you organize a state, how money is issued by the state, and for what purpose? And this demand, to be truthful, demands a break with the present European Union, and a respect for true European civilization.

## One, Two, Many 'Yellow Vests'

**Shevardnadze:** It seems to me that the Yellow Vests are like other street movements—Occupy Wall Street, or even the Arab Spring, or the Greek and Spanish protests. Do you see any similarities?

**Cheminade:** As of now, the Yellow Vests are meeting in assemblies throughout the country, in which they are trying to figure out what they want. We are at this point. But at the same time there are other movements developing: a movement of nursing aides; a growing movement in hospitals to stop the cuts in funding; nurses and doctors are in a state of rebellion. We have the *Stylos Rouges* (Red Pens) teachers—if you want to measure the collapse in social conditions in this country, look at what happened to teachers. In the beginning of his career, a teacher used to reach more or less twice—200%—the average wage. Now it's only 100%.

CC/Thomas Bresson

*Yellow Vest demonstrators fill the streets of Belfort, France on December 1, 2018.*


The income of people in all the of social services has dropped. That explains, in part at least, the Yellow Vests. The other part is that they don't feel represented by the usual politicians, and they are trying to find among themselves those who will represent them. So, really, it's not short-term.

**Shevardnadze:** With a grassroots leaderless movement like the Yellow Vests, you will have your share of wacky people, *crazy* people—but it seems that anti-Semitism, belief in conspiracy theories, Holocaust denial—all of that is very much present among the Yellow Vests. Do you feel that the Yellow Vests are maybe in danger of being hijacked by radicals like this?

**Cheminade:** No, I don't think so. They are being *provoked* by radicals all the time, but they themselves are isolating the radicals. Being this type of uprising, in the beginning they had no security awareness, but little by little, with the help of some trade-unionists, they have been able to organize a security force for their demonstrations. It's a process of education, and my bet is that this process of education will lead them in a good direction, good for the people, and good for the nation.

## A Long-Term Educational Process

After all, the French Constitution proclaims that the principle of France is a government of the people, for the people, and by the people. They have to understand that that means respect for the responsibility of the state, and that not everything can be turned over to the private sector. Certainly rage is present, but it's limited to a very few Yellow Vests. For the most part violence has been provoked by extreme right-wing and extreme left-wing agitators, and, probably, also perpetrated by some in the police, or even in the government, who expected that violence would discredit the Yellow Vests. I think these tactics won't work.

**Shevardnadze:** Some Yellow Vests want to branch out into traditional politics, preparing to run for the European elections; others condemn that idea and have pledged to keep up their street brand of politics. How wide can this division get? Can the rift grow big enough to splinter the movement?

**Cheminade:** This idea of a European Parliament list is already absolutely discredited. Ingrid Levavasseur, a nurse who is heading a list of candidates affiliated with the Yellow Vests to run in the next European elections, was recruited by BFM TV [a French 24-hour business news channel], which is a media outlet generally hated by the Yellow Vests. She has no authority to head such a list, and already two people have quit. One of them, a hidden Macron agent, had to leave when he was discovered. So, this list will lead nowhere.

The true leaders, the few leaders who have influence, are not leaders in the usual sense, but are people who serve as reference points for the Yellow Vests. They call for no list and they call for long-term thinking and education, and from that they believe will come an in-depth motion in French society, whose impact will go far beyond the European elections.

I think these European elections are, in advance, fake. We have on the one side so-called populists or nationalists or sovereigntists, and on the other side progressives, so-called reformists. The election is just an artificial construct; it's nothing, it doesn't address the real problems of the country. The Yellow Vests are more connected to the real problems of the country than the politicians running in the European elections.

**Shevardnadze:** All right, Mr. Cheminade. Thank you very much for this interview.

# III. Mankind in the Universe

# Radio Astronomy: Peeking into the Infinite

by Janet G. West

Feb. 3—The recent success of China in landing the Chang'e-4 on the far side of the Moon opens the door to the deployment of radio telescopes there—on the far side. The lander sits within the Moon's Von Kármán crater, which in turn is within a large plain (the South Pole-Aitken basin near the South Pole), which is an ideal site for a lunar radio telescope (LRT). It can create the basis for an outpost (and perhaps later a colony).

The projected mining of helium-3 (He-3) for use as a fusion energy source on Earth, will later be also the source of fusion energy for the first colony on Mars. These possibilities could be the basis for reviving a proposal by Lyndon H. LaRouche in 1985, for a "Moon-Mars crash program mission." Just such a "crash-program" is urgently needed today, not only to kick-start globally an economic recovery, but also a renaissance of classical culture.

### 'The Woman on Mars'

In 1988 LaRouche proposed, during his then presidential campaign, an ambitious and inspiring crash-program mission to the Moon and Mars, as part of an engine to create new technologies to lift the U.S. and the world out of an economic crisis. He set this forth in his video, "The Woman on Mars."

In this video, he shows that just as the Apollo program returned ten times the value of what was spent on it, to the economy, a Moon-Mars crash-program will return even greater benefits to the physical economy and the average standard of living, as well as enabling the cultural and moral uplifting of mankind. The reader is encouraged to watch the video in its entirety.[1]

As part of that program, largely automated mining and manufacturing facilities will be built on the Moon. The program will also respond to the necessity for astrophysical scientific studies, for which mankind will need new, very large array radio telescopes. The first step in that journey will be lunar radio telescopes (LRT), followed by even larger arrays in stable orbits around Mars.

"But," you ask, "don't we know all we need to know already? Why go to the Moon, anyway?"

This, and other similar questions will be addressed as we proceed.

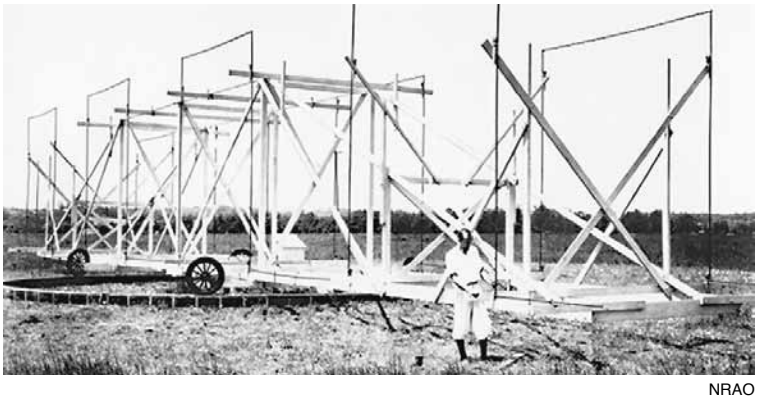
### Citizen Scientists: Pioneers on the Edge

Like many scientific discoveries over the centuries, radio astronomy was discovered by—and the first radio telescope built by—amateurs, not by the so-called professional, "bona fide scientists."

The first to discover radio waves being transmitted by the Milky Way was Karl Jansky (1905-1950). While he was investigating static that might interfere with "short wave" (about 10-20 meters) radio voice transmissions for Bell Laboratories, he discovered three main sources: (1) nearby thunderstorms, (2) distant thunderstorms and (3) a faint steady hiss of unknown origins.

In 1930, he constructed an antenna (**Figure 1**) which was designed to receive radio waves at a frequency of 20.5 MHz (a wavelength of about 14.5 meters). It was mounted on a turntable which allowed it to rotate 360 degrees, earning it the name of "Jansky's Merry-go-Round." One could find the direction of any radio signal by rotating the antenna.

FIGURE 1



NRAO

*"Jansky's Merry-go-Round."*

1. Lyndon LaRouche, "The Woman on Mars."

At first, Jansky thought that the source of the interference was the Sun, but after a few months of monitoring the signal, he discovered that the most intense point had moved away from the position of the Sun, to an area in the fixed stars. He noticed that the wave pattern changed in form every six hours or so, and he was mystified for many months. He changed his hypothesis—he reasoned that the radiation was coming from a variety of sources, concentrated at the center of our galaxy, the Milky Way; it wasn't coming from the stars themselves, but from the material between the stars, particularly charged particles.

This discovery was widely publicized during May 1933, and Jansky wanted to follow up with more investigation—he proposed to Bell Labs the construction of a 100-foot diameter dish antenna. But Bell Labs now knew all it wanted to know about static—they knew that this static would not be a problem for transatlantic radio communication—so, why bother? Jansky was promptly re-assigned to another project and did no more work in radio astronomy. (However, history has had the last word—Jansky is now remembered as "the Father of Radio Astronomy.")

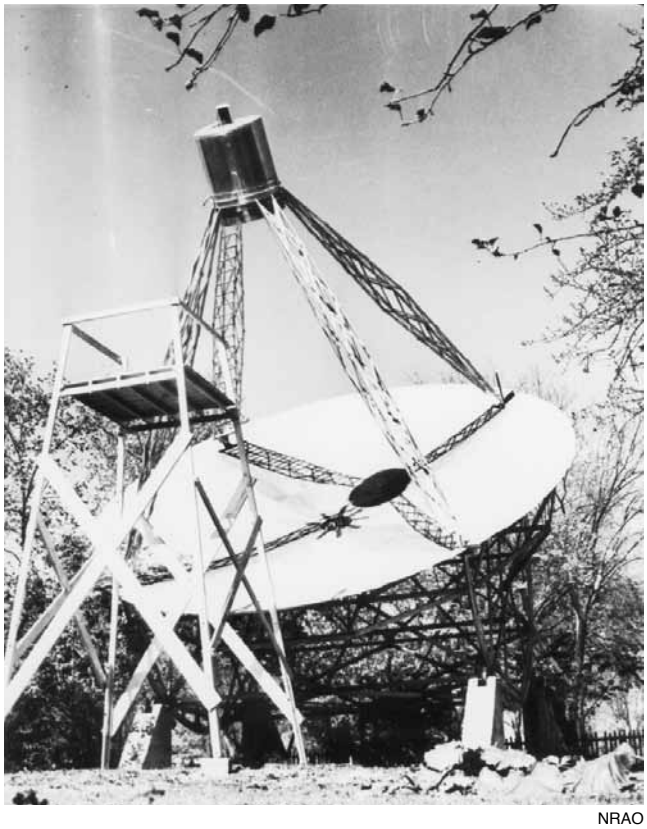
A young man—a ham radio operator and amateur astronomer, who had just gotten a degree in electrical engineering—heard about Jansky's work. He contacted Jansky and learned that he wasn't going to pursue further research. The young man checked with people at Harvard, Caltech, and others in the "scientific community"; he was aware that at least one physics professor at the University of Chicago was adamant that Jansky had made a mistake about the source of the static. Suddenly realizing that *no one* was moving forward with the discovery, he decided, "Well, if nobody else is going to do anything, maybe I'm the guy to do something about it!" His name was Grote Reber (1911-2002). He was the first person to build a radio telescope.

This demonstrates the power and importance of an individual summoning the gumption to see, as it were, the mere shimmering of an idea, of a discovery, and to decide through one's free will to step forward and make a unique, world-historical contribution to the future of mankind.

## To Unfurl Wondrous Discoveries

At that time, radio antennae were simply wires, sensitive to particular frequencies determined by their lengths. Reber figured that he would need an antenna that would be receptive to a wide range of wavelengths—and directions of origin. He then reasoned that if this radiation had characteristics of black-body radiation, as was widely assumed, then its intensity per unit bandwidth should increase proportionally to the square of the frequency. In addition, for an antenna system of any given size, the resolution would increase proportionally to the size of the system. So, he decided that he had to go to the highest frequency that was detectible at that time, and he determined that he would build a dish, designing the mounting system for it as well (**Figure 2**).

FIGURE 2



NRAO

*The first radio telescope—built by Grote Reber in his yard.*

Buying the longest available lumber (20 feet) and using a local machine shop for tooling, he built the telescope *in his yard* in 1937 with the help of a couple of friends. They assembled the dish in one day, and the supporting parapet and mount took a few more weeks. The dish measured 31.5 feet across, and as soon as it was operational he began running a series of tests, scanning the sky, looking for some kind of pattern in the test results.

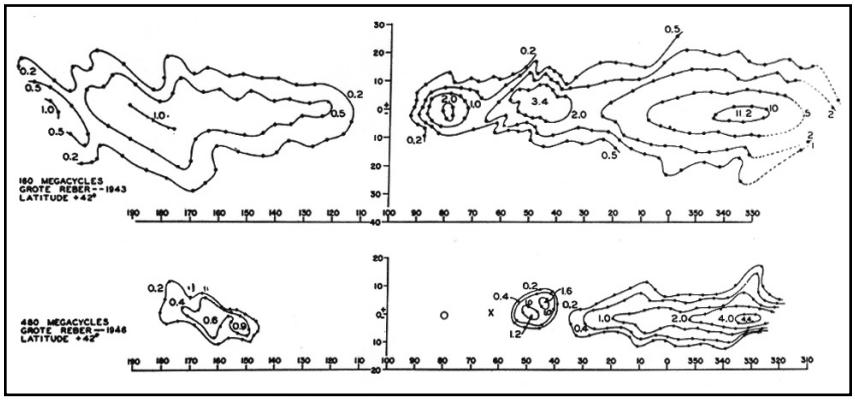
He experienced failure after failure and kept changing different specs on the telescope to try to detect the frequencies that Jansky had observed. After modifying the design somewhat, he began making observations every minute for several hours—and success! He was able to plot out a change in amplitude of the frequency with the relative position of the Milky Way. After securing an automatic recording device for these observa-

tions, from those measurements he developed a radio map of the sky. But, without his love of discovery and passionate persistence, it would not have happened. His telescope was the only one of its kind on the planet until the 1950s (**Figure 3**).[2]

It would seem that love, and most especially the love of mankind (*agapē*) is a key element of courage.

A friend of Reber related a story about "a young student who once asked Reber how to go about making new discoveries. Reber replied, 'Pick a field about which very little is known and specialize in it. But don't accept all current theories as absolute fact. If everyone else is looking down, look up … you may be surprised at what you find.' "[3]

FIGURE 3




NRAO

*Grote Reber's contour map of the Milky Way Galaxy, showing constant intensity at 160 MHz and 480 MHz, taken at Wheaton, Illinois.*

It was assumed, from the turn of the century into the 1930s, that the pervasive radiation of the galaxy could not be due to black-body radiation—the distribution of light wavelengths that is given off by all hot bodies. The prevailing theory was that there would be considerably more high-energy light than low-energy radiation, due to the stars and other hot celestial objects. However, Reber discovered that *the reverse is true*—that there are large amounts of low-energy radio signal—but it wasn't until the 1950s that synchrotron radiation was theorized to be the source. (Synchrotron radiation is generated when charged particles are accelerated in a curved path or orbit.) And, what wondrous discoveries would unfurl themselves as man's reach extended further into space!

2. Reber's first telescope and a replica of Jansky's antenna are on display at the Green Bank Observatory in West Virginia. See https://greenbankobservatory.org

3. Source: http://amazing-space.stsci.edu

NRAO

*Grote Reber at his radio controls.*

## The Hydrogen Emission Line

Hydrogen is the most abundant element in the Universe; it has one electron and one proton. It has two forms: neutral hydrogen and ionized hydrogen. The so-called "ground state" of neutral hydrogen is more complicated than what first meets the eye—this has to do with the direction of spin of the proton and the electron. When their spins are parallel, it's known as the "high-energy" level, and when they're anti-parallel, it's known as the "low-energy" level. When a high-energy hydrogen atom converts to the low-energy state, the energy difference is given off as a photon, and the wavelength of that photon is 21 centimeters, corresponding to a frequency of 1,420 MHz.

But as we look farther and farther out into space, there is a continuous shift in frequencies in known, relative positions in the spectrum, and they have been measured to be lower—that is, further toward the red end of the spectrum. The hydrogen line in the spectrum, measured at 1,420 MHz in the laboratory, is no longer so, but is recognized by its more or less constant strength (brightness) relative to neighboring spectral lines that also preserve their mutual relationships of strength, even while all lines are shifting. This is the "redshift."

No one yet knows why this shifting occurs. If the Universe were expanding and everything were moving away from us, then we could say the redshift is like the siren of a passing fire engine, whose pitch seems to fall so long as it continues to move away from us. (But there are other proposed explanations.) When looking out into

furthest intergalactic space, the hydrogen line will eventually be measured at 30 MHz, which is the high end of what we call the Very Low Frequency (VLF) part of the electromagnetic spectrum that we can't see from Earth. The VLF range is from 30 MHz down to 3 MHz.

Radio telescopes enable us to see thermal radiation (ionized gas), polarized synchrotron radiation (pulsars, cosmic rays), cyclotron radiation (planetary magnetic fields), other spectral lines (neutral hydrogen, masers), and other, as yet unknown mysteries. Radio telescopes penetrate the clouds of interstellar dust and gas that block the light as seen through optical telescopes. Since hydrogen is plentiful and has a known wavelength (21 cm) that can be seen through these clouds, it is used as a marker to help map the universe. Radio telescopes will also offer us increased insights into the heliosphere—the plasma bubble blown by the Solar wind—in different ways than that of the current Parker Solar Probe mission.

Radio waves can be observed from the ground, but the waves in the VLF range cannot penetrate our ionosphere without distortion. Beginning in the 1950s, Reber pushed to the limits of ground-based, low-frequency observing by building a large radio telescope in Tasmania, where the electron density in the ionosphere is very low, allowing observation of low frequency radio waves with less interference.[4]

FIGURE 4

NRAO

*The Very Large Array radio telescope near Socorro, New Mexico.*

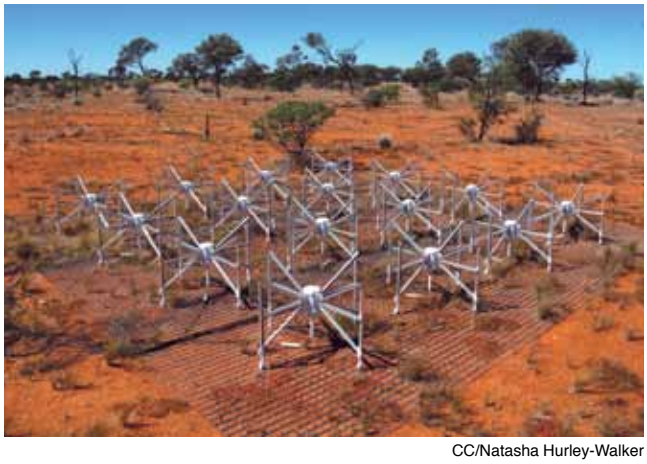
## Benefits of Radio Interferometry

Using interferometry, in which large numbers of small devices are arrayed on the ground and electronically combined, greater and greater detail can be seen in radio-wave images. An example of this technology is the Very Large Array (VLA) near Socorro, NM (**Figure 4**). The *Cosmos* website explains how interferometry works:

> A radio interferometer is an array of radio antennas or "elements" that are used in astronomical observations simultaneously to simulate a discretely-sampled single telescope of very large aperture. To put it another way, a radio interferometer can be thought of as a single telescope with a very large and incompletely-filled aperture, of maximum size equivalent to the maximum spacing, or baseline, between any two of its component elements. This large "synthesized" aperture is only sampled at the locations at which an element exists, and this is aided by the rotation of the Earth, which effectively moves the elements within it, hence increasing the sampling. This is known as "Earth rotation aperture synthesis." The size of the synthesized aperture dictates the resolution or "beam size" of the array; the larger the aperture, the smaller [finer] the resolution.[5] (**Figure 5**)

5. Source: http://astronomy.swin.edu.au/cosmos/R/Radio+Interferometer

FIGURE 5



CC/Natasha Hurley-Walker

*A segment of the Murchison Widefield Array radio telescope in western Australia.*

4. In an article Reber wrote for *21st Century Science & Technology* ("The Big Bang is Bunk," March-April 1989), he describes (p. 45) his decision to move to Tasmania in 1954, where he observed at wavelengths in the neighborhood of 100 meters.

## Destination: Moon!

Who are we, and where did we come from? How and when did "black holes" first develop? What are Fermi Bubbles? Why do only parts of the Moon have a magnetic field? How do galaxies create new stars at a rate that consumes more matter than they have inside them? How does cosmic ray acceleration occur within the heliosphere? Radio telescopes could be among the first instruments by which we may be able to answer these and other burning questions.

The Moon is the best site available to us—particularly its far side—for a VLF radio telescope, since it is always shielded from Earth's noisy radio environment, and from the Sun for about two weeks at a time. It offers a number of advantages:

- There are relatively flat, level areas available in the area of the Moon's South Pole, which allow for the deployment of a very large number of antenna elements in stable positions over tens or hundreds of kilometers' separation.
- The initial telescope can be of modest size and modular, such that thousands of antenna elements can be added over time.
- The dry, dielectric lunar surface regolith allows for simply laying out the short, thin-wire antenna elements on the surface. NASA has already designed several potential configurations which would be simple to set up.
- The lunar rotation provides a monthly scan of the sky.

The individual antenna elements would probably weigh about 50 grams each; their associated amplifiers, digitizers, transmitters and solar batteries, along with packaging, could still weigh less than 50 kilograms. Laying out the initial system could be a matter of only a few days' work by future astronauts on site, and some designs also allow potential robotic deployment.

The South Pole of the Moon provides many craters that are in total darkness; these may be ideal sites for an LRT. Additionally, the Shackleton Crater's rim is in permanent sunlight, and solar cells could be sited there to power the LRT.

The fact that a significant amount of water has been found on the Moon is a true "game-changer." It not only allows shielding capabilities for an outpost on the surface, but it could be split into hydrogen and oxygen for fuel.

## The Crab Nebula

One of the most mysterious objects in our sky is the Crab Nebula. What could radio telescopes on the Moon reveal about it? This fascinating supernova was first documented by the Chinese, when it exploded in 1054 near the constellation that we know as Taurus the Bull, visible in the Northern hemisphere in the autumn and spring, and in the Southern hemisphere during the summer months. Except for the Moon, it was the brightest object in the sky—*for two years!*

Over the centuries, astronomers made drawings of what they observed, and in the 20th century, it was noted that not only was the Crab remnant growing, but at an increasing rate. It presents many anomalies. If we look to great discoveries in the past, by such people as Johannes Kepler, Louis Pasteur and Marie Curie, we can see that it will be through persistent and passionate investigation of apparent anomalies that new discoveries will be made.

The ruling authorities in modern science—which has been perverted by the genocidal oligarchical-British ideology—observe anomalies, whether in the microscopic or macroscopic realm, and dismiss them with a wave of the hand. They attempt to hack their observations into pre-selected "explanations" or "theories," a process that becomes increasingly tortured, much as in the infamous Bed of Procrustes, or the Ptolemaic model of the Solar system. The veritable tyranny of "accepted" theories, based on the fallacious assumption of an entropic Universe—such as the "Big Bang" theory—has suffocated and intimidated true creative thought among our "scientific community."

Like high priests of a gnostic religious cult, these ruling authorities intone solemnly what Albert Abraham Michelson, 1907 Nobel Prize winner in Physics, attributed to an unidentified "eminent physicist," who "remarked that the future truths of physical science are to be looked for in the sixth place of decimals."

If that weren't bad enough, a so-called modern physicist, Sean Carroll, a professor of cosmology at Caltech, has made the incredibly asinine assertion that—

> The laws underlying the physics of everyday life are completely understood. . . . All we need to account for everything we see in our everyday lives are a handful of particles—electrons, protons, and neutrons—interacting via a few forces—the nuclear forces, gravity, and electromagnetism—

> subject to the basic rules of quantum mechanics and general relativity. . . . Fifty years ago we more or less had it figured out, depending on how picky you want to be about the nuclear forces. *But there's no question that the human goal of figuring out the basic rules by which the easily observable world works was one that was achieved once and for all in the twentieth century*.
>
> . . . Using the framework of quantum field theory—which we have no reason to doubt in this regime—we can classify the kinds of new particles and forces that could conceivably exist, and go look for them. It's absolutely possible that such particles and forces do exist, but they must be hidden from us somehow: either the particles are too massive to be produced, or decay too quickly to be detected, or interact too weakly to influence ordinary matter; and the forces are either too weak or too short-range to be noticed. In any of those cases, *if they can't be found by our current techniques, they are also unable to influence what we see in our everyday lives.* We have very little idea how big the region of our understanding is, compared to all that there is to be understood; but we know that *it's bigger than what we need to understand to make sense of the world we see with our unaided senses.* [emphasis added][6]

What a crock! Even a caveman would know better than that!

It reminds one of Edgar A. Poe's prose poem, "Eureka," in which he scathingly ridicules this kind of thinking. Here the narrator of his story is speaking:

> It appears, however, that long, long ago, in the night of Time, there lived a Turkish philosopher called Aries and surnamed Tottle. [Here, possibly, the letter-writer means Aristotle; the best names are wretchedly corrupted in two or three thousand years.] The fame of this great man depended mainly upon his demonstration that sneezing is a natural provision, by means of which over-profound thinkers are enabled to expel superfluous ideas through the nose; but he obtained a scarcely less valuable celebrity as the founder, or at all events as the principal propagator, of what was termed the *de*ductive or *a priori* philosophy. He started with what he maintained to be axioms, or self-evident truths:—and the now well understood fact that *no* truths are *self*-evident, really does not make in the slightest degree against his speculations:—it was sufficient for his purpose that the truths in question were evident at all. From axioms he proceeded, logically, to results.

It is not by putting one's snout to the earth and rooting in the mud that one discovers the true nature of what it means to be human.

## Is the Crab Nebula 'Impossible'?

To gain this insight, we need to pursue the anomalies of our observations from the perspective of, "What can these anomalies tell us about the nature of the Universe? In what kind of Universe could something like the Crab Nebula exist? What is the principle which drives these events? What is the nature of mankind, that we exist in such a universe?"

As the Crab Nebula has been investigated over the years, a pulsar was discovered at its center, and it continuously creates turbulence which powers the expansion. In optical range observations, it was noted that the synchrotron radiation contains fine-filament structures, and that the intensity of the radiation drops off rapidly from the center; the creation of these filaments and the role they may play is unknown, but their structure and morphology appear to be highly organized. Radio wave mapping also shows similar "fibrous" structure to that seen in the optical range. These filaments will show up in photographs taken in the red wavelengths of light, but are absent when photographed in blue light. What can this mean?

The Crab Nebula is a powerful source of radiation, spanning the entire electromagnetic spectrum—from very long radio waves to the extremely short gamma rays. And, this poses the question, "How, then, do you see it?" Only parts of it can be seen in visible light, other parts in X-rays, still other characteristics of it are only seen by radio waves. Furthermore, the radiation isn't generated at a steady rate; areas that are expanding the most rapidly show a decrease, while every few months or so, two bright filaments (or "wisps") flare up from the central part of the nebula and are symmetrical with the pulsar. However, in the X-ray region, no intensity variations have been detected!

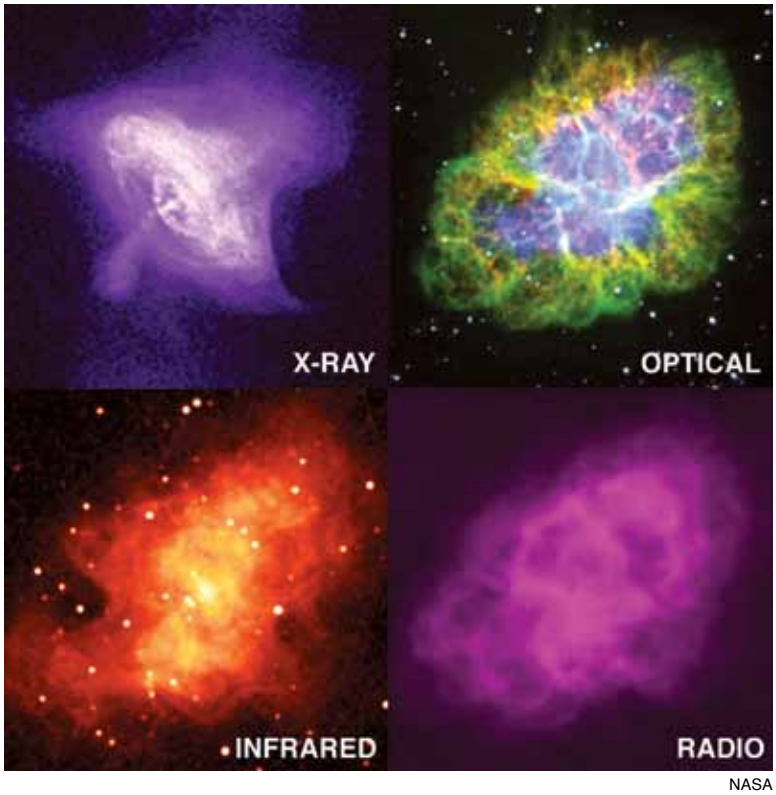
6. See Carroll's posting on the "Cosmic Variance" blog of *Discover* magazine.

Some of the light is polarized along the long axis of the nebula, and other observaions show that the entire nebula is highly magnetized. What causes this?

The most extraordinary image is that produced by the Chandra X-ray telescope, which shows a clearly-defined axis aligned with the long axis of the nebula; overall, it has a toroidal structure with organized concentric rings. The "accepted theories" would indicate that this is "impossible"; that the remnant of an exploded supernova would "naturally" dissipate over time, not become more organized (**Figure 6**).[7]

By bringing radio telescopes to the far side of the Moon we may help to peel away the layers to reveal the truth of this and other marvels of the universe.

FIGURE 6




NASA

*The Crab Nebula as seen in different wavelengths of the electromagnetic spectrum.*

## The Path Ahead

Humanity can explore our entire Universe—from microscopic creatures to galaxies—with wonder and confidence, knowing that the Creator has so designed the Universe, as to make its mysteries accessible to the human mind. One can imagine the Creator designing "puzzles," awaiting a creative human mind to unravel them, and then laughing with delight, as a child does when making an original discovery, no matter how simple.

Our bodies may be mortal, but our spirit and our species-nature touch the Infinite. As we deploy more sophisticated telescopes and other instruments further into our galaxy, perhaps we will discover, as Dante describes in Canto XXX of the *Paradiso* of his *Commedia* (*Divine Comedy*), that the closer we approach the Truth, the closer we are to the Divine:

> O everlasting Light, you dwell alone
> In yourself, know yourself alone, and known
> And knowing, love and smile upon yourself!
>
> That middle circle which appeared in you
> To be conceived as a reflected light,
> After my eyes had studied it a while,
>
> Within itself and in its coloring
> Seemed to be painted with our human likeness
> So that my eyes were wholly focused on it.
>
> As the geometer who sets himself
> To square the circle and who cannot find,
> For all his thought, the principle he needs,
>
> Just so was I on seeing this new vision.
> I wanted to see how our image fuses
> Into the circle and finds its place in it,
>
> Yet my wings were not meant for such a flight—
> Except that then my mind was struck by lightning
> Through which my longing was at last fulfilled.
>
> Here powers failed my high imagination:
> But by now my desire and will were turned,
> Like a balanced wheel rotated evenly,
>
> By the Love that moves the sun and the other stars.

7. See time-lapse video of the Crab pulsar, as seen by the Chandra telescope.

# IV. Music the Key to Science

May 22, 1986

MEMORANDUM

# The Axiomatic Basis for Musical Theory in the Physical Sciences

by Lyndon H. LaRouche, Jr.

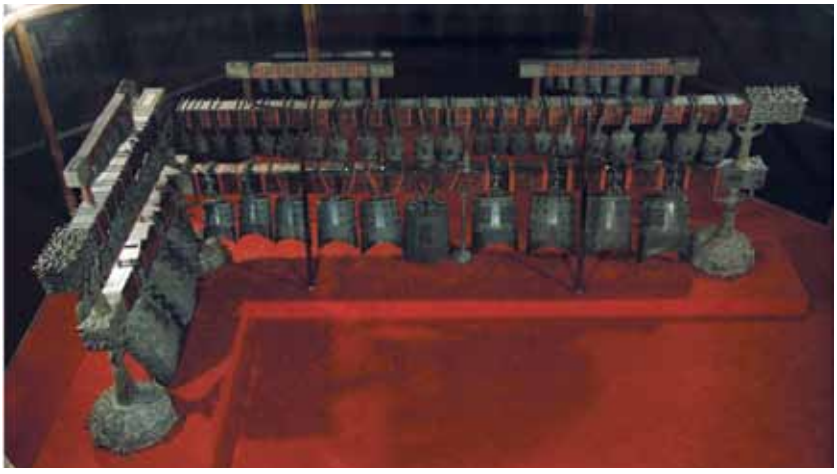
*The editors of* EIR *are publishing here, a previously unpublished memorandum by Mr. LaRouche intended to be used as the introduction to a polemical book on the principles of classical musical composition—unfortunately that book was never completed. Some details of the projected book have been removed.*

*This is the third of Mr. LaRouche's previously unpublished 1986 works that we have published this year. On October 6, 1986, a massive raid on* EIR*'s office was executed by the very same forces that are today involved in an ongoing coup attempt against President Trump. Mr. LaRouche was then targeted for elimination by the British Empire forces that had deemed LaRouche's collaboration with President Reagan on the Strategic Defense Initiative (SDI) intolerable.*

For about 100 years, the principles of classical musical composition used by such composers as J. S. Bach, Wolfgang Mozart, and Beethoven have been among the "lost secrets" of art. For about nine years now, a group of my associates and I have been searching for the answers to three questions: (l) What were the principles actually used by the greatest classical composers? (2) How was the use and knowledge of these principles driven out of the memory of modern professional musicians? and, (3) How, and to what practical effect, might that lost knowledge be revived and applied today?

A team of researchers, and has reviewed relevant European archives, and interviews with leaders of the international "music mafia" which controls most of the concert-hall programs and musical-conservatories today. My own part in this work, has been chiefly in directing research into two related areas (1) what biophysical principles underlie well-tempered polyphony; and (2) what is the doctrine of 'aesthetics which subsumes both these biophysical principles and the experience of beauty in a great classical composition? In this text, we report on the way in which the succession of classical, romantic, and modernist genres in musical composition and interpretation was centrally organized, and the motives of those who have guided the emergence of the romantic and modernist varieties of doctrine and taste. My function, in this introduction, is to summarize some of the leading features of my own work, complementing the text.

Vedic-Sanskrit scholarship indicates, that well-tempered polyphony is more than 6,000 years old. As Yehudi Menuhin reported, a set of bells tuned to the well-tempered scale, dated to about 1,000 B.C., was discovered in southern China, a region ruled by the ancestors of the modern Thais at that time. During the time of classical Athens, Plato's faction defended the well-tempering principle, whereas Aristotle's faction attacked it. St. Augustine introduced the principles of well-tempered polyphony to Europe, prompting the application of these principles of harmony to the cathedral designs of the school of Chartres. The modern well-



wikimedia/KongFu Wang

*The Bianzhong of Marquis Yi of Zeng, an ancient musical instrument made of bells (called bianzhong) unearthed in 1978 in the tomb of the Marquis. The instrument contains a total of 64 bianzhong; each bell can play two tones with three degrees' interval between them. The tonal range of Zenghouyi Bells is from C2 to D7. In the middle area of the tonal range, it can play all twelve half tones.*

tempered, octave scale, was elaborated by al-Farrabi, about 1,000 years ago; his work influenced the development of music in Europe into the period of the Golden Renaissance. The modern development of we11-tempered polyphony was established by the circles of Leonardo da Vinci; despite the influence of the Ptolemaic opposition during the sixteenth and seventeenth centuries, the influence of Gottfried Leibniz promoted the climate in which J.S. Bach established modern well-tempered counterpoint.

Throughout modern European history, the most consistent and influential opposition to well-tempered polyphony has come from the anti-Augustinians of the Venetian nobility. This opposition has used three prongs of attack: Gregorian chant, Ptolemaic formalism, and irrationalist hedonistic doctrines of composition and performance. Well-tempered polyphony was always in disfavor at Venice; and, except for Georg Friedrich Händel, was virtually banned in Britain from 1603 onwards. Yet, with the rise of the classical composers, in Italy and Germany, well-tempered polyphony was hegemonic on the continent of western Europe until approximately the 1840s' phase of the emergence of Romanticism.

In Germany, the war of Romanticism against classical art, was begun in Immanuel Kant's *Critique of Judgment*. After Kant, the most important sponsors of the Romantic school in Germany, were G. W. F. Hegel and his close collaborator, law professor Friedrich Karl Savigny, under whom Karl Marx studied and took the premises for his own doctrine of "historical materialism." The way in which Kant, Hegel, and Savigny set forth the doctrine of modernist aesthetics, is the key reference-point for those of my own contributions of which I supply summary report here.

Some glimpse of relevant developments during the l8l5-1849 interval, locates the musical setting in which the attempted eradication of classical music was begun. We begin with some observations provided by the pianist Carlo Levi-Minzi.

Levi-Minzi presented a workshop session on the performance of Chopin to a musical seminar, documenting the evidence in a lecture delivered from the keyboard. Except as Paris circumstances influenced secondary features of his compositions, Chopin is essentially a classical composer, rather than as usually misrepresented today, as virtually a follower of the Romantic Franz Liszt.

Chopin teethed on J. S. Bach in his native Poland, as his own earlier compositions underscore. He moved briefly to Vienna, in 1827, but moved on to Heinrich Heine's Paris after discovering that post-1815 musical Vienna had lost that spark which had fostered the work of Mozart and Beethoven. The affinity of Chopin to Beethoven is well known. The "Fantasie-Impromptu" is famously a reworking of a musical idea taken from Beethoven's "Moonlight" sonata; the B-minor sonata is a treatment of the musical idea of Beethoven's "Opus 111." That Chopin sonata is based, generically on the same musical idea originally presented by Bach in his "Musical Offering," in Mozart's famous "Fantasy-Sonata" (K. 475-457), and Beethoven's "Pathetique." Levi-Minzi demonstrated, that while there is a strong influence of Beethoven upon Chopin's composition, Chopin remained predominantly a pupil of Bach.

This illustrative case of Chopin, requires us to turn, at this point, to a seeming digression which is not a digression.

## Tonality and Musical Ideas

Our insight into the musical life of the late eighteenth and early nineteenth century, is blurred today, in many ways. One of the important ways, is a shift in the tuning of instruments and orchestras, a change which

Portrait by Joseph Willibrord Mähler

*Ludwig van Beethoven*

wikimedia commons

*Frédéric Chopin*

Portrait by E.G. Haussman, 1748

*J.S. Bach*

has made it near to impossible, usually, to hear classical music performed according to the intent of the composer.

Bach's, Mozart's, and Beethoven's keyboards were tuned precisely to a well-tempered scale, with middle-C set strictly at 256 cycles. The dominant concert keyboard instrument into the early nineteenth century, was the fortepiano; this instrument has a registral balance on which the intent of Mozart, Beethoven, et al. was premised, and has a balance with the chamber-music ensemble, which is of importance to hearing works of the "pianoforte" period performed as they were intended to be heard musically. During the middle of the nineteenth century, keyboard instruments underwent certain radical alterations, which fitted them to the Romantic compositions.

The wind voices of the orchestra were redesigned in such a way that the out-of-tune character of modern wind instruments makes it impossible to perform a Mozart or Beethoven symphony in which the winds' voices cohere exactly, contrapuntally with the strings.

The upshift toward "concert A," seems a small difference in pitch, until we note the discomfort of trained vocalists who attempt to sing their usual repertoire at its original reference key of middle-C at 256 cycles. Often, a shift in pitch has significance for the singing register at which a passage is delivered, a matter of no small importance in well-tempered compositions.

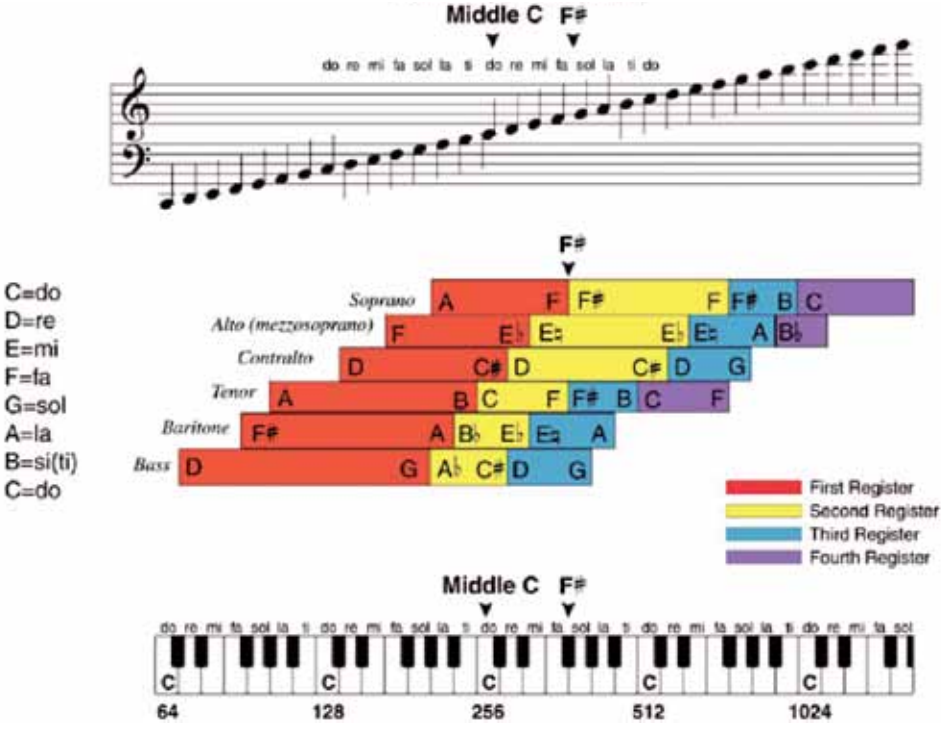
In classical composition, succeeding passages for a single singing or instrumental voice are often intended to be a different voice than the preceding passage; in effect, a singer, for example, may be singing two or three parts, each at different points in the composition, often in successive lines of a strophe. The skilled composer places passages within tonal ranges which tend to aid the singer in producing different registral "color" for each of the two or more voices that singing part must represent in the composition as a whole. A slight shift, away from classical values of well-tempered middle-C, toward a modern "concert pitch," can thus either muddle the performance of the composition, or at least create difficulties for the singer's attempt at contrapuntal "voice transparency" in the rendering.

The adjustment of the musicians to "relative pitch," rather than a rigorous childhood solfege training in "absolute pitch" as a well-tempered scale at middle-C equal to 256 cycles, introduces difficulties. It becomes more difficult for the musician to recognize the purpose of the classical composer's choice of a specific key-signature. The classical composers based their work on the well-tempered scale of C-major, at middle-C equal to 256 cycles. Thus, for them, any shift in key from well-tempered C-major has well-defined significance. The base-line in musical composition, especially since Bach's "Musical Offering," is the developmental relationship between the keys of C-major and C-minor. Among well-educated musical audiences, the entirety of classical music is, in effect, a single, growing totality, to such effect that any composition not in C-major/C-minor is heard with respect to the base-line of

C. The very fact of a different key-signature, or a different key arising in the development of the composition, produces an effect which may be described as a shift in "color," or as "aesthetic tension."

Thus, the transition from the Classical to the Romantic, following approximately the 1815-1849 interval, was accompanied by a shift of tonality away from well-tempered scales, notably in the altered design of winds, and shifts toward "concert pitch" and the notion of "relative," rather than "absolute" pitch. It is near to impossible, to cause a modern orchestra to produce some of the most essential features of a classical composer's intent. For these reasons by themselves, excepting the case of certain exceptional vocalists and string performances, the modern performer and audience usually has a "blurred" perception of the original intent of classical compositions, at best.

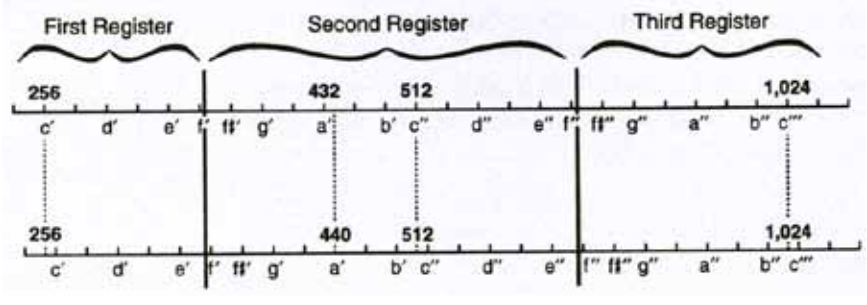
**The Six Species of Human Singing Voice, and Their Registers**




This argument is not merely a matter of musicological "archeology." There is some advantage, especially for musical research, in attempting to reproduce the exact pitch and sound of instruments and orchestras, as the classical composer intended them to be heard; but, that is only a secondary matter. The primary issue, is the reproduction and communication of musical ideas: A well-tempered polyphony, set at a 256 cycles value for middle-C, is indispensable for accurate presentation of the musical ideas of classical composers, but this is only the precondition for that presentation; the nature of musical ideas goes deeper.

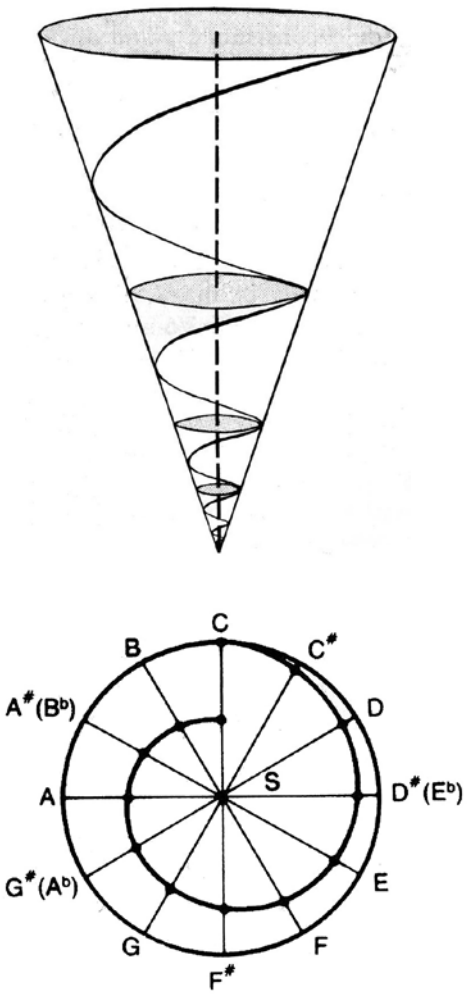
Every musical instrument, including the human singing voice, should be strictly set to a well-tempered scale of these specifications. However, there are additional distinctions among instruments, which distinctions often bear upon the way the composer presented a musical idea. The registral characteristics of the different strings or ranges of strings, of bowed instruments or keyboard instruments, are to be included in this; similar principles apply to wind instruments. The balance among different instruments of an ensemble, is of the same general significance. For such reasons, transcription of a composition from one instrument to another, does not always succeed. The issue is not "an authentic sound;" the issue is the way in way the registral interplay among voices within the composition is presented. This registral interplay is an essential part of what is conveniently described as "voice transparency;" the clear communication of musical ideas usually depends upon such "transparency."

The location of "musical ideas" is found by examin-




*At A=432 or below (top scale) the register shift occurs between F and F♯; at A=440 or above (bottom scale), it is forced downward to between E and F.*

ing the characteristics of well-tempered polyphony as a language. We are "language" in the proper, broader sense, that geometry is also a language. There is nothing accidental or arbitrary in this definition of music. The origin of music is classical poetry, as, for example, in the sung character of Vedic hymns, which neither have nor require a written-out musical score to guide the trained singer to as precise a rendition as if a scoring had been provided. Musical ideas are poetic ideas freed of the restricting significance of a verbal setting; in terms of spoken language, musical language is a language of pure metaphor and related forms of poetical irony. By studying the characteristics of music as a language, with immediate and simultaneous reference to classical poetry and a constructive geometry seen as a language, the meaning of the term "musical ideas" is more readily defined. To unravel the syntax of well-tempered polyphony, once we have grasped the origins of music in classical poetry, we must place the greater emphasis thereafter upon the principles of synthetic geometry.




*A self-similar, or logarithmic, spiral on a cone, and its projection down to the cone's base.*

As such a language, the essence of music is that it performs the same kind of underlying functions for people as does classical poetry or synthetic geometry. Musical ideas reference rea1-life experience, although in a very special and limited way. Contrary to the commonplace program-notes on concert programs and record dust-jackets, musical ideas can not be equated to the kinds of ideas commonly conveyed by prose.

The challenge which confronts the performing artist, is an accurate representation of a composition's musical ideas. The artist's performance must point clearly to the musical ideas with which the composition is begun, and show clearly how these first statements are evolved, through various stages of new musical ideas, to reach a concluding musical idea.

The best analogy for this process of musical development within a classical composition, is geometry. In deductive Euclidean geometry, we begin with the assumed self-evidence of infinitesimal points and straight lines. We add an assortment of other axioms and postulates. Every idea (theorem) introduced after that stage, is nothing more than the working-out of the original set of axioms and postulates, by successive layers of development. The original set of axioms, is a geometrical idea, analogous to the musical idea used as the starting-point idea for working out the development of a musical composition.

The layers of theorems developed, are also geometrical ideas, ideas which differ from the original axioms, but which have a hereditary-logical connection to those axioms. To that degree, the analogy to musical ideas holds up.

Beyond that point, the analogy to a formal-deductive kind of geometry fails. Musical ideas are in one-for-one correspondence with the kind of developmental process represented by what is called a "synthetic geometry." In such a "synthetic" geometry, otherwise called a "constructive geometry," there are no axioms or postulates, and no deductive methods of proof are permitted. We start with the unique self-evidence of circular action, as shown by the isoperimetric theorem of elementary topology. By nothing but circular action upon circular action, we construct a straight line and a point, and go on to construct various kinds of lines, surfaces, and solid figures, never introducing any new assumption to circular action. At a later stage, the process of extended construction passes beyond the scope of Euclid's geometry, into Fourier Analysis and Gaussian higher geometries.

The proof that the well-tempered scale is the only natural musical scale, and precise measurement of that scale's tonal values and principal harmonic intervals, is supplied by an elementary, Gaussian conic construction in the complex domain. The construction within the

scale of C-major, which determines the C-minor scale by the principle of complements, leads directly to proving the existence of, and nee for every one of the twenty-four major and minor key-signatures. Bach's musical idea elaborated in his "Musical Offering," is the model example of this in Classical composition as a whole. All of the harmonic principles of polyphony are implicitly constructible from this geometrical starting-point. We shall turn attention to more on this, in the conclusion of this introduction.

That concluding section of this introduction will return to this matter of synthetic geometry. We shall describe there, the reason why all musical ideas belong to the level of Riemannian geometry, why the construction of the well-tempered scale can be only approximated at more elementary levels of geometry. This fact ought not to frighten the student of music, but quite the contrary. The fact that classical musical ideas are congruent with nothing less than the most advanced geometrical levels of mathematical physics, should encourage us to recognize that the possibilities of classical composition are as far-reaching as the most advanced scientific thought, and the ideas developed in a major classical composition, such as the later major compositions of Beethoven, are as profound as ideas encountered in the work of physical scientists.

Generally speaking, the formal difference of interpretation between a Classical and Romantic composition, is that the Romantic composer views music as a matter of a sequence of sensual effects. The Classical composition is designed to produce a rigorous unfolding of musical ideas, in a manner analogous to a synthetic geometry. Classical composition is not "emotionless;" the emotion of Classical composition is of the type a child experiences in making what is for that child, a valid recreation of a rational discovery. Essentially, Classical music's emotion is agapē, whereas the Romantic is erotic.

At first glance at the page of a score, the early Romantic compositions seem not to be absolutely distinct from the Classical. The Romantic composers were, initially, persons educated in the Classical musical tradition, and were therefore influenced by certain features of that tradition; the distinction appears to be merely the Romantic's practice of introducing rather arbitrary sensual effects, effects which are irrationalist incompetence from the standpoint of strict polyphony. The way in which passages are constructed around these thematic, arbitrary sensual effects, is the aspect of the composition which resembles the polyphonic principles of the Classical composers.

One may say, fairly, that the difference is "emotional." The Classical composer adheres to rigorous polyphony, to the effect that the creative features of the composition are analogous in form to a valid new scientific discovery in physics. The emotion, therefore, is agapē. The Romantic's so-called "freedom," is comparable to a married man's pleasure in illicit sex; he breaks the rules arbitrarily, on impulse. He thus becomes a pornographer, the exponent of the irrational erotic in music.

The contrast between Chopin or Schumann, and Liszt, is exemplary of the point. The former are classical composers, whose musical ideas demand the clearest possible polyphonic transparency; Liszt is polyphonically trivial, by contrast, as is Richard Wagner. In a classical composition, every not of a chord is a voice; a chord of four notes signifies four voices associated with that chord (putting subtleties to one side for sake of simpler illustration). So, in presenting a Classical work, clarity of articulation of polyphonic voices, and emphasis upon their "interaction," is paramount. Relatively speaking, a Romantic piano composition is an overpedalled blur of erotic progressions of sound-clusters, for which the tendency is to perform slow movements too slow, and faster movements too fast.

The scores of Romantic compositions, to a large degree, parody the structural features of Classical composition. It might appear, mistakenly, that one theory of composition and interpretation could subsume both genres. Yet, respecting the kinds of musical ideas involved, the two genres are respectively distinct languages, the Classical the language of agapē, and the Romantic the language of eros.

The shifts in tuning and characteristics of keyboard and wind instruments, which erupted during the 1840s, had the effect of spoiling the possibility of accurate performance or Classical composition, while blurring tonality and register in a manner agreeable to the Romantic school. So, bad performance seems to be proof to the ear, that Franz Schubert was a prophet of the Romantic school, and Chopin and Schumann exponents of it.

The widespread misrepresentation of Heinrich Heine as a "German Romantic poet," is analogous to the representation of Chopin and Schumann as "Romantic composers." Heine published the most devastating, accurate denunciations of the Romantic influence, and also identified Immanuel Kant as key to those German influences which had made toleration of Ro-

Painting by Josef Danhauser

*"Franz Liszt Fantasizing at the Piano," 1840.*

manticism possible. The relevance of this comparison is made clear by the Heine-Schumann "Dichterliebe," quite literally a musical-poetic Socratic dialogue, in which the poet and composer are of one mind in damning the folly of Romanticism.

How was the emergence of Romanticism possible, and how, similarly, did the sundry varieties of "modernism" supplant nineteenth-century Romanticism? We describe that process first, and then conclude this introduction with an outline of the elements of the geometry of music.

## Kant & Savigny Versus Schiller

Nineteenth-century Romanticism was spread throughout continental Europe, and into the precincts of Harvard and Concord, from the boudoir of the notorious Madame de Staël. It was the pathetic ideology of Jean-Jacques Rousseau, and Voltaire, spread by the Swiss banker-sponsors and accomplices of both. Yet, its roots in modern Europe go back much earlier than the eighteenth century; Claudio Monteverdi must be seen as the true forerunner of Liszt and Wagner, in respect to the pagan-cult ideology dominating the operas of both Monteverdi and Wagner, and in Monteverdi's, explicitly proposed emphasis upon erotic effects. However it was the rise of German Romanticism, out of the left-wing, Mazzinian radical movement of the 1840s, which tilted the balance, to establish the dominant influence of Romanticism in both European and American culture.

With that qualification, Immanuel Kant, G. W. F. Hegel, and Friedrich Karl Savigny, are the principal authors of nineteenth-century German Romanticism, and so, implicitly, of Adolf Hitler's regime.

The issue was first most clearly posed in Germany, by Kant's *Critique of Judgment*. Thereafter, the principal conflict internal to the history of nineteenth-century German physical science and culture, is an elaboration of the conflict between Kant and Friedrich Schiller during the 1790s. The leading points at issue in Kant's book, are two: Kant insisted, for one, that human creative discovery could not be accounted for in terms of any knowable sort of rational principle. He also made the corollary assertion, that there was no knowable rational principle governing the definition of beauty in works of art. Carl Friedrich Gauss was later to identity Kant's reasoning as dangerously absurd in the domain of physical science. Immediately, Schiller wrote his *Letters on the Aesthetical Education of Man*, both to refute Kant, and to set forth a positive basis for the rational comprehension of human creativity. Without knowledge of this controversy, no competent understanding of nineteenth-century German science and culture is possible, and no comprehension of the Romantic movement in particular.

Kant opened the doors of intellectual Germany to the corrupting influence of de Staël, by asserting that there was no rational basis for judging artistic values. Kant insisted that artistic taste was arbitrary, in the sense that taste was something redefined, from time to time, by shifts in popular consensus. The elaboration of this assertion of Kant's into a full-blown doctrine of aesthetics, was accomplished partly by Professor G. W. F. Hegel, but more emphatically, more influentially, by Hegel's fellow-conspirator at Berlin University, Professor of Law, Friedrich Karl Savigny.

There was nothing accidental in these specific roles of Kant, Hegel, and Savigny. Even in an introductory essay, such as this one, summary reference to the non-German backgrounds of all three must be included, before turning to the character and consequences of Savigny's influence on modern aesthetics and law.

Until the appearance Kant's most famous Critique, the *Critique of Pure Reason*, Kant's reputation was established in Germany as a fanatical enemy of Gottfried Leibniz, and the leading German apostle of Scotland's famous professor and British spy, David Hume. Second-generation Scottish immigrant to Germany Kant, had so defined himself. Kant's partial break with Hume occurred when Hume veered toward a more radical version of his empiricist philosophy. Hume, like his famous disciple, Adam Smith (of *Wealth of Nations* notoriety), had prohibited individuals and governments from attempting to discover any body of natural law by means of which mankind could select policies according to the pre-calculable moral effects of such policies. In opposition to, and in place of reason, Hume had proposed the substitute of customary moral opinion. This, Kant held his entire life. He distanced himself from Hume, in the Critiques, when Hume veered toward a more radically immoral empiricism akin to that later elaborated by Jeremy Bentham, Bentham's radical break with custom.

At first glance, the non-German influences principally shaping the outlook of Hegel and Savigny appear to be of a different nationality than Kant's. Not strictly so. The continuing origin of David Hume's and Adam Smith's views on philosophy, morals, and economics, was the Franco-Swiss patrons of Voltaire, Rousseau, and Robespierre's Jacobins, a Swiss circle centered upon Geneva and Lausanne, of which de Staël was a representative. These were the Swiss influences which shaped Hegel's philosophical and political outlooks, and also Savigny's.

In the manner of the times, the Prussian secret police discovered, by intercepting and reading Hegel's mail, that Berlin Professor Hegel was working as a spy for Vienna's Prince Metternich. During the period from the anti-Schiller Carlsbad decrees, until Hegel's death, Prussian State Philosopher Hegel and Savigny collaborated in an effort to prevent Alexander von Humboldt from introducing science to that university. Von Humboldt got around Hegel's and Savigny's sabotage of science, by making the university's department of classical philology the center of mathematics education, and by the Prussian military's habilitation of science professors whom von Humboldt nominated over the objections of Hegel and Savigny.

In opposition to Leibniz and Schiller, among others, Hegel introduced a principle of mystical irrationalism into philosophy, history, and art: this mysterious agency, with clearly recognizable kinship to Adam Smith's mystical "Invisible Hand," he designated as the *Weltgeist* ("World Spirit"). In order to give the appearance of rationality to this pagan mysticism, Hegel composed histories of philosophy, and a philosophy of history, which, like his "dialectics," are completely delphic frauds. As to aesthetics, the late Benedetto Croce typifies, more or less accurately, the aesthetical doctrine specific to Hegel. Hegel's significance for modern doctrines of aesthetics, is chiefly his influence on the work of Savigny.

Savigny is famous on two principal grounds, and should also be more or less famous for a third reason. In law, he is famous and continues to be influential worldwide today, by fusing the characteristics of Roman imperial law with the Romanticism of de Staël. in aesthetics, Savigny, more than any other person, introduced a policy of insisting upon an airtight separation of the rationality of the physical sciences from the study and practice of law, political science, social science, theology, and aesthetics: the separation of *Geisteswissenschaft* (the liberal arts from *Naturwissenschaft* (the physical sciences). Not only did Karl Marx study law at Berlin under Savigny, but Marx's doctrine of "historical materialism" is chiefly a plagiarism of Savigny's irrationalist doctrine of law and culture, with elements of Ludwig Feuerbach's Gnostic dogma added in.

Savigny's version of Hegel's *Weltgeist* was the *Volksgeist* (the spirit of the popular consensus). Savigny's *Volksgeist* dogma, sometimes called the *voelkisches* principle, was not perfectly implemented until Adolf Hitler's dictatorship made this the fundamental principle of Nazi law-doctrine. The congruence between Savigny's dogmas of law and aesthetics is almost absolute.

Essentially, Savigny, like Friedrich Nietzsche and Aleister Crowley later, was committed to eradicating the influence of the western Judeo-Christian tradition from modern law. Western European culture and law were first defined by St. Augustine, who outlined a comprehensive replacement for the irrationalist law and degraded moral culture of the imperial Rome then collapsing of its own rot. With one very specific and essential qualification, as expressed in the *Filioque* doctrine of the Latin Christian Creed, Augustine adopted the scientific method of classical Athenian republicanism, as best typified by Solon's constitutional reforms and the writings of Plato.

Through development of the divine spark of potential reason, embedded in every human individual as the

essential distinction between man and the beasts, man's capacity for scientific, creative reasoning in a rigorous way, enables us to discover certain higher principles of causality and law, principles which are at worst an imperfect reflection of the intent of the Creator. This is the body of natural law, as the term "natural law" is understood by Augustine, by such authors of the Golden Renaissance as Cardinal Nicolaus of Cusa, and by Gottfried Leibniz.

By its nature, by definition, Augustinian natural law is superior to any nation's constitution, any legislative act, any deliberation by judges, any passing majority of popular opinion. As the 1776 U.S. Declaration of Independence references this principle, when the inferior forms of the merely positive law come into conflict with the natural law, the natural law must prevail, and the relevant law of a nation or popular opinion must surrender to the authority of the natural law.

Painting by Sandro Botticelli, 1480

*"St. Augustine in His Study."*

Savigny was committed to destroying natural law, to eradicate the influence of St. Augustine and the Golden Renaissance from civilization, and to restoring the tradition of Roman imperial law, adding to Roman law only the modern innovation of empiricist irrationalism. Essentially, Savigny insisted, that, using the tradition of Roman imperial law as a set of axioms for the system of law and culture generally, the specific qualities of positive law enacted, and popular opinion on liberal-arts matters, must be treated as merely arbitrary, but authoritative. Moral values, and cultural values, for Savigny, must shift in accord with shifts in prevailing opinion's choice of values. The connection to Hume's empiricism, Adam Smith's "Invisible Hand," and Kant's emphasis on an irrationalist form of custom, should be sufficiently clear.

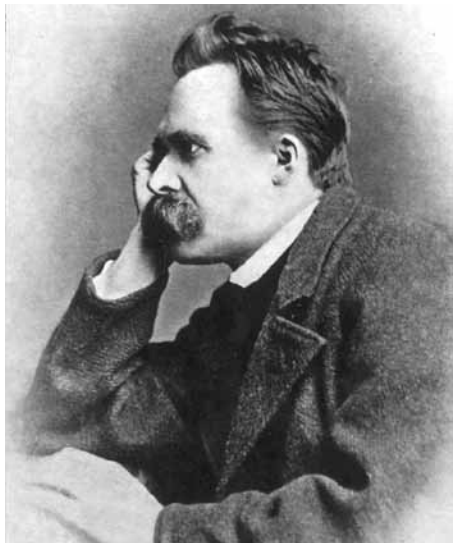
Through the position of influence in which he was sponsored at the University of Berlin, Savigny's doctrine emerged to become hegemonic in late-nineteenth-century and twentieth-century German aesthetics. This development in Germany, as it affected both doctrines of law and the fine arts, paralleled and converged upon hegemonic aesthetic dogmas in France, Britain, and elsewhere.

Through powerful Venetian influence over the powerful Acton family of Britain, a virulent Gnosticism was introduced to those islands, typified by the cult-novels of Edward Bulwer-Lytton and the preachings of Oxford Professor John Ruskin's Pre-Raphaelite Brotherhood. Out of this came the nineteenth-century theosophical-cult movement which spread throughout Europe and into the Americas. Ruskin, the Isis-worship of Madame Blavatsky, the explicit Satan (Lucifer-Dionysos) worship of Friedrich Nietzsche and Aleister Crowley, and the explicit Lucifer worship of Crowley's German social-democratic protégé, Rudolf Steiner, are examples of this. Wagner's "Parsifal" is an explicit adoration of the Cathar version of the Gnostic cult, the same variety of Gnosticism adopted by Houston Stewart Chamberlain, Nazi doctrinaire Alfred Rosenberg, and, from Wagner's circles, as the anti-Judeo-Christian state religion of the Nazi insiders. A kindred, neo-Cartesian positivism erupted in nineteenth-century France, giving rise to French fascism and twentieth-century Franco-Hispanic synarchism.

The overlap of the theosophical variety of Gnostic cults with Romanticism, and with later modernism, is not coincidence. René Descartes' mechanistic world-view exemplifies the epistemological roots of the connection. By declaring the physical world to be axiomatically mechanistic, the neo-Aristotelean Descartes relegated God and the creative faculties of the human mind to a place outside the universe, the mystical domain of a *Deus ex Machina*. In respect to Judeo-Christian theology, the Cartesian and neo-cartesian

dogmas deny the existence of the Judeo-Christian God, and thus implicitly define God as the Syrian Magi and their Gnostic offshoots do. Descartes thus, similarly, implies the wicked doctrines of Kant's *Critique of Judgment*, and thus the dogmas of Hegel and Savigny. The "mind set" of the theosophist and musical irrationalist, are one and the same; there is no coincidence in the occurrence of the two disorders in the same personalities.

*Richard Wagner*



*Friedrich Nietzsche*

In the same vein, Scottish Pietist Kant was essentially a Cartesian. This shows most clearly in Kant's distancing himself from Hume's radical turn. Both Hume and Kant defined themselves essentially as anti-Leibnizians. Hume thus continued the anti-Leibniz campaign launched by the supporters of the Duke of Marlborough, in the effort to prevent Queen Anne's appointing Leibniz the Prime Minister of England; this campaign is best known through the Leibniz-Clarke-Newton correspondence. Although post-1660 British empiricism in matters of the physical sciences, was a parody of Descartes, the eighteenth-century British empiricists were radicals, relative to the neo-Aristotelean formalism of Descartes and his followers on the continent. British empiricism adapted itself to the radical, Swiss form of Calvinist doctrine, which Presbyterians today often term "ultra-Calvinism;" whereas Descartes' training and beliefs were doctrinally Jesuitical. Kant's neo-Aristotelean formalism was essentially neo-Cartesian, as Kant showed most dramatically in distancing himself from Hume's radical turn.

By contrast, Bach, Mozart, Beethoven, et al., as well as Gotthold Ephraim Lessing, Moses Mendelssohn, Schiller, Gauss, and Wilhelm von Humboldt, were within the tradition of Augustine, Cusa, Kepler, and Leibniz.

Modernist cults within the arts are divided broadly among three currents: (1) The anti-Augustinian, Venice-centered faction of oriental Gregorian chant and Magi-Gnostic symbolism; (2) The strict formalists, such as the strict twelve-toners; and (3) The absolute hedonists, such as the jazz and rock cults. In studying modernist art-dogmas, we must take into account the significant differences among the three types, as we must recognize the secondary differences between Hume and Kant; but, we must also recognize, at the same time, that the three prototypes of modernism are but different varieties of the same species, as Dave Goldman has outlined this common origin for modernism in music.

All varieties of modernism in art concur in the most essential principle. That there is no rational principle which art shares in common with the physical sciences, and that either all art, or even only one particular artform, is governed by an arbitrary aesthetical principle peculiar to the passing opinion of some contemporary consensus. In music, for example, the radically hedonistic varieties of modernism, insist that shifting popular taste among audiences, is determining. Among the "elitists," the radical formalists, it is the current fads among the professional musicians which are esteemed as setting the standard.

For the case of Germany, the similarities and differences between the dogmas of Hegel and Savigny, are most relevant.

As Mrs. Joan Robinson aptly described the quack economist, Professor Milton Friedman, Hegel insisted upon a *post hoc ergo propter hoc* theory of history in general, and the history of philosophy in particular. For Hegel, what happened in history, is what should have happened; for him, a science of history consists of accepting the successive stages of political history as empirical demonstration of the will of the *Weltgeist*. For him, the history of philosophy is a matter of accounting

Portrait by Jakob Schlesinger, 1831

*G.W.F. Hegel*

*Friedrich Carl von Savigny*

for the world-view coinciding with each of the successive cultural stages of political history. Whatever theory of political history and of reigning philosophies is apparently consistent with *post hoc ergo propter hoc* dogma, is the proper universal theory.

Thus, Hegel pronounced the establishment of Spartan and Roman slave-society, as a necessary stage of progress in the political condition and philosophy of mankind in general. It was necessary for Hegel to lie wildly about history to paint this picture, but scholarly integrity was always an impediment to Hegel's reputation as a universal philosopher. So, every stage of political history, up through the Prussian state of 1818 as represented by State Philosopher Hegel, was a necessary stage of history, as ordered by the World-Spirit. The Prussian monarch, a notoriously weak, vacillating, and superficial intellect, relative to his great forebears, was declared by Hegel to be the highest agency of the will of the World-Spirit, and the Prussian civilian bureaucracy to be his high-priesthood, more or less as imperial Roman dogma pronounced the emperor to be a god.

Savigny narrowed Hegel's dogma somewhat; Savigny preferred a racialist version of Hegel's dogmatics. Each nation-race, according to Savigny, had its own special *Weltgeist*, the *Volksgeist* (the collective will of the people). In Savigny's dogma, the judges must accept the perceived collective will of the people, during that passing moment of history, as authority not subject to rational examination. Hit1er's doctrine of law and history, exactly.

Savigny's dogma is consistent with Roman law. Roman law was based chiefly upon the principles of Aristotle's *Nichomachean Ethics* and *Politics*, two of the most evil books ever written. The social, political, and theological dogma of imperial Rome was based on a special, oriental kind of racialism otherwise called "blood and soil" dogmas.

It has been the doctrine of empires, since Babylon and the Persian empire, that each people acquired its character from its racial ancestry and the particular patch of real estate associated with its habitation. The Chaldean priests, and their successor-form, the Syrian Magi, codified for each conquered people one and only one approved religion and law peculiar to people of that blood and soil. That codification was controlled by the priesthood of the ruling power, so codified as to make religion itself an instrument of willing subjugation of the conquered to the will of the conqueror. The Roman imperial pantheon, at Rome and at Constantinople, exemplifies the imposition and administration of this principle.

The only question of importance, for those who adopt the tradition of Roman law, is which race shall be the ruling race, to which all others are subjugated? Such empires are intended to be what some today term "world government," "global society," and so forth. The present, accelerating effort, to establish the International Monetary Fund as an institution of "world government," is consistent with Roman and Savigny's dogmas. Rather that submitting the subjugated nations to the status of puree-and-simple colonies, each nation is permitted to have its own approved varieties of local laws, religion, and customs; in effect, each such nation becomes a local satrapy under the imperial overlordship of agreements between the two superpower-alliances. The only restriction on local self-government of nations, that the particular form of religion and law they adopt, must be that approved by the ruling, "international authorities."

It is consistent with this imperial dogma, that today the proponents of an imperialist form of "global society" support the proliferation of those forms of "integrist" religious-cultural movements, by aid of which to fragment many existing nation-states into collections of "integrist" microstates. This is the current policy of

major sections of the Liberal Establishments of North America and Western Europe; it is also the "ethnic" policy of the Soviet empire. The only contention between these imperialistic "global society" advocates of the western Establishment and Moscow, is whether the Establishment and Moscow shall rule the world as equal partners, as the Establishment proposes, or whether Moscow shall emerge soon as the only dominant power within a world-empire which is essentially a "third Roman empire."

Savigny's revival of Roman law, denies any principle of law universal to mankind. That is, in direct opposition to the U.S. Declaration of Independence, for example, Savigny et al. deny an oppressed people the right to appeal to universal principles of law in behalf of justice among nations. It is a hateful attack upon the essence of Judeo-Christian civilization, most emphatically: it denies that all persons are created politically equal under the law. In hateful rejection of Roman law and Savigny, we hold that all persons are equal before the law, by virtue of that divine spark of reason which sets mankind above the beasts: an equality which is blind to distinctions of race, nationality, or local real-estate. We hold that all nations are subject to this principle of universal natural law, and regard any state or other potency which violates natural law on this point, to be an abomination. For us, only under conditions of what St. Augustine defines as "justifiable warfare," can some, relatively few, temporary exceptions to the application of this principle of natural law be tolerated.

This political side of Savigny's promotion of Roman law, aids us in seeing more clearly what is at stake in the application of these same, irrationalist principles to art in general, and music in particular. Hegel was partly correct, in assuming that there is a coherence between the form of society's political institutions and the dominant philosophy of the people under such forms of government. That point is by no means original to Hegel; relative to those who explored this matter earlier, Hegel's interpretation of it is fraud-ridden and largely false. The moral values expressed by the popular art and related features of culture of a people, do have a determining influence on the evolution of political institutions. Poetry, gone from bad to non-existent during the past century or more, and the moral decay of music, through Romanticism and later modernism, like popular television and other entertainments today, are expressions of, and forces for a kind of moral-decay of the political will, which must tend to bring nations into ruin. Modernism in art, traceably originating in ancient political evils, is a device which tends to express its embedded nature in decay of the moral quality of the political will, and of political institutions.

## Schiller, Humboldt & Gauss

In his rebuttal of Kant's *Critique of Judgment*, his *Letters on the Aesthetical Education of Man*, Friedrich Schiller demonstrated that creativity is governed by knowable, rational principles. Schiller's *Letters* greatly influenced the entire work of those Prussian republican reformers, who, like Schiller himself, were part of the faction supporting the American Revolution in Germany. Out of this came directly, Wilhelm von Humboldt's sweeping reform of secondary education dedicated to the fullest and broadest possible development of the creative potentials of each young person prior to that person's undertaking specialized training at the university-level. The emphasis on teaching of synthetic geometry in secondary schools, as pioneered directly by Johann Friedrich Herbart and Jacob Steiner under the sponsorship of Humboldt was partly indebted to the work of France's Gaspard Monge and Lazare Carnot, but was a direct outgrowth of the influence of Schiller's *Letters on Aesthetical Education*. Out of this emphasis on synthetic geometry, came the greatest school of science in modern times, the Göttingen circle around Carl Gauss. Through the provocative inquiries by Herbart, and the instruction of Jacob Steiner, came Gauss's great collaborators and successors, most notably Bernhard Riemann in Germany, and Riemann's Italian collaborators, Enrico Betti and Eugenio Beltrami. The revolution in synthetic geometry, the establishment of the theory of functions in the complex domain, accomplished by Gauss and his collaborators, enables us today to restate the fundamental questions of Schiller's thesis in the most rigorous terms of scientific fundamentals.

My own contribution to this feature of music, occurred as a by-product of my earlier successes in economic science. In economics, I am to be classed generally as what is sometimes called a "neo-mercantilist," a follower of Leibniz, Alexander Hamilton, the Careys, and Friedrich List, an exponent of what Hamilton named "the American System of political-economy." However, within that larger framework, I have added an extremely important, fundamental discovery, on which I first struck during 1951-1952, the discovery of how the cause-effect relationship between advances in technology and increased productivity may be measured. The

*Friedrich Schiller*

*Wilhelm von Humboldt*

Portrait by Christian Albrecht Jensen

*Carl Friedrich Gauss*

elaboration of this discovery has depended chiefly on the contributions to physics of Professor Bernhard Riemann. My familiarity with the work of Riemann, arising in economic science and related matters of technology, enabled me to specify a fresh proof of the fundamental principles of well-tempered polyphony.

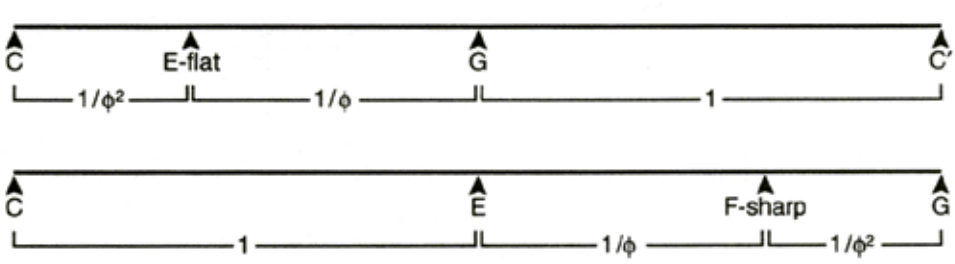
Briefly, the elaboration of my musical discovery came about in the following way. My associates and I had adopted an active program of music for our own needs and gratification, during 1973. Two brief items of mine, written during the Summer of 1977, on the Finale of Beethoven's *Ninth Symphony*, and on the singing of Florestan's prison-cell soliloquy in Beethoven's *Fidelio*, had prompted some of my associates, to launch a musical-theory research project. During 1981, the work of the musical-theoretical task-force is a new turn, almost as if by accident.

At that time, I was boiling with frustration. At the close of 1970s I had specified the constraints needed to create a computerized forecasting system. Work on the implementation of that design, had prompted a larger number of people to undertake study of Riemannian physics' relevant aspects. For most students, that study had been a failure; the cause of this failure was the blunder of some professionally physicists and students, in attempting to approach Riemannian physics from the starting-point of conventionally taught university calculus texts. From that standpoint, no comprehension of the fundamental work of Gauss, Dirichlet, Weierstrass, and Riemann is possible. Thus, the students understood the most crucial features of my mathematical-economics methods much less after taking that course, than before it. In aid of overcoming this problem, I sponsored a seminar-series on the relevant features of Leibniz's, Gauss's, and Riemann's work, held at a convenient location near Frankfurt, Germany. It was in that setting, that I introduced my thesis on Riemannian demonstration of the fundamental principle of polyphony.

Essentially, the harmonics of the well-tempered scale, and of the rudimentary polyphony based directly upon that scale, are all defined rigorously in terms of an elementary geometrical construction; the projections of conical self-similar spirals. A single such spiral projected upon the circular base of the cone, produces a plane spiral circumscribed within that circle. A radius drawn within that circle, is divided into line-segments whose ratio is the Golden Section. If the circle is divided into twelve equal sectors, the radii divide the length of the spiral-arm into segments whose ratios are congruent with the Golden Section; the division into twelve sectors is required from the standpoint of Leonhard Euler's and later treatment of the so-called "five Platonic solids" in topology: the topological significance of the twelve sides of the unique dodecahedron constructed by means of the Golden Section. The ratio of the lengths of the spiral arms is the well-tempered scale, precisely.

I proposed that we include an elaboration of the fundamental principles of polyphony, on this basis, to become part of the curriculum in mathematical eco-

nomics. Dr. Jonathan Tennenbaum and Ralf Schauerhammer, two of my colleagues, undertook the details of the construction, and presented the elaborations derived to two successive international conferences My pedagogical ruse succeeded more or less as I had intended; there was a substantial improvement in understanding the principles of my mathematical economics, and it became much easier to present the physics of coherent electrodynamic radiation to audiences educated in that approach to mathematical economics and music.




*The frequency values of these two basic series of musical tones are ordered according to the Golden Section.*

It is the bare features of that method, which I include in this introduction.

For purposes of comprehension, the following summary of synthetic geometry, from Cusa through Riemann, must be supplied.

Modern science began approximately 1438, with Nicolaus of Cusa's discovery of a physical principle usually associated today with either Leibniz's Principle of Least Action, or the isoperimetric theorem of topology. In his 1440 *De Docta Ignorantia*, Cusa named this "the Maximum Minimum Principle." In the language of Euclidean geometry, this states that the only self-evident form of physical action in the universe, is circular action, and not points acting along a straight line. The influence of that discovery, is key to the history of modern physical science. Leonardo da Vinci, Kepler, Leibniz, the Gauss's circle, among others, based their discoveries on this approach; Descartes, Newton, Laplace, Cauchy, Clausius, Kelvin, Maxwell, Helmholtz, Boltzmann, et al., represent those who attempted to deny the Principle of Least Action This discovery is also the key for defining the principle of beauty in aesthetics, our immediate topic here.

This discovery, and related elaboration of the principles of scientific method, by Cusa, guided the collaborators Luca Pacioli and Leonardo da Vinci to effect numerous major discoveries in mathematics and the physical sciences. The most elementary of these discoveries, and the most relevant to the questions of aesthetics, Pacioli reconstructed the proof referenced by Plato's *Timaeus*, that in visible space, only five kinds of regular polyhedrons can be constructed (the regular tetrahedron, cube, octahedron, dodecahedron, and icosahedron), of which five, only the dodecahedron is unique (the other four are derived from the dodecahedron). Since the construction of the dodecahedron depends upon first constructing the Golden Section of the circle, it is clear that the Golden Section expresses a limit of constructability in visible space. This discovery led to a number of remarkable results.

Pacioli and Leonardo proved, that all living processes are distinct from non-living processes in the respect, that the morphology of growth of living processes is harmonically ordered in a way coherent with the Golden Section. Between the extremes of astrophysics and microphysics, that discovery holds true experimentally today: any process which lies between the extremes of astrophysics and microphysics, and which as harmonic characteristics congruent with the Golden Section, is either itself a living process, or is a special sort of non-living artefact produced by action of a living process. Beautiful works of art are such artefacts.

The aesthetical principles of composition employed by Leonardo and his classical followers, up until the rise of German Romanticism, were based on this significance of the Golden Section's subsumed harmonies.

This was not entirely original. The design of the Acropolis, both its individual structures and the construction as a whole, is based on an harmonic ordering of those proportions which correspond to the harmonic proportions found in the human body, and in animals. Since as early as classical Greece, beauty is that which celebrates the principle of life. The classical Greeks also knew, as Plato's dialogues reference this, that the interval of a fifth, as precisely determined by the Golden Section, is the cornerstone of beautiful musical composition, and that the other elementary intervals are determined by geometrical constructions congruent with the construction of that Golden Section.

On this basis, Kepler constructed the hypothesis upon which the founding of a comprehensive mathematical physics is based to this day. If the universe is the work of a living God, then the most fundamental laws of the universe, as encountered in elementary features of astrophysics, must have the characteristics of a living process's artefact. Within the limits of precision of his mathematics, Kepler's three laws of astrophysics are the foundation of physics today. Kepler's only explicit error, was to tolerate the Ptolemaic system of harmony; otherwise, the limits of his work were those he specified himself. He prescribed the need to develop a rigorous notion of elliptic functions, a task completed by Gauss and Riemann during the nineteenth-century. He specified the requirements of a differential calculus, a task completed in essentials by Leibniz, as reflected in a 1676 paper which was the first report of discovery of the differential calculus.

Gauss proved conclusively, that Kepler's conception of the ordering of astrophysics was the only correct approach, and that the contrary approaches of such as Galileo and Newton, were absurd in principle, and useless in practice. Today, we know that a corrected version of Kepler's approach, applies to microphysics, as well as astrophysics.

On the basis of what we have just summarized, it is possible to construct the rudimentary features of polyphony, as well as a perfect calculation of the well-tempered scale. However, this is not yet the kind of conclusive proof we require to account for the physical principles underlying music, or to prove why the approach of Bach, Mozart, and Beethoven, is the durable standard for beauty in musical composition. This requires us to touch upon the bare elements of Gaussian physics.

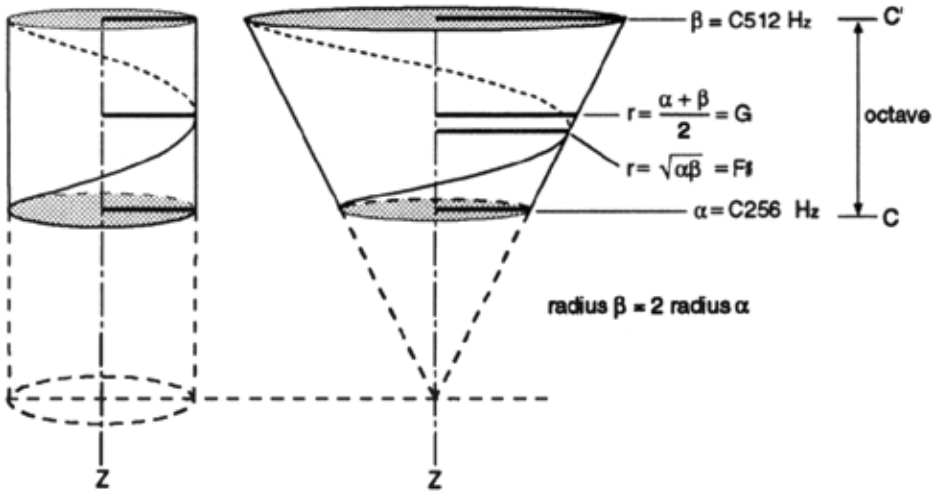
Cusa already proved that self-evident particles do not exist, and that action between particles does not proceed self-evidently in straight-line motion. Points and straight lines exist, of course; but both come into existence by construction, and thus do not exist "self-evidently." This is readily shown in constructive geometry; how is this also the case in physics? This question leads us through Leibniz's definition of the Principle of Least Action, into the discoveries of Gauss, Dirichlet, Weierstrass, and Riemann. It is within the work of Riemann, including his definition of what is called "the Riemann Surface," that the physical significance of creativity in musical composition is demonstrated.

The basis for Gaussian physics is simply this. Action in our universe does not occur in physical space, but rather in physical space-time. In elementary synthetic geometry, the secondary-school pupil is taught to master the rudiments of what we call a multiply-connected circular action. By "multiply connected," we mean simply that circular action is acting upon circular action at as much as every point, or the circular action is acting, similarly, potentially, upon every point of circular action upon circular action. This is the multiply-connected form of action in abstract physical space. What form does multiply-connected circular action assume in real space, in physical space-time?

Only two alternative forms are available. The simplest, is uniform circular action in the form of a uniform helix on a cylinder: implying multiply-connected helical action. The only alternative, is action in the form of a conical self-similar spiral. A hyperspherical universe, characterized by multiply-connected, conic self-similar-spiral action, is the physical universe of Gauss, Riemann, et al. The functions of a complex variable, in the mathematical physics of Gauss, Riemann, et al. are merely the algebraic form of description of loci in a purely geometric construction of the physical function to which the formulation refers. That construction is a synthetic geometry in which multiply-connected, conic self-similar-spiral action takes the place of multiply-connected circular action.

How can we prove that the Gauss-Riemann universe is the universe in which we live? Comparing Gauss-Riemann physics with that of Kepler, two points are outstanding.

Kepler already showed that the metrical properties of action in our universe are determined by the geometry of that universe. For example, Kepler's determination of the solar orbits, the only successful approach to estimation constructed thus far, ignores the masses and forces acting between masses, in determining the orbits. The orbits are determined by purely geometrical principles, defining the ordering and harmonic values for the orbits. Yet, from this, Kepler was the first to discover the principle of universal gravitation, and to supply the method for calculating the "force" of universal gravitation. The naive observer's problem here, is that the naive person thinks of space as "empty space," having no efficient effect on the processes which occur within, except the factor of straight-line distance. In reality, as Kepler was first to prove, our space has a "shap-




*Simple spiral action in the complex domain (left) is cylindrical in form; at one-half rotation, the distance moved along the vertical z-axis is one half the distance moved along the z-axis by a full rotation. The radius at one-half rotation is the arithmtic mean (α+β)/2, which divides the octave at the fifth, or the movement from C to G. In self-similar spiral action (right), the radius at one-half rotation is the geometric mean $\sqrt{\alpha\beta}$, corresponding to the movement from C to F♯.*

ing," such that all actions within physical space-time are governing primarily by that shaping of physical space-time. The question is, therefore, how do we prove that Gauss-Riemann space is the space in which we exist? The two tests are as follows.

First, the characteristic feature of physical space-time, is that the primary metrical relations within the universe are harmonically congruent with the Golden Section. This, to make short of the point, suffices to prove conclusively, that we exist in a hyperspherical universe, in which the elementary form of action is conic self-similar-spiral action.

Second; the characteristic feature of all processes of the physical universe, is the generation of what we call "physical singularities." These singularities include such things as the action of a photon, or the existence and behavior of an electron. Since the universe is rich in such singularities, we know that the only competent mathematics to be used for stating universal laws, must be the kind of mathematics which requires, and accounts for the generation of such singularities. Only a Gauss-Riemann physics requires and accounts for the existence of such singularities; only a mathematics based upon a synthetical-geometrical construction of functions of a multiply-connected, conic self-similar-spiral action, requires and accounts for the way in which singularities are generated in our universe.

To press to our crucial point here, we must take notice of the reader with limited mathematical knowledge. We must demystify certain terms.

The universality of circular, helical, and self-similar-spiral action is expressed mathematically by complex numbers. For example, the light-beam which appears to be moving simply in a straight ray, is actually progressing in a helical fashion within that ray. If we take a side view of that ray, we see the familiar sine-wave movement, which is nothing but the projected image of a helix, side-view, on a flat surface. Divide the number of helical turns per second by the speed of light, and you have the wave-length of one cycle of rotation. The action performed by the photon of light is expressed in terms of a cycle, such that light of shorter wave-length is more powerful than light of longer wave-length. We describe the movement of the sine-wave by an elementary trigonometric statement; this statement is another form of stating a function of a complex variable. If we look at the helix, of which the sine-wave is a projected image, we see that it is uniform rotation of the progressing helical action which obliges us to describe this as a locus in terms of a complex function.

In Gauss-Riemann physics, the locus-descriptions are based upon conic self-similar-spiral action, rather than simply helical action. This physics becomes very interesting once we study the most simple cases of doubly-connected such action. Such doubly-connected action generates hyperbolic mathematical discontinuities, and this at a harmonically ordered rate. So, from the standpoint of algebra, we have a function which is defined as continuous, but which has an increasing density of regions of discontinuity throughout that continuity. This is the simplest form of what we call a non-linear function. Directly to the point, this is an illustration of what we ought to signify, whenever we speak of creativity in science, music, and so forth.

The structural features of a Classical musical composition, the bare harmonics aside, are copied directly from classical poetry. The time-signatures and other metrical features of the composition, are taken directly from classical poetry. The music is written in a sequence of lines, like lines of classical poetry. In Mozart and Beethoven, for example, the German strophic form is most used, or at least referenced. Any Mozart keyboard sonata, for example, shows that the statement of thematic material is usually in the couplet form associated with classical strophic forms, such that the paired lines in sequence, have the form of statement and apposition.

If, in this simplest case, I state a theme in the key signature of C-major, and state that as a harmonic progression in the tonic-fifth-fourth sequence, and then restate this in the slightly altered form of a tonic-fifth-sixth sequence, I have a doubly-connected action. In this case, I have defined a relationship between the original C-major and a now-added C-minor; I have also opened the way, harmonically, to move to each of the other twenty-two major and minor keys. In respect to a linear interpretation of the key-signature of C-major, I have created a discontinuity by implicitly superimposing the fifth-sixth progression upon the fifth-fourth, which I have done by stating the same thematic material in these two ways. To maintain harmonic continuity within the composition, I must incorporate the new keys invoked within the totality, such that, instead of a monotonous progression, linearly, through the original key-signature, the characteristic of the development of that theme throughout the composition, is recurring, "non-linear" movement across the totality of keys invoked.

In polyphony, distinct from the sequential music of single-singer poetry, there are two or more voices singing simultaneously. In the most rudimentary polyphony, the simple canon, a second voice is introduced at some determined place in the singing of the first. The accomplished composer uses this to add new dimensions of multiple-connectedness. This juxtaposition is the means employed to create new singularities many of which are "dissonances" relative to the range of keys already in progress.

In each case, the rules of polyphony from which the composition begins in its assigned key-signature, are never violated in any arbitrary way. Rather, multiple-connectedness is employed to generate singularities. This applies not only to harmonic development, but also to rhythmic development (herein lies the obvious bestiality and wickedness of the oriental cult of Gregorian chant). It is not necessary, or desirable, to go further into this side of the matter here. The point illustrated, is that Classical composition strictly binds the composer to the rules of well-tempered polyphony; he can never exert personal "freedom" against those rules by mere impulse. Yet, this mode of composition provides the greatest possible freedom for creativity within the scope of those rules.

This power of Classical composition is rooted in the physics of the well-tempered scale. Every statement within those rules of harmony, is a conic function, such that multiply-connected statements generate the kinds of discontinuities associated with creative development of the composition.

Musical creativity thus pertains to the same faculties of reason which enable the scientist to discover valid new physical within the strict rigor of Gauss-Riemann physics. Classical music reflects and celebrates these creative powers of the mind is the purest, most immediate way, such that the physicist whose life is enriched by concentrated experience of such music is a better physicist, for that reason.

## The Physiology & Psychology of Well-Tempering

Most simply, because we are living beings, our characteristic movements, including those involved in singing and hearing, require harmonic orderings congruent with the Golden Section. Modern research confirms, as Riemann argued, that these are the metrical characteristics of the physiology and processes of hearing. The method of singing, which the Italians named "bel canto" during the nineteenth century, is of the same relevance. In this method, which is known to have been practiced during the fifteenth century, the human head functions according to the same principles as a laser. The rough tone produced in the throat is projected against the tissues and cavities of the upper portion of the cavity, and something approximating a "lased" tone is projected, instead of the less coherent throat-tone. The same physics as in hearing apply.

Thus, the well-tempered scale is the only natural scale for the singing and hearing of living beings. Helmholtz's "natural scale" is better suited only to inanimate

objects, such as a concert of rocks (e.g., a "rock concert"). Similarly, Ptolemaic harmonics. There was never a time in the history of music, at which a composition intended to be performed in anything but a well-tempered scale, was truly musical.

Let us now summarize the case for the principle of creativity peculiar to Classical composition, as omitted from the Romantics and modernists. The quality of creativity associated with a strictly rational composition, is the most essential of the distinctions between mankind and the beasts. This fact is demonstrated most easily from the standpoint of economic science.

In the ethnologists' hypothetical, most primitive state of society, a "hunting and gathering society," an average of ten square kilometers of the Earth's land-area, approximately, is required to sustain an average individual. This indicates approximately ten million persons as the maximum population. Today, there are nearly five billion persons, and most of the increase has occurred since the Golden Renaissance. If we had been a species incapable of creative rationality, like the baboons, we should have remained at the "hunting and gathering" level forever, and the "radical ecologists" would never have come into existence to demand that we regress toward that "natural" condition best suited to small populations of baboons. This increase of population reflects the most essential superiority of man over the beasts; it reflects that quality of human reason which sets us above the beasts.

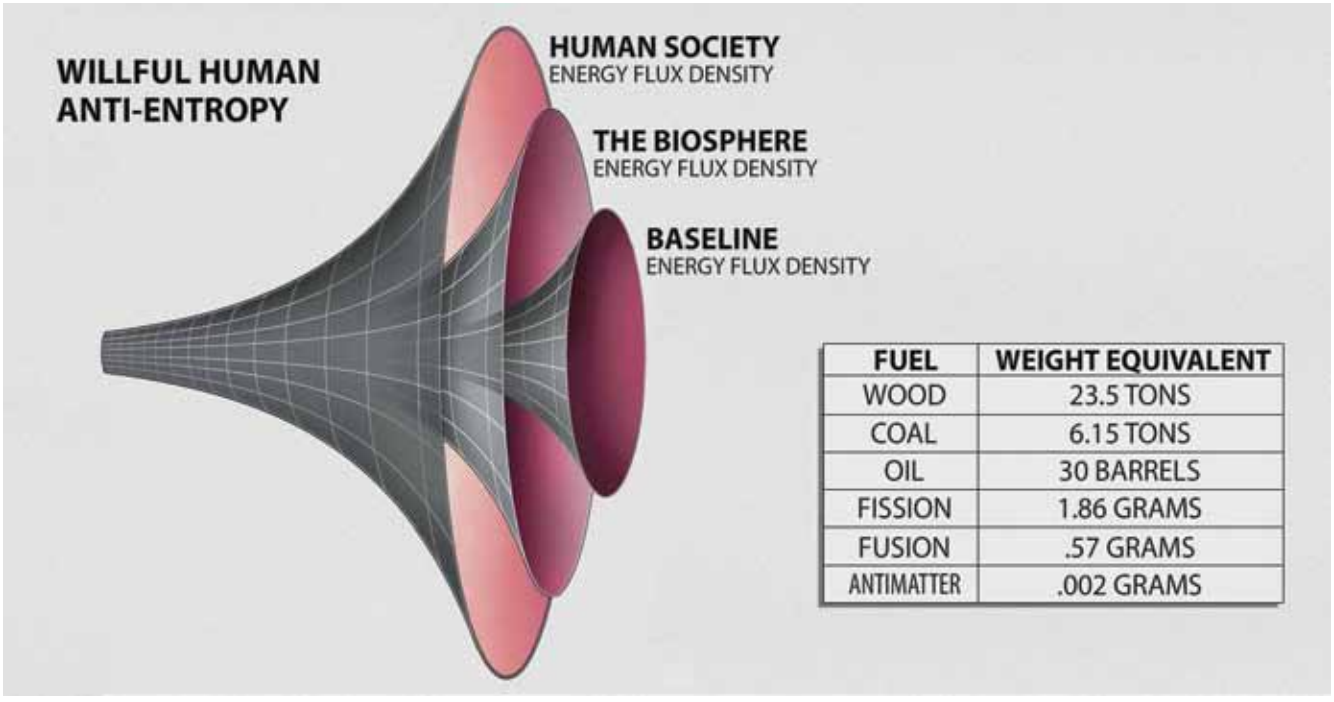
The means by which the quantity and quality of human life has been advanced to such effect, is of the form we call today "technological progress." Technological progress is divided into two distinct categories. The lesser quality of technological progress, is that accomplished by those kinds of useful inventions which involve no first application of a scientific principle; the second category, is the application of a new scientific principle. The first type of invention, is to be compared to the discovery of a new theorem in a deductive geometry, in which there is no act of discovery of a new axiom or postulate. The second, more profound type, is comparable to a revolution in the entirety of previously existing practice of geometry, through replacement of a faulty, axiomatic principle of the old geometry.

Although fundamental scientific progress represents a qualitatively higher level of mental life, than ordinary useful inventions, both are distinct, but interrelated expressions of that potentiality of the human mind which places mankind qualitatively above the beasts. Those activities which are deserving of a rigorous usage of the term, "useful invention," are already a form of activity which depends upon the individual's development of rigorous approaches to rational thinking, rationality of the type required for mastery of Professor Jacob Steiner's text in synthetic geometry, for example. The higher level of creative reason, unknown to Immanuel Kant, is most usefully termed "Socratic method," the method by which the axiomatic assumptions of scientific principle are successfully challenged to the effect of prompting lesser or greater scientific revolutions. The individual's rise to the higher level of mental development, "Socratic reason," requires that individual's preceding development to the ordinary, lower level of rationality.

Let us consider reversing the ordering of these two levels. Let us assume that the higher level, cohering with Socratic reason, comes first. Since new human individuals are born predominantly infantile personalities, whose best development is, apparently, through the transition from infantile irrationalism, through formal rationality, to Socratic reason, it must seem to some, that irrationality comes first, and then rationality develops out of irrationality, and then Socratic reason develops as a higher stage of rationality. To some degree of approximation, this sequence appears to occur in the civilized development of the individual personality. Is it not a wildly fallacious assumption, to presume that the highest degree of rational behavior did not exist before mankind?

The progress of physics, from Cusa through the circles of Gauss, proves conclusively that the laws of the universe are of the form of Socratic reason applied to synthetic geometry, and that this ordering of the universe long predates the existence of mankind. The uniqueness of mankind is not that man actually invented the laws of the universe, but, rather, that mankind is the first species able, both to assimilate knowledge of those laws, and to employ that knowledge as guide to efficient changes in mankind's behavior.

Gnostic theology has been sufficiently persistent and influential, to introduce even into Christian churches, for example, the absurd, Chaldean, neo-Aristotelean dogma, that the physical universe was created in a "big bang," and that the universe as it now exists is the rubble from that explosion roaming within empty

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*Successive power sources of mankind's economic activity measured in energy-flux density, as indicated by the comparative weights of fuel required to achieve an equivalent energy release. This is a qualitative, not simply quantitative effect. LaRouche indicates below: "The fundamental laws of the universe are best approximated today by ordered values for what is called in mathematics 'a Riemann-Surface function.' "*

space. The popularization of this absurd cosmogony in modern times, owes much to a widespread, credulous confidence in Newtonian mechanics; Gnostic theology describes Creation as if it had been an act of Sir Isaac Newton.

This "big bang" doctrine, as it first appeared in Chaldean theology, was later copied from the Chaldeans by Aristotle, or propounded by such miseducated astrophysicists today, is based mathematically on the assumption that the fundamental laws of physics are of the form of linear algebraic statements. On the contrary, God had already mastered the physics of a "nonlinear" complex function, long before Aristotle existed; Gauss, Riemann, et al., have proven, that the fundamental laws of physics are not linear, but are, rather, "non-linear." Specifically, the fundamental laws of the universe are best approximated today by ordered values for what is called in mathematics "a Riemann-Surface function."

The form and metrical characteristics of our universe are constantly being changed, to the effect that the set of linear formulations approximating physical laws, is being changed in an ordered sequence of changes. None of these linear approximations actually corresponds to a fundamental, i.e., permanent law of physics. Rather, the fundamental laws of the universe determine the ordering principles governing the relativistic changes in linear approximations of physical laws.

What this signifies for physics, requires review of the work of Gauss, Dirichlet, Weierstrass, Riemann, and Cantor in some detail, a detailed discussion beyond the scope of our purpose here. Here, it is merely necessary that we identify the authority for the interpolated working-point, as we have just done briefly. The point is, that when we think of physics in terms of Socratic reasoning expressed as synthetic geometry, we have tuned our mental processes to receiving knowledge of the highest, preexisting laws of creation. The fact that we, by effecting scientific revolutions in this way, are able to introduce to the universe physical states which did not previously exist, merely demonstrates the nature, the power of that quality of knowledge which such modes of Socratic reasoning permit us to receive.

Over the centuries, the increase of human population would have been aborted at many points, but for the introduction. . . . [Here the ms. breaks off.]

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