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Former Technical Director, NSA

Truth to Power

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Truth to Power

EDITORIAL

Bill Binney and Larry Johnson Shred Robert Mueller's Russian Hack Fable

by Barbara Boyd

March 4: LaRouche PAC TV has just conducted a 45-minute [interview](#) with Bill Binney.

Feb. 26—Bill Binney, the former Technical Director of the NSA, and Larry Johnson, formerly of the CIA, wrote the article reprinted below. In a sane nation, it would have been published widely in prominent media, discussed, and debated. Binney and Johnson would have been immediately contacted by Special Counsel Mueller, because what they have written destroys the entire narrative of Russian cyberwar to swing the 2016 election to Donald Trump. Congress would be beating down their doors to learn more. In a sane nation, people would be pursuing truth based on scientific proofs. That is not the nation of the present. In our view, to reassert its sanity, the nation must now demand that Robert Mueller refute, beyond a reasonable doubt, what is presented by Binney and Johnson. That is the resounding demand which must meet the specious fake report he is about to present to the Attorney General.

Guccifer 2.0 Is a Fable

Bill Binney and members of the Veteran Intelligence Professionals for Sanity (VIPS) published a study back in 2017 showing that Guccifer 2.0, the online persona who first claimed responsibility for the alleged Democratic National Committee (DNC) hack, was a fabrication. Their study was based on a metadata analysis of the documents released by Guccifer 2.0. The metadata gave evidence that the files were downloaded at speeds consistent with, and in a manner consistent with copying to a thumb-drive

or a storage device, rather than through an internet hack.

As a result, the President or someone close to him asked Mike Pompeo, at that time the head of the CIA, to meet with Binney. Binney demonstrated to Pompeo that the President was being systematically lied to by the intelligence agencies about the Russian cyberwar election-meddling fable, which has now been used to cripple the Trump Presidency for over two years. Binney offered to assist in an investigation to unearth the truth as to the perpetrators of the lie, but he never heard a word back thereafter. When Patrick Lawrence reported on the VIPS study in *The Nation* magazine (which has since prepended a long editorial note), his journalistic career came under sustained attack, as did the VIPS study more generally.

No Hack, a Leak: Not the Russians

Now Binney has examined the metadata of the actual DNC files published by WikiLeaks and demonstrated that they are also consistent with transfer to a thumb-drive or another storage device rather than a Russian internet-based hack. Although this story has received some attention (as on the *Gateway Pundit* and *ZeroHedge*), it must receive the broadest possible circulation.

Unlike the claims by the intelligence community and Mueller, this analysis by Binney and Johnson is a public, verifiable forensic analysis of the WikiLeaks releases, which established that Hillary Clinton was attempting to rig the Democratic primaries against Bernie Sanders and that Hillary Clinton was a craven pawn of Wall Street. Both the Obama Administration's

January 2017 Intelligence Community Assessment and Robert Mueller's indictment of twelve Russian military intelligence agents for perpetrating the hacks of the DNC and John Podesta, rely on findings (lacking available supporting data) reported by CrowdStrike, a private firm, heavily linked to the war hawks in the Atlantic Council and the Democratic National Committee.

As is well known, the FBI never examined the DNC computers or the computer of John Podesta and instead adopted the analysis of the DNC vendor, CrowdStrike, to make claims of the highest possible impact on the national security of the citizens of the

United States.

As former NSA Technical Director Binney knows and states publicly, if the Russian hack occurred as the intelligence community assessments and Robert Mueller claim, the NSA would have been able to trace it and attribute it specifically as to times and places. This has never happened, simply because the hacking scenario advocated by Mueller and the Obama intelligence community never happened.

This is a matter of war and peace, because the Russian hack false narrative is a central element in fomenting a new and very dangerous Cold War between the United States and Russia.

Why the DNC Was Not Hacked by the Russians

by William Binney and Larry C. Johnson

We reprint below a copy of the [full article](#) by William Binney, former Technical Director, NSA and Larry C. Johnson, former State Department Counter Terrorism and CIA, first published Feb. 13, 2019.

The FBI, CIA and NSA claim that the DNC emails published by WikiLeaks on July 26, 2016 were obtained via a Russian hack, but more than three years after the alleged "hack" no forensic evidence has been produced to support that claim. In fact, the available forensic evidence contradicts the official account that blames the leak of the DNC emails on a Russian internet "intrusion." The existing evidence supports an alternative explanation—the files taken from the DNC between May 23-25, 2016 and were copied onto a file storage device, such as a thumb drive.

If the Russians actually had conducted an internet-based hack of the DNC computer network, then the evidence of such an attack would have been collected and stored by the National Security Agency. The technical systems to accomplish this task have been in place since 2002. The NSA had an opportunity to make it clear that there was irrefutable proof of Russian meddling, particularly with regard to the DNC hack, when it signed on to the January 2017 "Intelligence Community Assessment," regarding Russian interference in the 2016 Presidential election:

We also assess Putin and the Russian Govern-

ment aspired to help President-elect Trump's election chances when possible by discrediting Secretary Clinton and publicly contrasting her unfavorably to him. All three agencies agree with this judgment. CIA and FBI have high confidence in this judgment; **NSA has moderate confidence.**

'Moderate' vs. 'Full' Confidence

The phrase, "moderate confidence" is intelligence speak for "we have no hard evidence." Thanks to the leaks by Edward Snowden, we know with certainty that the NSA had the capability to examine and analyze the DNC emails. NSA routinely "vacuumed up" email traffic transiting the U.S. using robust collection systems (whether or not anyone in the NSA chose to look for this data is another question). If those emails had been hijacked over the internet, then NSA also would have been able to track the electronic path they traveled over the internet. This kind of data would allow the NSA to declare without reservation or caveat that the Russians were guilty. The NSA could admit to such a fact in an unclassified assessment without compromising sources and methods. Instead, the NSA only claimed to have moderate confidence in the judgement regarding Russian meddling. If the NSA had hard intelligence to support the judgement the conclusion would have been stated as "full confidence."

We believe that Special Counsel Robert Mueller faces major embarrassment if he decides to pursue the indictment he filed—which accuses 12 Russian GRU military personnel and an entity identified as, Guccifer 2.0, for the DNC hack—because the available forensic evidence indicates the emails were copied onto a storage device.

According to a DOJ press release on the indictment of the Russians, Mueller declares that the emails were obtained via a “spear-phishing” attack:

In 2016, officials in Unit 26165 began spear-phishing volunteers and employees of the presidential campaign of Hillary Clinton, including the campaign’s chairman. Through that process, officials in this unit were able to steal the usernames and passwords for numerous individuals and use those credentials to steal email content and hack into other computers. **They also were able to hack** into the computer networks of the Democratic Congressional Campaign Committee (DCCC) and the Democratic National Committee (DNC) **through these spear-phishing techniques to steal emails and documents**, covertly monitor the computer activity of dozens of employees, and implant hundreds of files of malicious computer code to steal passwords and maintain access to these networks.

The officials in Unit 26165 coordinated with officials in Unit 74455 to plan the release of the stolen documents for the purpose of interfering with the 2016 presidential election. Defendants registered the domain DCLeaks.com and later staged the release of thousands of stolen emails and documents through that website. On the website, defendants claimed to be “American hacktivists” and used Facebook accounts with fictitious names and Twitter accounts to promote the website. After public accusations that the Russian government was behind the hacking of DNC and DCCC computers, defendants created the fictitious persona Guccifer 2.0. On the evening of June 15, 2016 between 4:19PM and 4:56PM, defendants used their Moscow-based server to search for a series of English words and phrases that later appeared in Guccifer 2.0’s first blog post falsely claiming to be a lone Romanian hacker responsible for the hacks in the hopes of undermining the allegations of Russian involvement.

FAT Files Aren’t Hacked Files

Notwithstanding the DOJ press release, an examination of the WikiLeaks DNC files does not support the claim that the emails were obtained via spear-phishing. Instead, the evidence clearly shows that the emails posted on the WikiLeaks site were copied onto an electronic media, such as a CD-ROM or thumb-drive before they were posted at WikiLeaks. The emails posted on WikiLeaks were saved using the File Allocation Table (FAT) computer file system architecture.

An examination of the WikiLeaks DNC files shows they were created May 23, 25, and 26, respectively. The fact that they appear in a FAT-system format indicates the data was transferred to a storage device, such as a thumb drive.

How do we know? The truth lies in the “last modified” time stamps on the WikiLeaks files. Every single one of these time stamps ends in an even number. If you are not familiar with the FAT-file system, you need to understand that when a date is stored under this system the data rounds the time to the nearest even numbered second.

We have examined 500 DNC email files stored on WikiLeaks and all 500 files end in an even number—2, 4, 6, 8 or 0. If a system other than FAT had been used, there would have been an equal probability of the time stamp ending with an odd number. But that is not the case with the data stored on the WikiLeaks site. All end with an even number.

The DNC emails are in 3 batches (times are GMT).

Date	Count	Min Time	Max Time	FAT	Min ID	Max ID
2016-05-23	10520	02:12:38	02:45:42	x	3800	14319
2016-05-25	11936	05:21:30	06:04:36	x	1	22456
2016-08-26	11357	14:11:36	20:06:04	x	22457	44053

The random probability that FAT was not used is 1 chance in 2 to the 500th power or approximately 1 chance in 10 to the 150th power—in other words, an infinitely high order.

This data alone does not prove that the emails were copied at the DNC headquarters. But it does show that the data/emails posted by WikiLeaks did go through a storage device, like a thumb-drive, before WikiLeaks posted the emails on the World Wide Web.

This fact alone is enough to raise reasonable doubts about Mueller’s indictment accusing twelve Russian soldiers as the culprits for the leak of the DNC emails to

WikiLeaks. A savvy defense attorney will argue, and rightly so, that someone copied the DNC files to a storage device (e.g., USB thumb-drive) and transferred that to WikiLeaks.

We also tested the hypothesis that WikiLeaks could have manipulated the files to produce the FAT result by comparing the DNC email files with the Podesta emails (aka Larter file) that was released September 21, 2016. The FAT file format is NOT present in the Podesta files. If WikiLeaks employed a standard protocol for handling data/emails received from unknown sources, we should expect the File structure of the DNC emails to match the file structure of the Podesta emails. The evidence shows otherwise.

There is further compelling technical evidence that undermines the claim that the DNC emails were downloaded over the internet as a result of a spear-phishing attack. Bill Binney, a former Technical Director of the National Security Agency, along with other former intelligence community experts, examined emails posted by Guccifer 2.0 and discovered that those emails could not have been downloaded over the internet as a result of a spear-phishing attack. It is a simple matter of mathematics and physics.

Shortly after WikiLeaks announced it had the DNC emails, Guccifer 2.0 emerged on the public stage, claiming that “he” hacked the DNC and that he had the DNC emails. Guccifer 2.0 began in late June 2016 to publish documents as proof that “he” had hacked from the DNC.

Taking Guccifer 2.0 at face value—i.e., that his documents were obtained via an internet attack—Bill Binney conducted a forensic examination of the meta-data contained in the posted documents based on internet connection speeds in the United States. This analysis showed that the highest transfer rate was 49.1 megabytes per second, which is much faster than possible from a remote online connection. The 49.1 megabytes speed coincides with the download rate for a thumb-drive.

Forensic Testing of Internet Transmission Rates

Binney, assisted by other colleagues with technical expertise, extended the examination and ran various forensic tests from the Netherlands, Albania, Belgrade and the UK. The fastest rate obtained—from a data center in New Jersey to a data center in the UK—was

12 megabytes per second, which is less than a fourth of the rate necessary to transfer the data, as it was listed from Guccifer 2.0.

The findings from the examination of the Guccifer 2.0 data and the WikiLeaks data do not prove who copied the information to a thumb-drive, but it does provide an empirical alternative explanation that undermines the Special Counsel’s claim that the DNC was hacked. According to the forensic evidence for the Guccifer 2.0 data, the DNC emails were not taken by an internet spear-phishing attack. The data breach was local. It was copied from the network.

There is other circumstantial evidence that buttresses the conclusion that the data breach was a local effort that copied data.

First, there is the Top-Secret information leaked by Edward Snowden. If the DNC emails had been hacked via spear-phishing (as alleged by Mueller) then the data would have been captured by the NSA by means of the Upstream program (Fairview, Stormbrew, Blarney, Oakstar) and the forensic evidence would not modify times—the data would be presented as sent.

Bizarre Timelines

Second, we have the public reporting on the DNC and CrowdStrike, which provide a bizarre timeline for the alleged Russian hacking.

It was April 29, 2016, when the DNC claims it became aware its servers had been penetrated. No claim yet about who was responsible.

According to CrowdStrike founder, Dimitri Alperovitch, his company first detected the Russians mucking around inside the DNC server May 6, 2016. A CrowdStrike intelligence analyst reportedly told Alperovitch that:

Falcon had identified not one but two Russian intruders: Cozy Bear, a group CrowdStrike’s experts believed was affiliated with the FSB, Russia’s answer to the CIA; and Fancy Bear, which they had linked to the GRU, Russian military intelligence.

And what did CrowdStrike do about this? Nothing. According to Michael Isikoff, CrowdStrike claimed their inactivity was a deliberate plan to avoid alerting the Russians that they had been “discovered.” This is

nonsense. If a security company detected a thief breaking into a house and stealing its contents, what sane company would counsel the client to do nothing in order to avoid alerting the thief?

We know from examining the WikiLeaks data that the last message copied from the DNC network is dated Wed., May 25, 2016 08:48:35. No DNC emails were taken and released to WikiLeaks after that date.

CrowdStrike waited until June 10, 2016 to take concrete steps to clean up the DNC network. Alperovitch told *Esquire* magazine's Vicky Ward that:

Ultimately, the teams decided it was necessary to replace the software on every computer at the DNC. Until the network was clean, secrecy was vital. On the afternoon of Friday, June 10, all DNC employees were instructed to leave their laptops in the office.

Why does a cyber security company wait 45 days after allegedly uncovering a massive Russian attack on the DNC server to take concrete steps to safeguard the integrity of the information held on the server? This makes no sense.

DNC Emails Were Downloaded & Copied

A more plausible explanation is that it was discovered that emails had been downloaded from the server and copied onto a device like a thumb-drive. But the culprit had not yet been identified. We know one thing for certain—CrowdStrike did not take steps to shut down and repair the DNC network until 18 days after the last email was copied from the server.

The final curiosity is that the DNC never provided the FBI access to its servers in order for qualified FBI technicians to conduct a thorough forensic examination. If this had been a genuine internet hack, it would be very easy for the NSA to identify when the information was taken and the route it moved after being hacked from the server. The NSA had the technical collection systems in place to enable analysts to know the date and time of the messages. But that has not been done.

Taken together, these disparate data points combine to paint a picture that exonerates alleged Russian hackers and implicates persons within our law enforcement and intelligence community taking part in a campaign of misinformation, deceit and incompetence. It is not a pretty picture.

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William Binney



EIRNS/Stuart Lewis

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by Barbara Boyd

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I. Urgency for a New Paradigm

ZEPP-LAROUCHE WEBCAST

Defeat the Murderous British Empire—Raise Mankind to a New Level of Creative Thinking

This is the edited transcript of the Schiller Institute's New Paradigm Webcast of Friday, March 1, 2019. A [video](#) of this webcast is available.

Harley Schlanger: Hello, I'm Harley Schlanger from the Schiller Institute. Welcome to our international strategic webcast today. It's March 1, 2019. We'll be joined by the founder of the Schiller Institute and our President, Helga Zepp-LaRouche.

These last days have been extraordinary in the depth of machinations, movements on all sides of the strategic picture, and in a sense, it looks like we see the clash of the two paradigms in very bold relief. I think the place to start is what happened in Hanoi, the summit meeting between President Trump and Chairman Kim Jong-un of North Korea. Helga, what's your reading of what happened there?

Helga Zepp-LaRouche: I think it was a step forward. I think that both the Trump assessment and also from the North Korean side was that the two sides have come closer to each other than they were before the summit. Obviously that means they did not get the possible expected breakthrough, but in a complex question like North Korea and South Korea, which involves all the other strategic factors—including U.S., China, Russia—it is not necessarily a disaster or completely unexpected

that you would not get a breakthrough of that dimension in one, or even two meetings.

I think the interesting thing to look at is that both sides—Trump and Kim Jong-un—expressed the wish to continue the negotiations. Look at the difference how absolutely hysterical the western media have been, saying, “Ah, you see, this was a complete failure of Trump. He obviously thought he could negotiate a busi-



White House/Shealah Craighead

President Trump and North Korea's Chairman Kim Jong-un at their second summit meeting, in Hanoi, Vietnam on February 27, 2019.

ness deal, and he just doesn't know how to do these things."

There was a thoroughly different reaction coming from Russia, from China, from South Korea, from Japan; all of whom expressed the absolute conviction that this is on the right track, that it must be continued. I think that that is absolutely the case. I think the really incredible circumstance which show you how nasty and totally vicious the old paradigm is trying to fight against the possibility that Trump would get an agreement about denuclearization of North Korea with Kim Jong-un, was the hearing which was scheduled for exactly the same day for former Trump lawyer Michael Cohen in the House.

Con Man for the British Empire

Then, if you look at how this was orchestrated, this utterly slimy character Michael Cohen used all kinds of words against Trump from con man to racist to even worse ones. That tone was uniformly pushed by the western mainstream media internationally to say the absurdity that Trump only did the North Korea meeting to divert attention from the much more important question of the hearing of Michael Cohen; when the exact opposite happened. They decided to use the Michael Cohen story to create a situation where you had the most unfavorable environment for such an important meeting to take place.

This incident alone should tell you what is really going on, because there was an unspoken—or maybe even spoken—rule in the past, that when a President or a head of state is conducting extremely important diplomatic negotiations abroad, that that would be respected unconditionally, and nothing would be done to interfere with that. This incident really shows how any code of conduct, any civilized behavior on the side of the opponents of Trump (or better, of the opponents of the New Paradigm) has been eliminated, and they wish to destroy the idea that you actually could have a world in which conflicts are overcome through negotiations. I think it shows you how viciously barbaric the tone has become, and I think it really should backfire on the people who orchestrated that hostile environment.

As for the North Korean situation as such, I don't think it's a disaster. I think there will be progress. Russian spokesman for Vladimir Putin, Dmitry Peskov, said that this diplomatic situation between the two



Former Trump lawyer Michael Cohen testifying before the House Oversight Committee on February 27, 2019.

countries is again proof that you cannot get progress in a step-by-step manner. This is true, because the world situation is so complex that you have to find solutions which address all of the problems, or you don't make progress anywhere.

Schlanger: Back for a moment to this juxtaposition between Trump conducting very high-level diplomacy, and the Democrats in Congress using Michael Cohen not just to distract from what Trump is doing, but to run him out of office. Trump made the point in the press conference afterwards, and also in his discussions leading up to it that he's working with Russia, he's working with China, with Japan and South Korea.

The Nature of the Coup

Afterwards, he spoke to the leaders from those countries, so it's clear there's an ongoing cooperation on the highest levels among the most important nations in the world. That's not just disregarded by the opponents of Trump, the "Never Trumpers," that's what they're trying to stop. I think that really, as you say, that intention was in bold relief from the way this thing played out over the last couple of days.

Zepp-LaRouche: I'm sorry; I didn't understand your point.

Schlanger: Well, my point is that it demonstrates the nature of the coup. It's not about anything that Trump did related to Russia; it's about what Trump is trying to do in terms of shifting the strategic paradigm.

Zepp-LaRouche: Yes, that is the whole nature of

Russia-gate. In the election campaign of 2016, the moment Trump indicated that he was in favor of improving the relationship with Russia, and then what he did in the initial phase of his administration with Xi Jinping, to improve the relationship with China, this indeed is the exact nightmare of the geopolitical faction on both sides of the Atlantic. Because once you have an alliance of U.S.-Russia-China, possibly India and other nations, working together, the whole British game of manipulation goes out the window. I think under the circumstances, Trump is doing an incredible job if you consider the forces he's up against.

Schlanger: You mentioned the British in this. We see a couple of other operations under way, one of which is the fighting that broke out between India and Pakistan, which is extremely dangerous. And also, the regime-change coup which seems to be under way with Venezuela. What do you think is happening with India and Pakistan; and how can that be resolved?

Zepp-LaRouche: Obviously, the trigger was the terrorist attack by this terrorist group in Pakistan [Jaish-e-Muhammed] attacking Kashmir. Forty Indians were killed, and two Indian fighter jets were shot down. If you have two nuclear powers that historically have a rather adversarial relationship ever since the division of India following independence, this is extremely dangerous. There have been in the past many worries and scenarios that you could have regional nuclear wars exactly between such powers as Pakistan and India.

In the meantime, Pakistan's Prime Minister Imran Khan and the Modi government in India expressed that they are fully aware of the fact that if there would be a nuclear war between the two countries, it would be annihilation of both, and possibly a terrible catastrophe for the whole world. So, I think there are moves being made to cool the situation down, but on the other side, the situation remains extremely hot.

There are still military exchanges going on, so I think it is very important that there again, as we have seen it in the case of North Korea, you had Putin, who telephoned Modi; you had the Chinese government and also Trump all offering their mediation and offering to help to cool the situation down. These two instances—North Korea and now the India-Pakistan situation—



White House/D. Myles Cullen
Vice-President Mike Pence speaking with reporters while meeting with Venezuelan migrants in Bogota, Colombia on February 25, 2019.

demonstrate that the world definitely needs the cooperation of the four major powers (at least), the United States, Russia, China, and India.

Four Powers Against Empire

That is one of the reasons why my late husband, Lyndon LaRouche, many years ago had called for a four-power agreement to address all major problems of the world situation, including the need for a new financial and credit system, a New Bretton Woods system. I think these tensions really show you that the world is urgently crying out for a solution.

For example, the case of Venezuela: here you have the full-fledged, neo-con, regime-change policy in place. The only good thing is that in the meantime, all the Latin American countries have come out speaking against a military intervention. Unfortunately, this is a flash point into which President Trump has been pulled, unlike in Syria, Afghanistan, and North Korea. So therefore, the situation there remains extremely dangerous.

Schlanger: Helga, this brings up one of the other questions that needs to be resolved, which is the tension that has emerged over the U.S. threat to withdraw from the INF [Intermediate-Range Nuclear Forces] Treaty. This is in the background, and it brings up again lowering the threshold for nuclear war. What's your thought about where this is headed?

Zepp-LaRouche: I think it is definitely a very dangerous development, because it may be that President Trump wants to accomplish some other treaty replacing the INF Treaty. But this is a very tricky question. I think there is not so much an imminent danger that you would have medium-range U.S. nuclear weapons immediately deployed in Europe, because as far as I know there are no such weapons systems in the pipeline which could be established immediately. If they were to be positioned there, it would bring us back right to the situation of the beginning of the 1980s where you had only a few minutes' warning, and therefore all the forces of the Warsaw Pact and NATO were on "launch on warning."

The more immediate danger is that it opens a Pandora's box; once you break down all disarmament or arms-control treaties, like the ABM [Anti-Ballistic Missile] Treaty which was cancelled many years ago, it brings down any kind of treaty arrangements, and it could lead to unpredictable developments.

This brings me to the point I have made many times. Some people say the motivation behind that is the effort to get the Chinese into an INF agreement, but some experts have recently written that it's not very likely that the Chinese could agree or would agree; because if you just have an INF approach, it would mean that the Chinese would have to give up more than two-thirds of their entire missile arsenal, which they obviously will not do under these circumstances.

I have emphasized this point many times. If you look at the totality of all of these problems—Venezuela, North Korea, India-Pakistan, the whole situation of Southwest Asia which remains extremely fragile, and the situation with Ukraine: all of these things have the potential of leading to a large, if not the final, catastrophe of a Third World War. Given the fact that the old paradigm is collapsing, it's disintegrating, there are people and forces representing this old paradigm that are pushing confrontation.

I think it is extremely urgent to recognize that either humanity moves to a completely new type of thinking, a New Paradigm where you establish of new international relations, which considers the security interests, the economic interests, the political interests of all nations, or the world could face World War III.

A More Elevated Solution

The only way you can do that is to establish a higher order of a system, a New Paradigm which overcomes geopolitics and puts humanity as one *first*, and then all

national and regional interests, second. That is what Xi Jinping has been proposing with his New Silk Road, the Belt and Road Initiative, and the idea that we have to build a community of shared interests for the future of mankind.

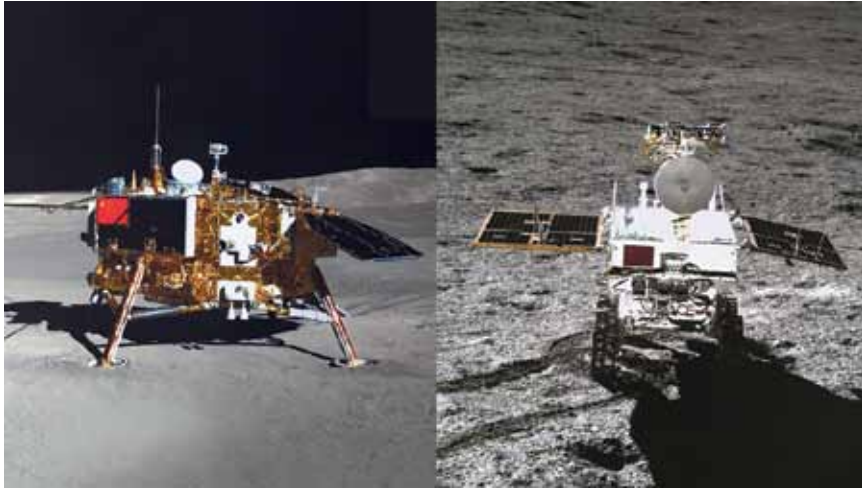
You can see right now that it is that idea which is being fought against by many of the neo-cons in the United States, for example Marco Rubio. Mitt Romney just came out attacking the Confucius Institutes as if these schools, where Chinese language and culture is being taught, would represent the biggest threat to the national security interests of the United States.

I think it is really very important that we develop a different kind of thinking to approach all of these problems, such as the ideas of Nicolaus of Cusa, who thought these things in the 15th century, that in order to solve problems you need the coincidence of opposites—the *coincidentia oppositorum*—as an approach to solve problems. You find the higher level of reason where the problems which, on a lower, Aristotelian level of contradiction are looking insolvable, can be solved.

That is what Einstein also expressed in a different way. He said you will never find a solution with the same method which caused the problem to arise. That means you cannot just geopolitically try to put this puzzle-piece here and that puzzle-piece there; but you have to define the common interests of humanity.

The best way to do it is to look towards where mankind should be 100 years from now, and hopefully will be. We will have commercially-used thermonuclear fusion power, which will give us energy and raw materials security. We will hopefully have established villages on the Moon. We will have plans for interstellar space travel as an international effort. We will join our efforts on the common aims of mankind, such as asteroid defense; we don't want planet Earth to be attacked or hit by an asteroid or some other body which could cause a big destruction as happened 65 million years ago. So, we would have to put our minds together to develop better laws of the physical universe. We are living in a galaxy which is only one of 2 trillion galaxies, about which we know really very little.

We have only made infant steps in knowing the nature of our physical universe. We have to find out what is the real process of life. We had this wonderful recent breakthrough by the Chinese when they landed the lander and the rover on the far side of the Moon; and then a few days later, they were able to have a little cotton plant sprout and even develop buds! There were



CNSA

China's Chang'e-4 Lander and Yutu-2 Rover on the far side of the Moon.

human beings on the Moon before, so life was on the Moon before. But it was for the first time that other than human life developed on an extraterrestrial body; which is obviously extremely important for the future of colonization of space, and the ability to have long-term space travel and grow food in space.

Beyond Infant Steps

It just shows you that we are on the verge of completely new breakthroughs in terms of the definition of the human species—what we can do together, once we stop squabbling like little boys kicking each other on the knee. And, that we will develop our creative powers together as the creative species in the universe. There may be other creative species, but we haven't found them yet.

So, I think we should really mentally—and I'm appealing also to you, our audience—it's a mental exercise to not think solely in terms of sensuous experience; or just project your experience from the past into the future. Do it the other way around; have a beautiful vision of where you want mankind to be, and then try to apply that approach to the problem-solving in the world today. Then you will realize that that is the only way you can find creative solutions.

Schlanger: That I think defines what the task is for our listeners. We just had a Schiller Institute conference where among the topics that came up was this question of what a threat to national security is, identifying the Russia-gate scandal, the Mueller investigation as one of the threats. Presenting new evidence at that conference

was Bill Binney, the former NSA [National Security Agency] Technical Director. He has a new article out with Larry Johnson in which they rip apart the argument that there was Russian hacking in the 2016 election. I don't know if you want to say something about that Helga, but the videotape from that conference is available on the Schiller Institute website. Did you have any thoughts on the Binney-Johnson new article?

Zepp-LaRouche: Yes! I would really urge you, our viewers, readers and listeners, to study this article and spread it around as far as possible in-

ternationally. What Bill Binney and Larry Johnson present in this article, and Bill Binney at the conference of the Schiller Institute in Morristown, New Jersey is really incredible. It is the categorically undebatable forensic proof that there was no Russian hacking; that instead the emails from the DNC server were downloaded, because all the technical data—the speed at which these things were copied—makes it impossible that it was via the Internet, but it was some kind of storage device; probably a thumb drive.

When they presented these accusations some years ago, the analysis used by the NSA, demonstrated that they had considerable confidence that it was like that. This is in the talk of the intelligence community; if they would have definite evidence, they would have said they had “full confidence,” and they would also have NSA files. If the NSA had files of these things, they could trace the origin of such a hacking. And the fact that after more than two years they have not presented any such evidence, upholds the fact that there was no Russian hacking and that they made the whole story up, that the whole Russia-gate was an invention.

Also very interesting is the fact that more than a year ago, Bill Binney met with [Secretary of State] Mike Pompeo, and gave him the entire findings that the VIPS [Veteran Intelligence Professionals for Sanity] had produced. Binney never got any feedback; there was never any answer from Pompeo. I think this is really incredible, because the whole Russia-gate story, the whole Robert Mueller investigation completely disintegrates if you look at this Binney evidence.

Therefore, the U.S. Congress must immediately in-

investigate that, but also other parliaments around the world; given the fact that the Russia-gate and everything which hangs on that is not just a U.S.-Russian affair, but it is a strategic matter of the highest importance; other parliaments should definitely investigate that. Investigative journalists should look at this material and start to comment on it. Interview Bill Binney; I think he needs a flood of interview requests from all over the world to get this story out of the control of the mainstream media, which are obviously sitting on the whole story.

The Mueller Report

I think such an action is extremely important to occur now, because it is expected Robert Mueller will issue his report by next week. Who knows what will be in it? I think the best way to get the truth on the table is to interview Bill Binney, to get investigations going, and really blow this story apart. Because it will turn out to be the biggest scandal in U.S. history; but if it's not uncovered, discovered early enough, it could really lead to a very terrible strategic catastrophe. So, it is urgent to act. And I'm appealing to you to do so.

Schlanger: The presentation by Bill Binney at the Schiller Institute conference was in the first panel of the conference which took place February 16.

Helga, we're sort of short on time, but I think we can put two things together here. The insanity of the Green New Deal as it's coming out in the United States, with the new reports from Germany about the incredible cost of the so-called "decarbonization." In a sense, what we're seeing is an open admission by some people—including [Rep. Alexandria] Ocasio-Cortez—that in order to protect the environment, humans have to disappear. She actually really said that. If you can just comment on this; the Schiller Institute is involved now in a major mobilization to address this Green New Deal from a higher scientific standpoint as you were just talking about. So, what are your thoughts on this?

Zepp-LaRouche: This so-called Green New Deal is really only the latest re-brewing of an old, brown source which we have seen the in the eugenics movement, which was renamed in the post-war period to be the conservation movement because Hitler had given eugenics a bad name. It later developed in the form of



CC/GreenNewDeal_Presser_
Rep. Alexandria Ocasio-Cortez promoting her Green New Deal program in front of the Capitol Building in Washington, D.C. on February 7, 2019.

the ecology movement after the Club of Rome invented this fraud of so-called limited resources on the planet. All of this has been scientifically completely refuted, because the whole thesis that we have limits to growth, or we need limits to growth because the resources of the planet are finite, is a complete fraud.

[In 1983] my husband wrote a beautiful [book](#) about this called *There Are No Limits to Growth*, which people should read. It basically makes the obvious point that "What is a resource?" is completely determined by the level of science and technology with which you define what you are looking at. Obviously, the human creative mind and creative power have the ability to again and again develop new insights into the physical universe and therefore completely redefine what a resource is.

The Empire's Green New Deal

If Ocasio-Cortez is now coming out with this thing, it is an almost unveiled effort to prop up the hedge funds and similar investors on Wall Street and the City of London (most of the hedge funds are sitting in the City of London anyway) and create a new investment boom into matters which are, by the nature of their character, leading to depopulation.

If you go entirely to low energy-flux densities in the production process, what the Greenies call the so-called "carrying capacity" of the planet goes down. The CBE—Commander of the British Empire, as he likes to be called—[Hans Joachim] Schellnhuber, the former

head of the Potsdam Institute for Climate Impact Research; wrote this incredible paper for the transformation of the world economy some years ago, calling for the decarbonization of the economy: no nuclear, no gas, no oil, just so-called renewables. (Even nuclear would be a perfectly fine renewable.)

He said the carrying capacity of the Earth is only 1 billion people; and Ocasio-Cortez even went so far as to say that people should have fewer children, because the children are causing problems for the environment. So, the thoroughly barbaric nature of depopulation is out in the open. I think that people have to wake up to the fact that this so-called Green policy is really a brown-shirt policy. It's just the same old wine in new bottles, and we have seen this exact program more than 70 years ago with terrible consequences. It's just a new form of the same thing.

Now if Germany, which is unfortunately completely Green, continues on this and goes for the decarbonization of the economy after there was this mindless exit from nuclear energy, Germany soon will have no nuclear energy. No coal, because they now want to go out of coal by 2050. Germany will cease to be an industrial nation, and it will have terrible social consequences. The living standard will collapse, the aging population will not be able to be maintained; it will be a terrible thing. There is a research institute of combustion engines, and they just made a study that said that the minimum cost of halting the use of coal for Germany would be anywhere from \$800 billion to \$900 billion by 2050.

If you go for a maximum scenario, it would be more or less 1.5 trillion euro, obviously with a shrinking productivity of the economy. This is the death knell of the German economy, and categorically must be reversed. I think the Green New Deal is really something which unconditionally has to be recognized for what it is—genocide. If you look at this complete charade where this Greta Thunberg—a 16-year-old girl from Sweden—is being carried around from Davos to now Hamburg, trying to whip up the international children's movement that school children shouldn't go to school on Friday—a "strike"—to help stop global warming.

Since Ocasio-Cortez has said that we need to solve



UN/Simon Ruf

Hans Joachim Schellnhuber

the problem in 12 years, there's now a little girl of 5 years who said, "If this problem is not solved, I will commit suicide when I'm 13 because the world will be gone in any case." This is really evil stuff! If you look at who is financing it, the mother of Greta Thunberg got an award from the World Wildlife Fund many years ago; the whole thing is financed by Soros and other foundations. It is absolutely a new effort to brainwash young impressionable children and turn them into little anti-science monsters.

The Lawfulness of the Universe

I think we have to have a drive to really discuss what the laws of the universe are—the character of the universe is not of a closed system; very much to the contrary. The best

antidote to this pessimism is space travel and the discovery of new resources on asteroids, on the Moon. Look at what the Chinese just did. They plan to bring Helium-3 from the far side of the Moon for a future thermonuclear fusion economy on Earth. That's the way to go. But I think this Green New Deal is the last effort by a dying empire to impose its anti-population policies. People should recognize it for what it is—a brown-shirt policy.

Schlanger: The best place to go to get the material you need, the ammunition you need to combat it and to mobilize your friends, family members, and so on, would be the Schiller Institute website [<https://schiller-institute.com/>]. Become a member; see the videos from the conference that just took place in Morristown, New Jersey, that Helga mentioned. A science panel, a music panel, and the keynote panel where we discuss this question of the Four-Power Agreement.

So, Helga, I think we've covered most of what we need to cover. Is there anything else you want to bring up?

Zepp-LaRouche: Just become politically active, because this is a breaking point in human history, and we will either end up in World War III, or we will create a new epoch. So, become active with the Schiller Institute!

Schlanger: We'll see you next week.

II. Humanity's New Frontiers

Schiller Institute Conference

February 16, 2019 · Morristown, NJ

Let Us Create a New, More Human Epoch for Mankind

9:00 am – 1:00 pm

PANEL I: Let Us Create a New, More Human Epoch for Mankind

Dennis Speed, *“Lyndon LaRouche Speaks:
A Talent Well Spent”*

Jacques Cheminade, President of Solidarité & Progrès

Keynote, *“The Coming World of Lyndon
LaRouche”*

John Gong, Professor of Economics at the University
of International Business and Economics, Beijing
*“Chinese Investment and American Infrastructure
under the New Sino-U.S. Relations”*

H.E. Ambassador Vassily A. Nebenzia, Ambassador
and Permanent Representative of The Russian
Federation to the United Nations, presented by

Counsellor Theodore Strzhizhovskiy, Mission of the
Russian Federation to the UN

*“Prospects for East-West Collaboration: The
Russian Federation’s View”*

William Binney, Former Technical Director, National
Security Agency (NSA), U.S.A.

“Artificial Intelligence is not Artificial”

Jason Ross, Co-author of the Schiller Institute’s
“Extending the New Silk Road to West Asia and Africa”

“The Urgent Need for a New Paradigm in Africa”

Dennis Small, Executive Intelligence Review Ibero-
America Editor

*“Justice for the World: Why Donald Trump Must
Exonerate Lyndon LaRouche Now”*

Q&A Session



EIRNS/Stuart Lewis



EIRNS/Stuart Lewis

2:30 – 5:30 pm

Panel II: The Aesthetic Education of Man for the Beauty of the Mind and the Soul

Moderator: Dennis Speed

Schiller Institute combined chorus:

Benjamin Lyloff, arr: "Mo Li Hua" ("Jasmine Flower")

Benjamin Lyloff, director

H.T. Burleigh, arr: "Deep River" and

William L. Dawson, arr: "Ev'ry Time I Feel the Spirit"
Diane Sare, director

Megan Beets, LaRouche PAC Scientific Research Team

"Artistic and Moral Beauty"

Bruce Director, Secretary-Treasurer, U.S. Schiller Institute

"On LaRouche's Concept of the Significance of Art for Science and Science for Art"

Diane Sare, Managing Director of the Schiller Institute NYC Chorus

"The Choral Principle"

Johannes Brahms: "Dem dunkeln Schoß der Heil'gen Erde"

(text from Schiller's "Song of the Bell")

Schiller Institute Chorus
John Sigerson, director

Johann Sebastian Bach: *Brandenburg Concerto No. 5 in D Major, BWV 1050*

I. Allegro

Schiller Institute Orchestra
John Sigerson, director

Soloists: Gregor Kitzis, violin
Laura Thompson, flute
My-Hoa Steger, piano

Ludwig van Beethoven: *Choral Fantasia, Op. 80*

Schiller Institute Orchestra, Chorus, and Soloists
John Sigerson, director
My-Hoa Steger, piano

Q&A Session

7:00 – 10:00 pm

Panel III: The Frontiers of Science

Moderator: Jason Ross

Musical offering

Yuting Zhou, piano

Johannes Brahms: Rhapsody, Op. 79, No. 1 in B minor

Kesha Rogers, LaRouche PAC Policy Committee, former candidate for U.S. Congress

"The Frontier of Space: Fulfilling Mankind's Destiny as Man in the Universe"

Thomas Wismuller, Founding member of NASA retirees' The Right Climate Stuff

"What NASA Has Done and Where NASA Is Going"

Larry Bell, Founder, Sasakawa International Center for Space Architecture, College of Engineering, University of Houston, *"What Makes People Exceptional"*

Benjamin Deniston, LaRouche PAC Scientific Research Team

"LaRouche's Strategic Defense of Earth"

Q&A Session

PANEL II **The Aesthetic Education of Man for the Beauty of the Mind and the Soul**

MEGAN BEETS

Artistic and Moral Beauty

This is the prepared text of Megan Beets' address to the Schiller Institute conference in Morristown, N.J. on Feb. 16, 2019. She is a member of the LaRouche PAC Scientific Research Team.

Friedrich Schiller said in 1795, "It can be said that every individual carries a pure ideal man in himself . . . and it is the great task of his existence, during all his changes, to harmonize with this unchanging unity." Every human being, is fundamentally distinguished from, and set above all animals, all lower forms of life, in that every human child is born with the capacity for creative genius, to discover fundamentally new and *true* principles of the universe, or, as Einstein put it—to "know God's thoughts."

Therefore, genius is the most natural state of the human being, the fundamental characteristic of our species. But if that's the case, why are we in the situation we're in today—in which the beliefs of the majority of our fellow citizens, and the system that they have gone-along-to-get-along with for fifty years—even while they disagreed with it—have led them down the path of their own destruction, and have brought civilization to the brink of the abyss? Why has our own thinking failed us for so long? Is it the case that people just didn't know what's going on? That they didn't have the right information? People today are *drowning* in information! We are inundated with facts, with news stories, with documentaries, and most importantly, what we know from our own experiences—what's been done to us and to our children for all these years.



EIRNS/Stuart Lewis

Megan Beets

In response to the bloody failure of the French Revolution, the loss of the momentous opportunity to bring the American Revolution to the continent of Europe and bring an end to the system of oligarchy, Friedrich Schiller said that while the objective circumstances were there, the moral possibility was wanting—a great moment had found a little people. What is lacking today is not information, or the objective circumstances for change, but the *emo-*

tional capacity to respond and realize the great chance which stands before us.

This means that we must awaken within our fellow citizens, an inner force to change, to pull humanity back from the abyss. We must make our fellow citizens *better people*, and change today's society from a degenerate one which has tolerated and perpetuated such injustices for so long—into one which is moral, just, and good. As I say that, you may be picturing your next-door neighbor, your family members, co-workers, your in-laws, the deluded mobs of the "resist" movement, and you may be thinking, "Political victory depends on making *them* moral, just, and good?! My God, we don't have a chance!"

Popular Culture Is Menticide

Think for a moment about the mental life of the average citizen—and don't exclude yourself from that. With what does the average person occupy his or her leisure time? What occupies the thoughts, the idle moments of most people? How many thousands of hours of precious life are spent in a zombified state, *mindlessly* scrolling

through a social media feed or clicking from link to link on the internet? Why do people think this has no effect on their outlook on the world?!

Look at the popular music, the popular entertainment. I'll spare you my poetic recitation of the so-called lyrics of popular music. You've all heard them, you've all seen what passes for movies and dramas. What do all of these things share, as a common characteristic? Banality. Bestiality. And most of all, violence. Look at the video games, which even the youngest of children are playing! Violence! Our children, when they're not in school or otherwise occupied, are rehearsing murder on a daily basis. Does this, perhaps, have something to do with why Americans have thus far failed to reverse course? And therefore, there is no practical way out of this crisis. No logical extension of the beliefs and behavior of society today will lead to the necessary change for humanity, to bring mankind into a new paradigm, a future which is fundamentally different than the past fifty years.

The Function of Classical Art

How do we resolve this paradox? The future depends on a change in society which that society doesn't seem to have the resources to make! Where can it come from? It certainly won't come from the Congress, or the other leaders on our political stage, at least not here in the West. Think again of that inner, mental life, and invert our previous discussion of it. What if the leisure time of the average citizen were occupied with a kind of entertainment in which they rehearse not violence, not murder, not banality, but the act of *creative discovery*? What if, in their leisure time, they trained their imaginations in the mode of creative thought?

This is the function of Classical art.

Friedrich Schiller, "On the Use of the Chorus in Tragedy":

Art has for its object not merely to afford a transient pleasure, to excite to a momentary dream of liberty; its aim is to make us absolutely free; and this it accomplishes by awakening, exercising, and perfecting in us a power to remove to an objective distance the sensible world; to transform



Friedrich Schiller

it into the free working of our spirit, and thus acquire a dominion over the material by means of ideas. For the very reason also that true art requires somewhat of the objective and real, it is not satisfied with a show of truth. It rears its ideal edifice on truth itself—on the solid and deep foundations of nature.

How different that is from the conception of art today, where art is whatever you feel at the moment. Whatever expression of your inner pain, or inner ugliness, or inner ennui oozed out of you today, to be forgotten tomorrow. For Schiller—and it's not just his opinion, it's actually true!—art is not art unless it is beautiful, and it ennobles the mind and soul of the audience toward the divine, toward the ideal in humanity. In his *Letters on the Aesthetical Education of Man*, Schiller wrote,

Art, like science, is free from everything that is practical and is established by human convention, and both rejoice in an absolute immunity from human lawlessness. The political legislator can enclose their territory, but he cannot govern within it. He can outlaw the friend of truth, but the truth exists; he can humiliate the artist, but he cannot degrade art. For entire centuries philosophers and artists have been occupied in plunging truth and beauty into the depths of vulgar humanity; the philosophers and artists are submerged there, but truth and beauty struggle triumphantly to the surface with their own indestructible vitality.

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Educating Your Emotions

In the same work, Schiller takes up an extensive discussion of the process of educating the emotions. Just as you might study to improve your reason and your knowledge, the emotions can be trained and ennobled, such that the desires and impulses of a person can, over time, come to coincide with what is right and good. This kind of person Schiller called the "Beautiful Soul." This power of true art puts a great responsibility on the artist. The artist, before he or she dares do something so important as to touch the soul of the audience, must be sure of the

effect, yet must elicit this effect as a free action, a free response of the imagination of the audience—or else the audience isn't truly free. Schiller says,

As difficult as it may be to determine the imagination's interplay without thereby impinging on its freedom, that first task is no less taxing than this second one: namely, to wield this imaginative play so as to determine the subjective individual's emotional state.

How can we be certain of the subjective, emotional effect we will elicit through a work of art? The only way to do this is by addressing what Schiller calls the "species character," or that which is universally human, in each person—the ideal person. And only if the artist has elevated him- or herself to the ideal, to the level of the universal—at least in the moment of performance—will he be able to accomplish this.

Schiller commented on the individual's species character in discussing Friedrich Matthisson's poems:

In order to be certain that he is indeed addressing the pure species within the individual, he himself must have already extinguished the individual within himself, and must have elevated himself to species-being. Only when he no longer experiences emotion as belonging to this or that specific person (in whom the notion of species would always remain limited), but rather as belonging to man as a universal, can he then be certain that the emotions of the entire human species will follow his own; indeed, he is just as entitled to strive for this effect, as he is to demand pure humanity from each human individual.

The other person I want to bring in on this dialogue is Lyndon LaRouche, for whom Classical art, and Classical music in particular, was a center of his mental life, and formed to a large degree the structure of his thought. It played a crucial role in his discovery in economics, and he, in turn, contributed a great deal to enrich our understanding and love of great music. I want to encourage everyone to study his writings on music and the poetic principle.

Real Music Is Not Romantic

At the founding conference of the Schiller Institute in 1984, LaRouche discussed the difference in quality



EIRNS/Stuart Lewis

Lyndon LaRouche and Helga Zepp-LaRouche at the founding conference of the Schiller Institute in Arlington, Virginia on July 3-4, 1984.

between real music, human music, and romanticism, which is the fundamental characteristic of popular music today:

The creative element in music, the difference between a blank and a real musician is that in real music the passion, the beauty, the excitement, is not located in chromatic sensual effects—that is romanticism. It is not located in the "freedom" of the "interpreter"—another word for liar—certain gratifying effects, idiosyncrasies for which he is famous. The performer is properly enslaved to the music, not in any rigorous programmed sense, but in the sense that in great contrapuntal music, there is a progress of development, rigorous development. . . .

The excitement of music is the same excitement that you feel in a profound scientific discovery, or the excitement that a child experiences in solving a problem and re-experiencing discoveries made before: The passion of music is the experience of that light turning on in your head at the point you have made a discovery. It is an emotion which is precisely congruent with love, in the most profound sense of love. To love someone is to love them in precisely these terms of passion—the passion of discovery, the passion to create, to elevate by creativity, to communicate something which will become immortally useful.

The Power of Beauty

A population which is surrounded by beauty—by beautiful art, beautiful architecture, beautiful music—which taps into the imagination, the capacity for creative play which is inherent in every person; such a population won't be emotionally incapable of responding to the great tasks of his or her time, but will be able to take in the problems of humanity as their own.

Does that mean that nobody on Earth will have degenerate impulses, or will act like a jerk anymore, and that everybody will be a perfect angel all the time? Of course not! But what it *does* mean, is that the predominant characteristic in the majority of the population will be one which enjoys creativity, one which prefers that higher characteristics of mankind dominate their character. It means that the majority of humanity will exhibit and delight in a sense of goodness—in the sweetness of

truth, as Helga has said many times. And this is possible!

I would remind you that we are living in one of the most extraordinary periods in all of human history. This is a time such as Percy Shelley described when he said that at times of great social upheaval there is an “accumulation of the power of communicating and receiving intense and impassioned conceptions respecting man and nature.” For the first time in human history, we have the potential for a Renaissance to exist throughout all parts of humanity simultaneously—not merely within one culture, or one region of the planet; but for all of mankind, across the entire Earth. We are living at a moment when mankind is finally in the process of eliminating poverty for good. These are the kinds of moments when great changes which you didn't think were possible before, become reality. This is possible. And because it is possible, you should join us and fight to make it happen.

BRUCE DIRECTOR

LaRouche's Concept of the Significance of Art for Science, and Science for Art

This is an edited transcript of Bruce Director's address to the Schiller Institute conference in Morristown, N.J., on Feb. 16, 2019. Mr. Director is a long-time associate of Lyndon LaRouche and is currently Secretary-Treasurer of the U.S. Schiller Institute.

It is fitting to give a presentation about science on a panel dedicated to art, because the source of both, and the subject to which they are ultimately directed, is the same: the creative powers of the human mind. Human progress has been, is, and always will be dependent on the irreversible increase in the power of human creativity, and thus there must be art in science and science in art, if Mankind is going to survive and progress. When these two, science and art, become separated, mankind faces the kinds of difficulties that we face today. When they are united, you have the unlimited potential for development.

No one can guide us better in this respect than Lyndon LaRouche. He delved more deeply into the



EIRNS/Stuart Lewis

Bruce Director

nature of creativity—he called it, “creativity per se”—than anyone ever did before. He proved and elaborated how human creativity is the ultimate sum and substance of society, as reflected in physical economic progress and man's increasing mastery over nature. Mankind is demonstrably capable of creating new forms of physical existence and social organization that reflect the result in an increased power of human creativity. This power reflects the funda-

mental ontological characteristic of the universe as a whole, which is manifest in all its domains—life, non-life, and cognitive processes.

LaRouche showed us, this is expressed in the development of his concept of physical economy—or, human economy, as distinct from the financial, behaviorist, mechanistic concepts of economy; but rather real human economy, which is the only real economy—and he rightly called this the “king of all sciences.” Here, for LaRouche, human creativity is the source of eco-

conomic progress, and it's measured in the increase of potential relative population density, and also the output of all economic process. He once drew a very beautiful chart of the machine-tool principle, in which the input was the power of creativity, and the output was a higher power of creativity, and that sums up *real* economics. He developed this subject in such detail, it would be impossible to even attempt to give you an in-depth picture in such a short presentation.

Creativity Per Se

But I want to focus on one concept which will be relevant to the subject of this panel, and that is this question of potential. It's not the population density, or the relative population density that LaRouche focussed on as an economics parameter, but the *potential* relative population density—not what is, but what can be. As LaRouche showed, the increase in potential relative population density occurs through an increase in the power of human creativity, which is in turn reflected in an increased power of human creativity and a greater population density.

I am using the terms “power” and “potential” interchangeably, because they both are derived from the Greek word *dynamis*, which Plato discusses in his *Meno* dialogue and other places, as what is the central focus of human intellectual investigation. That is, it's an immaterial power, which actually produces and creates and is, the significant subject of all investigation of physical effects. The great physicist Max Planck told us that after studying matter for his entire life, he came to the realization that matter doesn't exist. That what exists is the power to create matter, and that this is what science must turn its efforts toward investigating.

We interact with this power, this creative power, by experiencing its effects, and we can measure those effects, and investigate this power. But we can also investigate it directly through experiencing creativity ourselves. And that brings us to the subject of art. Nicholas of Cusa called the investigation of this power, the “Summit of Vision.”

Another aspect of this power, which brings science and art together, was touched on by Megan Beets in great detail, and even by Mr. Binney in the earlier panel. That is the question of emotion. You cannot separate science from emotion. Show me an unemotional scientist, and I will show you a dead soul. Tell a scientist that Newton is a fraud, you will get a lot of emotional reaction. [laughter]

A dispassionate, logical scientist may be a comput-

ing machine, but is not a scientist. Hence the foolishness of so-called “artificial intelligence,” which as Mr. William Binney showed us, is neither artificial nor intelligent.

This characteristic of creativity, which we experience in human creativity, and know its demonstrable effects through the increase in potential relative population density as expressed in real economics, is not simply a human characteristic. It is an ontological characteristic of the universe itself. And this is where we get to the nub of what the frontier of science has to be and what is absolutely the most important subject for scientific investigation. And why we have to have a massive investment in development in space technologies, fusion power, and all the kinds of scientific and technological investigations that LaRouche has advocated.

In other words, to put it in a way which might cause an emotional reaction from some scientists, the Second Law of Thermodynamics is not a universal law. The entropy of the universe is not increasing. It's not tending towards heat death. In fact, the characteristics of the universe are exactly the opposite. If one looks at *anywhere* in the universe, whether it's physical processes, living processes—we heard a statement from Lyn earlier talking about evolution—it's always tending towards higher states of organization in existence, higher development, higher principles, higher organization of physical processes, of solar systems, of galaxies, of planets, of new forms of material. And of course, in the hands of man, this even accelerates further.

As LaRouche wrote in a 1986 [memo](#), Lyn described it this way:

The physicist urgently requires that the methods proper to the physical sciences be experienced as the essential feature of some aspect of classical art. Once the student of physics, for example, has discovered that the principles of Beethoven's method of composition are in correspondence with nothing less than the principles of a Riemann Surface, the student must sense the richness and universality of those principles. This sort of experience is indispensable to making professional work in physical science sensed as an occupation of the whole person. It is indispensable to true rigor in the physical sciences, to the effect that all that is relevant to the existence of mankind, and of mankind's development must be brought to bear on the practice of the physical sciences.



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John Sigerson conducting Beethoven's Choral Fantasy.

The Unity of Art and Science

So if we see art and science both as the servants of creativity, then we can begin to arrive at a true standard for both. Art serves to explore and express human creativity, itself, while science seeks the same as reflected in the physical universe as a whole. Philosophy, as Lyn practiced it, deals with both.

All art requires the creation of a means of expression suitable to expressing creativity, whether it is the principles of *bel canto*-based well-tempered polyphony, the creation of new forms of language through poetry, or principles of perspective, design, light and so forth in the plastic arts. The mere fact that man can bend such non-human features of the physical universe to express creativity, itself, in my view is a demonstration of LaRouche's principle that creativity is the everywhere pervasive characteristic of the universe.

This is, of course, a very deep subject, and would require a tremendous amount of effort to demonstrate in rigorous detail, but I don't have to do that today, because in a few minutes you will see it demonstrated. You will be hearing a wonderful composition by Beethoven, the *Choral Fantasy* for piano; orchestra of strings, winds, and percussion; vocal soloist and chorus—the entire panoply of the musical domain. Each of these elements in the musical domain is constrained by their own physical characteristics, and in the case of the singers, biophysical characteristics. LaRouche spoke about this in great detail, and commissioned the production of several music manuals, and wrote about this in detail, some of which you can read in the last few issues of *Executive Intelligence Review*—some of LaRouche's 1986 memos have been published by there, in which he discusses this in scientific, rigorous detail.

The sounds, as he emphasized, that you're going

to be hearing are not created by physical characteristics. These are the result of the creative powers, and in this case, the collaborative creative powers of all the musicians who are participating in this performance, with Beethoven himself—a re-creation of creativity itself.

This kind of process, this kind of actual, real physical process cannot be captured by any mathematical expression, or algorithmic expression, or any digital process. It is a uniquely human characteristic.

You will hear in this piece the opening chords of the piano, stating potential—power. And then you will hear the piano develop that power, and then restate it with a higher power. And then, this will be further developed by other parts of the orchestra and soloists, going from the different sections of the strings, to the winds, to the vocalists, and so on. Listen carefully, as you hear this development.

And then it will culminate with the final couplet:

*Wenn sich Lieb und Kraft vermählen,
lohnt den Menschen Göttergunst*

When love and power are married
God's grace is bestowed on mankind

And you'll hear in the performance, the word "*Kraft*," repeated three times, each with greater power, and this is the "power" I spoke of earlier, the power of creativity *per se*.

What you will be hearing is not only a great work of art. You will be hearing a statement of a scientific truth, a statement about the real nature of mankind. And when science accepts this, we can have unlimited progress.

Thank you.

DIANE SARE

The Choral Principle

This is an edited transcription of remarks made by Diane Sare to the Schiller Institute conference in Morristown, N.J. on Feb. 16, 2019. Mrs. Sare is the Managing Director of the Schiller Institute NYC Chorus.

I think we'll begin with a voice clip from Lyndon LaRouche. He said to a meeting of the National Executive Committee of his philosophical association in July 2015:

Classical musical vocal performances are not entertainment. They are an experience, a social and moral experience, which changes the attitude of populations.

The Schiller Institute NYC Chorus

When we began this process, I didn't fully appreciate the incredible insight of that comment, and I probably still don't. But, in this process that has become the official Schiller Institute NYC Chorus, we are discovering the truth of Mr. LaRouche's forecast, over and over. My current assessment of the process in Manhattan, relative to what Lyn suggested, is that we're perhaps halfway there, but of course, you can never get all the way there, as John Sigerson will tell us. Lyndon LaRouche said 1,500 voices—with 1,500 voices you'll develop 150 or so who can actually sing, and the others will be in the process of learning to sing or learning to hear as the audience. In the case of Manhattan, probably about 700 people have come through the choral process. We now have about 85 voices in the greater Manhattan chorus as a minimum solid core.

As usual, however, the truth is not in the numbers, although the numbers are a prerequisite for the effect. I got a glimmer of this in a negative way—that is, what makes LaRouche's choral process truly unique, and why our chorus attracts the most dedicated and wonderful people. A few weeks, or maybe months ago, I had sent an audio recording of one of our rehearsals—and I



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Diane Sare

knew it was a little rough; it was an early rehearsal of something—to a very dear friend and collaborator, who wanted to hear how we were coming along and make suggestions. He wrote back, “Diane, *you* are the problem,” [laughter] he said, “as long as you keep so many people in your group who can't match pitch, get the rhythm right or the words right.”

Now, I had told him it was an early rehearsal. But it struck me that our chorus is the only chorus,

at least in the greater Manhattan area, and maybe more than that, which is dedicated to actually improving the standard of Classical performance and Classical hearing, by teaching our singers how to sing, and not only vocal technique, which is also very important, but *how to think about what they are doing*. This approach has led to our chorus being one of the most diverse, friendly, and fun choruses in the city! And that's what our members, who sing in other choruses, say about our chorus. They say they love the repertoire, they love the sectionals, and they love to hear John Sigerson lecture about the background of the piece they are learning.

We love the chorus, because we love the experience of the continuous quest for improvement and the social process that is developing as a result. In our chorus the improvement of the individual participant, immediately uplifts the whole. Everyone who is a part of that process is inspired by that. Some of you here, who have formed other choruses around the country, have a sense of this.

I could say much more, but we should get to the music, which is where you'll get to experience that choral work. Lyndon LaRouche has more that I think it will be helpful for you to hear, so let us listen to Mr. LaRouche:

What you want to do, is you want to get people out of the idea of being practical, because practical people are inherently stupid people. That is, they



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Diane Sare conducting the Schiller Institute NYC Chorus.

don't have anything in themselves, which defines them as the process of meaningful expressions.

The point is, we want that kind of thing where the placement of the singing voice, real placement, not making noises, not throwing their throat out all over the place, but actually placing the voice. When people place the voice well, in the process of choral singing, you get an effect which is otherwise inaccessible. And therefore, if we have that number of voices, then we can do it. And when people learn how to use the singing voice properly, not as throat-throwing things, but the actual placement of the voice, you have a change in the attitude of the people, where they are inspired, because they are not trying to think about the noises they're making. They're going through the experience of placing the voice. And when they start to place the voice, their attitude about life *changes*. And therefore, the purpose is, to use that factor, the placement of the voice, the placement of the singing voice, in a competent placement, changes the mental outlook of the population.

First of all, you change the choral group of the singers, and then you effect those who are not such good singers, and they will tend to *hear* what they cannot project, not project efficiently. And that attitude is the basis for morality.

Now, the point is, instead of saying, "let's be practical," you

say, "let's be inspired." And we need a population of sufficient numbers of people who are in the process of qualifying themselves, as choral singers in general. When they qualify to do that, and when they can take more and more difficult challenges in the repertoire, then you have changed the attitude about the people in general with respect to themselves, how they feel themselves, how do they locate their identity, themselves. And, without that kind of inspiration, I don't think we can rebuild the kind of choral activity which we require for the leadership from the significant part of the population.

It's not making noise. It's not making sounds. It's what you experience in your own voice which changes the way you think about yourself, and about the people around you. That is the essential



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A section of the Schiller Institute NYC Chorus.

basis. It's not practical things. Practical things do not solve that problem. Only the Classical musical composition sets a standard, to which a resonance occurs out of that, and therefore, until you can get an area, like New York City in which you can say, well, there's potentially 150 people who are prospective choral performers, in training, and then a certain part will be qualified. The others will be sort of still the amateurs, or they have

problems with the voice otherwise. But when a chorus projects an effective performance, then even the people who can't do it themselves, will be inspired by hearing it, by the experience. And that creates what we really call a morality, a popular morality among the people. And that is what my intention is that we should achieve.

Thank you. [applause]

JOHN SIGERSON

An Introduction to Three Musical Performances Neither Chords nor Notes Exist

This is an edited transcription of remarks made by John Sigerson to the Schiller Institute conference in Morristown, N.J. on Feb. 16, 2019. Mr. Sigerson is a founding member of the Schiller Institute and is its Music Director. He is the co-author of A Manual on the Rudiments of Tuning and Registration.



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John Sigerson

As a matter of fact, if you really think about it, music is completely *soundless*. Because the real music is in your mind, in the changes that occur. A change is a physical effect, but it's not something tangible. The whole point of beautiful Classical composition, and the reason why you must refine your technique, your ability to do that, is to make yourself into the most transparent carrier of those ideas. That's the point, that's the reason why you want to have beauty of tone in music, and beauty of phras-

Moderator Dennis Speed: John Sigerson is a lot more than a music or choral director. He will be presiding over the next three sections of our program. But, in the last conversation that I had with Lyndon LaRouche, which was in August of this past year—a long conversation in person—I began talking to him about some of what we were doing in New York with the music work, and told him that John had this idea about the Beethoven *Mass in C*, and began to describe some other things. And he said this, he said: “Well, John knows what the path is. Let him define the path. He'll figure out how to take the people from one level to another. That's what you need.”

So, John Sigerson will now take over. [applause]

John Sigerson: For time reasons I'm going to shorten my comments, but I want to point out just one thing to understand, one thing that was very shocking to me when I first started working with Lyndon LaRouche. He said to me: “Chords don't exist. Notes don't exist.”

ing and all of these things, but it's all as a way of making yourself transparent to the creative breakthroughs, the creative development that the composer has presented you with; or the creative problem that the composer has presented to you, that the performer must *solve*.

The Song of the Bell

We are going to begin with a performance of a piece that Johannes Brahms wrote, which was only published 30 years after his death. He wrote it for the funeral of his close collaborator and friend, Robert Schumann, the composer. He took it from a poem, just a little bit of a poem, which at that time, was a poem known by *every single* German schoolchild—and probably in America, too—Friedrich Schiller's *Song of the Bell*.

This is a poem about the construction of the bell, as a way of thinking about the construction of a healthy



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John Sigerson conducting J.S. Bach's Brandenburg Concerto No. 5 in D Major.

human society. Everybody knew this poem. Rather than trying to compose music for the entire poem, which some people did, but not really with great success, Brahms did exactly what Beethoven did with Schiller's *Ode to Joy*: He took a little piece of it. This is the funeral section, and it seems appropriate today.

The Chorus then warmed up in front of the audience—singing four notes, which Sigerson described as a tribute to Beethoven. Beethoven used those same four notes as a core idea for many of his works. Then the Chorus and Orchestra performed Dem dunkeln Schoß der Heil'gen Erde by Johannes Brahms.

Bach's Brandenburg Concerto No. 5

Brahms would not have been possible without Johann Sebastian Bach. Beethoven would not have been possible. Bach discovered the entire nonlinear universe of the well-tempered system. Instead of a flat universe, the well-tempered system is an extremely complex universe. It's not a simple equal-tempered system. Well-tempering is an idea of principle, where every note in the scale has a universe inside of itself: It's like a Leibnizian monad. If you have never read Gottfried Leibniz, please do avail yourself. Learn what Leibniz says about the so-called "monad," which is otherwise known as a *soul*, but also can be thought of as a substance. That is, that every single substance, whether animate or inanimate, contains within it the potential of the entire universe. And that's exactly the way that Bach uses the well-tempered system and opens up this wonderful world, which otherwise, before then was somewhat inaccessible.

We're now going to [perform](#) Bach's *Brandenburg Concerto No. 5*, just the first movement, for time reasons. We're going to have as our soloists Gregor Kitzis, violin, and Laura Thompson, flautist. Our piano (continuo) soloist will be My-Hoa Steger. [applause]

Beethoven's Choral Fantasy

Before we start our last piece, let me read something. Looking back over the course of his life, Lyndon LaRouche wrote, "For me life is truly wonderful. Over the course of decades of a turbulently fruitful life, I've had the satisfaction, and sometimes the frustration, of effecting numerous discoveries in various aspects of experience and inquiry. Some of these have served the tasks that I put before myself during the period that the discoveries were made. Most were biproducts of intent, used for awhile to exercise the fact of their being and put aside into memory, gradually taken for granted, forgetting the fact that they had been discovered, forgetting the pleasure associated with their discovery. Now, as my own work and that of my immediate collaborators takes the form of a Platonic dialogue in numerous fields of inquiry, I have occasion to revive some of the stored-up discoveries of the past, to recall the circumstances and pleasure of their origins, and to polish their further development for current practice."

Lyndon LaRouche wrote that in 1978, at age 55, and what a richness he had since then. He lived many lives, I would say.

The Chorus and Orchestra then [performed](#) Beethoven's Choral Fantasy in C minor, Opus 80.

Panel II: The Aesthetic Education of Man for the Beauty of the Mind and the Soul

From the Question & Answer Session

Panel II of the Feb. 16, 2019 Schiller Institute conference, in Morristown, N.J., concluded with a question and answer session moderated by Dennis Speed. An edited transcript of selections from the question and answer session follows.

Question: My name is Lynn Yen. I'm part of the Foundation for the Revival of Classical Culture, and we advocate the use of proper tuning, the tuning at which music should be performed, and the relationship of that to science. That practice came about after our second Carnegie Hall concert back in 2013 with the concert pianist Tian Jiang. We had a conversation with Lyndon LaRouche about that performance, and issues relating to tuning.

I would like to actually direct the question to the panel with regards to the issues and the importance around this idea of proper tuning, which is tuning at C-256, and why it's important. If the panelists can discuss its importance in relation to both musical performance as well as to science, that would be really great, because it's an idea that needs to be explored more fully. Certainly, in the past, when I went to China, and discussed the question of proper tuning and musical performance, it's not an idea that they knew anything about.

John Sigerson: For those of you who didn't notice, we did perform all of the pieces today at the scientific tuning of C at about 256, or as it's better known, the "Verdi tuning," the tuning that was demanded by Verdi, but was actually used by all the great Classical composers—Bach, Beethoven, Schumann, Schubert, which is about A-432.

Nowadays, people tune their instruments usually to a higher tuning of around A-440, but actually, in Europe, it's gone way up to even A-450 or A-452,

which really means that in one part of the world, you may be playing what you think is an A, but it's actually an A-sharp.

This creates havoc in the world, but it's not just a question of organization. The reason why we started our campaign to return to this tuning that was demanded by the great Classical composers, is that nothing in music should be arbitrary. If you ask somebody why they tune their instrument to A-440, the only



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answer they can give is, "Well, that's the way we've always done it"—which is actually not even true. It was actually raised over the course of the 19th century, as a result of the Romantic movement, the movement that said you can set anything arbitrary, as long as it sounds more exciting. And so they started raising the pitch.

When Lyndon LaRouche started discussing this question of the lower tuning, for musicians who had grown up in that environment of saying "well, this is the way we've always done it," it was quite shocking. Because he was asserting something which was *way* beyond just a musical question. It's a question of art in general: That is, when you're doing art, *nothing is arbitrary*. *Everything* should be subject to rational thought—

that does not mean logical thought, but it means rational deliberation. And indeed, if you look at all sorts of processes in the universe, including the organization of the Solar system, including the organization of subatomic processes, you will find that there's an ordering principle, which it is incumbent upon man to know and to use.

One of the crucial proofs that LaRouche asserted, which, again, some people really didn't believe that it was a proof, was that the human voice is tuned to that particular tuning. Most specifically, human voices have registers, they have a chest register, they have a middle register, and they have a high register, and there are transitions between these registers. And especially if you're training your voice to do very difficult, very challenging pieces such as the arias by Giuseppe Verdi, singers have found that if they use the higher tuning to do the transitions, their voices suffer, gravely.

As a matter of fact, one of our close collaborators, Carlo Bergonzi, the great, late tenor, one of the greatest tenors of the 20th century, he held seminars with us, saying specifically that if we do not return to this—you can call it the scientific or the natural tuning—we will never have great Verdi voices again. And he was correct in that.

Again, it's mostly a question of not doing anything that's arbitrary, because in art today, if you ask somebody why they're doing something, the response will be, "Well, it's because I feel like it," or "because that's the way it's always done," or something like that. That's not enough. Unless you know why you're doing something, or else, unless you're asking yourself the question, why am I doing what I am doing—you're really not acting like a human being, you're acting like an animal which is just being trained to do something.

They Call This Higher Power 'God'

Bruce Director: I want to add to that. There's a scientific principle involved in this. In the latest *EIR*, there's a series of three articles by Lyndon LaRouche from 1986, reprinted in the last three issues of *EIR*, in which he talks about this.

Scientists really have to understand how the physical and biological domains of the universe are actually susceptible and organized by the human mind. What you just experienced really illustrates that, in

my view. Because it's the organization of the composition, the creative idea of Beethoven to compose this great piece of music, which requires the use of biological and physical processes, and they're all different—you see the piano has its capabilities, the winds, the horns.

LaRouche often spoke about how you cannot determine the pitches that are being used by any mathematical function. Yes, you can write a mathematical function with a spiral and divide it equally into 12 parts and you'll get mathematical values for the tones, but if these musicians had performed this piece using those values, you would have got up and walked out! It would have sounded terrible. It wouldn't have had any impact emotionally on you at all!

The scientists have to understand that this is really how to start thinking about the physical universe itself, what they're investigating. In the speech that Max Planck gave, from which I quoted earlier, he talks about how there is no matter. It only exists as vibrations that hold structure together, which are determined by a higher power. He calls the power, "God." As he said: Every civilized person has for the last several millennia—they call this higher power, "God."

This is something that science has to absorb now, and we have to get back to this approach, because all the problems in modern science that people throw around—quantum physics and dark matter, and dark energy, and everything else—you'll never get to it, if you can't understand why LaRouche said we have to sing at C-256. [laughter]

King and Queen of All Instruments

Question: My name is Don Sellers. My question is more on the construction of musical instruments and whether or not they were made differently during the Classical period. Specifically, as an instrument-maker, if you had in mind, making an instrument tuned to C-256, do you make it differently from one that would be tuned to A-440 or A-452?

Sigerson: Most instruments, except the brass instruments, are made of things that were formerly living, and especially in the development of violins, there was tremendous development in Italy during the 17th century, to figure this out. Also, there were kinds of living designs of especially stringed instruments, developed by Leonardo da Vinci and others, espe-

cially modeling the human head, (and also the heads of animals), using those as models for the way that the vibrations of the human head can be replicated in the instruments.

I would also point out that there's been a lot of research on older instruments. Some has had useful results, some has not.

But we need to be thinking about the future! We need to develop new instruments, even more beautiful instruments that have not been thought of before, instruments that can even be closer to the human voice, because the human voice, really, is the king and the queen of all instruments. That's why singing in cho-

One example of this is the cymbal. If you hold a cymbal and someone takes a mallet and just whacks on the cymbal—*donk!* But if you want the cymbal to resonate, you touch it, you get a vibration going already, and then, when you strike the cymbal, there's a sound which carries.

So, I think this is a very important question in terms of tuning—this quality of resonance. You use that term, also, in language, in poetry, and in a political moment, where at one particular time you express an idea and,— *donk!*—doesn't move. But in another moment, you express that idea and it carries. [applause]



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ruses is so important for everyone, because all of the other physical instruments are simply ways of getting at exactly the same kinds of beauty that the human voice is capable of.

Diane Sare: There is also a principle of resonance which I think is related to a principle of a mass strike. If you try to make an instrument—I'll take the case of brass, and it's true with the winds as well—you can play a note through a certain length of tubing and force the note up or down by changing the vibration, but the sound becomes more ugly, unless the production of the sound actually is coherent with the length of the tubing, to put it crudely. So that there are ways of forcing a sound, which are unnatural, and ways of producing a sound, which will resonate precisely with the construction of the instrument.

'Placing a Note'

Question: Good afternoon, my name is Robert Branca. I'm from Boston, Massachusetts. For John, the director of the chorus group, would you elaborate, or maybe give an example of, what you meant when you used the term "placing a note," versus simply singing or projecting it?

Sigerson: It's a spiritual question.

Follow-Up: Does the note come out the same?

Sigerson: It's a spiritual question in terms of the placement. That is, the mind needs to *imagine* the effect that you're going to have on the audience. La-Rouche never used "placement" in a merely technical sense that maybe a lot of singing teachers use,

although there's aspects of it which ring true.

The question is, how can you create an effect which has a kind of least-action principle in terms of its ability to communicate the idea that you want to get across to the audience. Lyndon LaRouche, as you saw from some of the videos here, was a master at that kind of placement.

I could talk about specifics in terms of voice placement, but in voice placement it's very straightforward this way—if you hear a student sing who hasn't figured things out, they will try to make sounds, and they'll try to emit sounds. A real poet who is a singer does not emit sounds. They place the poetry in their mind, in the idea, and the singing of it flows from that. Of course, that requires a lot of work to make your instrument be able to do that, but it's the intention to do that, which is really the kernel of placement.

We can refer you to some wonderful discussions that LaRouche has had on placement. I just don't want to reduce it into something less than it really is. It's a question of exactly what Diane was talking about: How do you create the kind of resonance in another person? If you're always talking in a monotone, you're not going to be able to get very much done, because everyone will be completely bored.

So, you have to place your voice. How do you modulate your voice, in order to be able to get that? But again, those are just technical things. The main thing is using your mind—controlling the image that you want to get across to the audience. Can you do that, and get it shaped in just that way?

I had experiences working with LaRouche, where someone was singing perfectly well—acceptably, by professional standards—and LaRouche would blow up. He would walk out of the room, because he didn't hear that kind of placement in the person. He just heard notes, he just heard people punching out notes. He was completely bored by those kinds of displays.

That's what we try to do in the singing, but also in our organizing: That is, we want to spark the creativity that is in every single person we meet. *Every single person.* [applause]

What If They Don't Want To Listen?

Question: José, from the Bronx. Megan, I really liked how you opened with the idea of culture, and how you think we should believe that our opponents can be

better, and that's how we win the fight. That's a strange statement to make, but I know it to be true, because Martin Luther King once fought for nonviolent principles: How do you look at somebody opposite from you, who's spitting in your face and calling you racial slurs, and say, "I love you, because you're made in the image of God, and I believe you can be better." Is that how you win a fight? I like to think it's true.

So now you have a culture in which people want to die! People want to kill themselves, they want to overdose, they want to indulge in this terrible music and culture. I personally think it's because they don't think they can be better, because they've lost the meaning of what it means to be human. And so, is it simply just showing them something as beautiful as Beethoven, as what we just heard with the *Choral Fantasy*, conducted by John Sigerson, that can pull them out of that state, where they believe they are not worthy of being human? Or is there something more that needs to be done? What if they don't want to listen? How do you make them listen? What do you do?

Megan Beets: Helga has said many times, that Schiller, of all people, had the most optimistic conception of mankind, of true human nature, and I've found that to be absolutely true, as well. Schiller had complete confidence in the beauty of the human soul.

Yes, in society, you may have demented people here and there, who have serious problems, but the majority of humanity is able to respond to the truthfulness of a beautiful idea, whether they planned to, or not. I think that's the key—that there is a principle of the human soul which is related to everything we've been talking about in the morning panel, and in this afternoon panel: The emotional passion of discovery! That's what happens in Classical music, in the performance and in the participating as an audience member of a well-performed piece of Classical music. The same process unfolds in the mind, as unfolds in the process of making a scientific breakthrough of a new principle. The human being is built such that the natural response to that is love.

People are changed by that! You don't walk away the same person. Take a person who's very degenerated—some from terrible circumstances or surrounded by drugs and ugliness. You take them to a Beethoven concert. Maybe they don't walk away and suddenly they're a genius. *But!* They're changed. They're af-

fect. There's a little crack. And I firmly believe that we *can* transform all of society in this way.

We have to fight to surround our fellow citizens with beauty, with a firm conviction that they will rise to the occasion. I think this is especially important with young people. I think most young people now are actually fed up with the banality of the culture! I think for the most part, young people are *looking*, are hungry for something better. It's clearly not provided in current culture, but the potential is there. The more that we can organize and do outreach, such as pulling in as many musicians as possible into what we're doing, into presenting these kinds of beautiful ideas to the population, I think we really can spark the kind of res-

even to Alpha Centauri and beyond. What is the connection, or the meaning of this cultural transformation, as we look into that future?

Beets: It's funny, as you were speaking, just before you got to the idea of a galactic perspective, I was thinking of this. Because revolutions and upshifts in the power and the meaning of the human species don't come about through some kind of logical elaboration or some continuation of the current organization of society. You need a leap. A leap similar to a leap of discovery, to a completely new system which bears no resemblance, for the most part, to the old system. And I think what you bring up, about giving humanity a



EIRNS/Stuart Lewis

onance process that Diane was describing.

A Galactic Identity

Question: Hi, I'm Daniel Burke. I also want to speak to Megan's presentation, and particularly her appeal at the end, that people take this into themselves as a mission. I've been working to reach others with the message, with the principles that we're discussing today. I have found that the phenomenon of a mass strike is very real.

I want to ask a question that looks beyond, because in order to have this transformation of culture that you're calling for, we will need a galactic vision. There is a fight now for exactly what Mr. LaRouche was speaking about in the clip this morning, of a fusion propulsion system for reaching into the Solar system, and

galactic identity, is crucial.

The next phase of the human species is to leave the Earth and assume our proper place as an extraterrestrial species, one that may have originated *on* planet Earth, but is not a species *of* planet Earth.

In doing this, we create the opportunity for a certain reconceptualization of the principles that govern our Solar system, the principles that govern our galaxy, the principles of life—the role of human creativity and human cognition in and over all of this. I think the new levels of understanding of what a human being *is*, what the process of creativity *is* per se, what powers we have to wield over the physical universe—I think this drives forward and necessitates the development of a new culture, new ideas which we've never conceived of before. As John called for, new instruments, higher, more de-

veloped forms of poetry and musical composition which match that level of elevation of the human mind.

Creativity or Death

Director: There's also a very important political significance of this issue you raised. Throughout human history, there's been a complete coherence between the way people think the universe works, the way they think they should behave, and the way they think society works. The entire period from the death of Archimedes until the Renaissance, was dominated by the Ptolemaic idea, that the Earth was at the center, unmoved, and that the farther out you got from the Earth, it changes less and less until you get as far as you possibly can from the center of this big sphere, and that's where

versal law. They can't do it! It doesn't exist, because it's not true.

The universe is creative and is governed by this principle of creativity.

If you have a society that is organized around the idea that man is extending his creative power in and over the universe, into the galaxies, that creates a whole different concept of what your society should be organized around. Not around conforming to computer algorithms or computing machines, but around the idea that we are gaining greater and greater control over the universe. Lyndon LaRouche said that, over, and over, and over again.

So this is not just a philosophical question, or one to be discussed in some abstract moralistic way, but it is the political issue of our day! Are we going to organize our society according to these principles? Or, are we going to fall back into the Dark Age that befell mankind for 1,500 years, from the death of Archimedes to the Renaissance?

How Music Touches the Soul

Question: Hi, this is Alvin. In this past week, and particularly this morning, in listening to Lyn, I'm reminded, as I'm sure many people are, of many things.

And one of the things I was thinking about was how another organizer, who is no longer with us, was key in actually recruiting me, because while it was based on Lyn's presence as a force and as a person, it was Jerry Pyenson who stuck with me, and stayed after me. And when Megan talks about making a crack, that's important.

And then, today, I made another step forward, but it started with a crack, 20 years ago. So, I, too, thank Lyn and everyone for sticking with me, and I need to do the same for all others around me. I lack patience and understanding, and that's not what Lyn was talking about. I wanted to share that. And thank you, all.

Question: My name is Safida. I'm a New Yorker, originally from the northern part of Pakistan. Thank



EIRNS/Stuart Lewis



EIRNS/Stuart Lewis

everything is perfect, because it stops changing. That was society; that was the Roman Empire. That was the concept: don't change anything. Everybody has their place.

Well, of course, that's inhuman. You can't maintain a society in a steady state, because the universe is not organized that way. Cusa broke that with his idea that in God, the center and the circumference are one. These are not distant things. There's one universe, and it is inherently creative. In the last 200 years or so, we've seen the promotion of the Second Law of Thermodynamics, which is just a complete fraud!—to say that the principles that govern a closed heat-engine are the principles of the universe as a whole! If you want to see an emotional reaction, tell somebody to prove to you that the Second Law of Thermodynamics is a uni-

you for your impressive performances.

I just came to the line to make a comment. Somebody asked a question, should we teach music? My answer is, “Yes!”

From my childhood, I used to sing the religious songs, and then gradually I started singing. When I worked in Afghanistan, in the very remote areas of Afghanistan, Badakhshan, there was no light and there were bumpy roads. I was based there for a year. Music was the only thing that enabled me to survive in that culture, in that environment. Because music touches your soul, and then it touches your spirit, and that has a connection with your brain, with your heart—that gives you much vision.

When you are depressed, music is the source that calms you. So that means music is something that gives you peace. We talk about peace and we talk about humanity, so that means music is important for everyone, every child.

So parents and teachers, they have to teach music. Thank you.

Sigerson: The peace comes from problem-solving. It’s not just an effect, sort of a “Mozart effect,” and so forth, that people talk about, when you play Mozart to the cows and the plants. [laughter] Human beings are not cows, and human beings are not plants.

The great composers present *paradoxes* in their music. It’s a problem that needs to be solved, and they’re allowing *you* to participate in the solution to that problem. *That* is peace, because that is pleasure. That is true, intellectual pleasure, to be able to participate in that kind of creative problem-solving. That is what brings peace to children and to all of us.

Through Beauty, Proceed To Freedom

Speed: I want to say something in response to the last comment as well.

The Manhattan chorus was founded in November-December of 2014, as a response to the death, by choking, of Eric Garner. Eric Garner was an African American who was selling cigarettes on the street and had been doing it repeatedly. He had been warned seven times, and had continued to do it, and was killed by a police officer, in the course of his apprehension. A video of his arrest went all over.

Many strong emotions were elicited from many dif-

ferent people about that, who then talked about it as a case of racism and talked about it in many different ways.

In looking at the chaos that was beginning to erupt in New York City, involving a 50,000-person demonstration, for example, across the Brooklyn Bridge that almost ended up in a massive fight between the police and the people who were protesting, we decided that we needed to do something. The night that we began the process, two policemen were killed—shot in the back of the head, in Brooklyn—as our performance began. This caused our performers to have a discussion, some of them, afterward.

Just now, we talked about solving problems. John told you that great composers are always thinking of how they solve problems. How do you solve *that* problem, in the United States, today? And I don’t mean racism. I mean the problem of a New Dark Age.

Well, you heard us, earlier this morning, play you something from Lyndon LaRouche—who said, we’re not going to export “things,” we’re going to export cities.

You have to propose an alternative, which is both meaningful, and has pungency and force, and above all, beauty.

I remember LaRouche, when I first met him, with his horn-rimmed glasses, and bow tie. He had, perhaps, three shirts—one of the shirts had an iron stain in the back. We were pretty young, we were Black nationalists and other sorts of radicals. We saw him coming, and I said, “What is this?” He would then begin just asking very embarrassing questions, like, “You guys think you’re tough, right? Do you know how to run a government? Suppose you had power: You say you’re for Black Power, right? But what do you know about power?”

And that was beautiful. [applause]

I hope people have gotten the idea, particularly in this panel, about a principle that Helga, more than anybody else, brought to this association—the idea of the *beautiful soul*. That’s an idea that is in everyone. And whether we’re talking about somebody who tragically dies, like an Eric Garner, or the policemen who tragically died, shot in the back of the head by somebody else who thinks they’re avenging Eric Garner, we believe that it is through beauty that people proceed to freedom. And that’s what the Schiller Institute is all about.

GREETING FROM R.P. TSOKOLIBANE

It Is Time to Finally Heed the Wisdom of Lyndon LaRouche

Mr. Ramasimong Phillip Tsokolibane, leader of LaRouche South Africa, sent the following greeting to the Schiller Institute conference in Morristown, N.J., held on February 16, 2019. Moderator Jason Ross read an abridged version at the opening of Panel III. The full text follows here.

On behalf of the LaRouche Movement in South Africa, I send my greetings to all of you assembled at this important conference, and offer my best wishes for your success. I truly believe that the fate of Africa, and for that matter, all of mankind, rests on the success of this relative handful of people—gathered here and around the globe—who are committed to moving the world into a new world order based on peace and progress.

We have come to a point at which mankind must finally grow into maturity, and throw off the shackles, both mental and physical, imposed by the dying paradigm of British Imperialism—shackles that have kept mankind enslaved. This is a moment at which revolutionary change is possible, but it calls for the actions of revolutionaries who are committed to the principles on which this new order must be founded: That each and every human being has been given by our Creator the power of creative reason, a power that enables us to both see into, and shape, a future that is born in the human imagination, and is brought into being by human actions in the present. This power of sentient reason is what distinguishes man from any other of our Maker's creations—it is the most powerful force.

Every human being has this power of reason, and has the God-given right to have it nurtured, so that it contributes to the general welfare of all of us. Though it may be forgotten and buried by the teaching of false

history, the United States of America was founded on this truly revolutionary idea—that governments are instituted among men to promote the general welfare of all, so that each may make a potent contribution to the progress of mankind.

The enemy of mankind is anyone who places limits on this principle of the General Welfare, as we have defined it, so that it might serve only this or that special interest, or the interest of one nation against another, or one group of people against another. Wealth, hereditary or otherwise, does not give anyone higher status or more rights. The British Empire, the system of oligarchical rule that treats men and woman as mere animals to be lorded over by an oligarchical caste, is an abomination and a sin against mankind, and *must be ended once and for all!* It is to this end that we are committed as brothers and sisters in struggle, to make a revolution in the affairs of men.

Africa is now a place of great hope for a better future and of great optimism to bring it about. But if the British Empire and some of its American lackeys have their way, then all the hope for development and progress will be drowned in the blood of hundreds of millions of dead Africans. For every development project under discussion with our fellow BRICS members China and Russia, there are plots and plans afoot to create chaos and war to prevent their implementation. That is true in my country, where our government recently suffered a regime change run by the British operating with American faces and names, with the financial backing of their golem, the speculator George Soros.

The British target South Africa not merely because we are a BRICS nation, but because we have the only “full set” economy on the continent capable of produc-

ing the machine tools necessary for the industrialization of Africa.

That the British can operate behind American faces is something that must be changed. It drives a wedge between the people who desire development and peace, and the United States. President Trump has said he believes in sovereignty of nations and is against regime change, and I believe him. Yet his State Department organizes and supports the regime changers.



Lyndon LaRouche meets with African political figures at the Schiller Institute conference in Bad Schwabach, Germany (May 2001) on the task of the New Bretton Woods.

Make Africa Finally Great

To build a new world order, it is not enough to have Chinese and Russian, and even Indian support for development projects. We will need the active support and help from the nation that was born in struggle against British imperialism, the United States. Otherwise such efforts must fail, as the British operating through American faces will plunge the world into a global thermonuclear war. That is reality.

It has taken Africans a long time to trust the Russians and the Chinese. In the past, both have betrayed us on behalf of their own interests. But with the emergence of new leaderships in those countries in this century, and through their work and commitment, that trust is building.

I can say that while Africans do not hate Donald Trump, as your fake news media might have you believe, they do not trust him. To build that trust, he must do something concrete to help Africans, such as joining in Chinese and Russian development programs. To make America great again, he must make *Africa* finally great, fulfilling the promise of a truly revolutionary America.

There has been one American whom Africans and the whole world could trust. Lyndon LaRouche and his movement have always stood for that better, revolutionary America, offering hope for a better world to be born out of the chaos of the dying old imperialist order. He and his wife Helga have kicked against the pricks, who have preached a neo-Malthusian genocide. He has fought for the greater and more powerful

glory of men free from that slavery of prejudice and stupidity which is the policy of the British system. The policies of the Chinese, especially their Belt and Road Initiative, find their inspiration in the program of Lyndon LaRouche.

So, Africa must turn to the LaRouche movement for leadership. Years ago, the then President of Mexico, José López Portillo, who had recently met with Mr. LaRouche, and would meet with him several times again, told the United Nations that, “the most constant concern and activity of Mexico in the international arena, is the transition to a New Economic Order. We have insisted that the entire gamut of economic and social relations of the developing countries and the industrialized world, must be transformed. . . .” López Portillo, a competent and courageous world leader who was himself targetted by the British and their lackeys, told a 1998 conference of the Mexican Society of Geography and Statistics in Mexico City, that “. . . it is now necessary for the world to listen to the wise words of Lyndon LaRouche.”

Had the world listened then, today we might have avoided the last twenty years of the tragedy, the bloodshed, and the horrors of British Imperial domination. There is now only one solution to the world’s current existential crisis: It must finally heed the wisdom of LaRouche and act to bring his revolutionary vision for a new world order into being. I, for one, commit my life to that endeavor.

The Woman on Mars

Jason Ross: I'd like to begin the panel with some words from Lyndon LaRouche, who in 1988 produced a nationally televised campaign broadcast called "The Woman on Mars." Let's see the beginning of the [video](#).

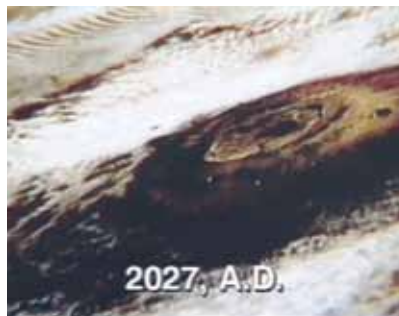
Male: Am I speaking to Dr. Gomez?

Female: Yes, John. I have the announcement you've been waiting for. As of five minutes ago, our environmental systems have been fully stabilized. Man's first permanent colony on Mars is now fully operational.

Lyndon LaRouche: Many of you are shocked. Some of you are saying, "Why is this old geezer talking about a permanent colony on Mars, 39 years from now, with the major budget problems in Washington today?"

In a nationwide television broadcast a few weeks ago, I told you, that on my first day as President, I shall declare a national economic emergency, and launch the largest economic recovery program in our history. During each of the first two years of my administration, about \$2 trillion in low-cost federal loans will be invested in building up our nation's presently rotting industrial infrastructure, plus building up about 5 million new industrial jobs, during the first three or four years of my administration.

Looking back to the experience of the 1940-1943 period under President Franklin Roosevelt, we know that the recovery will creak at the beginning, but will build up speed over the first two years, so that about the third year, the United States will have the highest per-capita income in our history. There are no mysterious tricks involved. It is all basic economics,



modelled upon our successful economic recoveries under Franklin Roosevelt and John F. Kennedy.

However, to keep that recovery going, beyond the first three to four years, and to make our economy, once again, the most competitive on Earth, we must invest in creating new technologies to do that. We must pick up where we left off with the old Apollo program, back during the 1960s.

President John F. Kennedy: We choose to go to the Moon in this decade, and do the other things, not because they are easy, but because they are hard! Because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we're willing to accept, one we aren't willing to postpone, and one we intend to win, and the others, too.

[sound of rocket launch]

NASA Mission Control: Lift-off, we have a lift-off, 32 minutes past the hour. Lift-off on Apollo 11. Tower cleared. Neil Armstrong reporting the roll and pitch program which puts Apollo 11 on a proper heading.

LaRouche: The old aerospace program of the 1960s has paid us back more than 10 cents for every penny we invested in it. This Mars program will pay us back much more, not 40 years from now, but *each year*,

over the 50 years or more to come.

This project's spinoffs, in the form of new products and new technologies into our civilian economy, mean that, by the year 2027 A.D., the average person in the United States will have a real income at least *ten times* that of today. [applause]

KESHA ROGERS

Frontiers of Space: Fulfilling Mankind's Destiny as Man in the Universe

This is an edited transcription of the presentation of Kesha Rogers to the Schiller Institute conference in Morristown, N.J. on Feb. 16, 2019. Ms. Rogers is a member of the LaRouche PAC Policy Committee. She has been a candidate for U.S. Congress, securing the Democratic Party nomination, and not just once, and forcing a run-off in her bid for U.S. Senate from the state of Texas.



EIRNS/Stuart Lewis

Kesha Rogers

gram has to continue. I want to start my topic and my remarks today on the theme “The Frontiers of Space: Fulfilling Mankind’s Destiny as Man in the Universe.”

Celebrate Our Accomplishments in Space

This year our nation and the world will celebrate the 50th anniversary of the first humans to ever walk on the surface of the Moon, in July of 1969. Many of

Thank you Jason, and thank you all for being here today. It is a pleasure to see so many people here that are passionate about our space program, as I am, and the great vision and mission for mankind.

I want to thank Helga, for her inspiration and vision of bringing this conference together. [applause]

It is because of the vision and life’s work of Lyndon and Helga LaRouche, dedicated to the progress of mankind, that we gather here today. I’m happy to be joined on this panel by some extraordinary individuals and speakers who I’ve had the pleasure of meeting, when Lyndon LaRouche asked me, and we talked about running for office, and the idea for a campaign around the revival of our space program.

After I first saw Mr. LaRouche’s, “The Woman on Mars” video, which Jason just showed, I vowed that I would dedicate myself to fulfilling that mission. I don’t come from a technical, scientific background. I did it as someone who represents the ordinary man and this vision for the ordinary man. And I’m proud of the support that I’ve received from a number of people within our space program, who understand that that wasn’t just a vision of the past, that the space program is not just something from the past, but something that drives us into the future.

The passion that we see exhibited in our space pro-

gram has to continue. I was not even thought about yet! [laughter] This year is also the 47th anniversary of the last humans to walk on the Moon. Nobody celebrates the ending of our human lunar space program, because we are proud of achieving a leading role in space, not of abandoning that role.

It is time to reclaim our destiny, not merely as a space observing civilization with our impressive array of space satellites, telescopes, stations, and rovers, but as a *space colonizing* civilization, as the vision of Lyndon LaRouche demonstrated clearly in that video. And this requires fundamentally rethinking not only the importance of human space exploration in itself, but also requires rediscovering what it means to be truly human in the first place and realizing how that is inseparable from our destiny as Man in the Universe.

This dedication to the mission of advancing our understanding of our human destiny of mankind in the Universe, has been the lifelong commitment of Lyndon LaRouche and his relationship in the simultaneity of eternity with all the great visionaries and classical minds that came before him and those who will come after. Reclaiming our destiny in space will not merely require having the right space vehicles or ad-



EIRNS/Eli Santiago

“What distinguishes a life as human, as exalted above the condition of mere beast, is that which the individual contributes to the enduring benefit of future generations.”

vances in technology. It will require, as LaRouche has declared, shedding “at least the cultural residue of the beast.”

Thirty-four years ago in 1985, speaking at a memorial conference of the Schiller Institute, in honor of the great space pioneer, Krafft Ehrlicke, Lyndon LaRouche reflected at the time,

As each of us is born, each of us must die. Within that brief interval of life, what distinguishes a life as human, as exalted above the condition of mere beast, is that which the individual contributes to the enduring benefit of future generations.... There, in the stars, lies mankind’s entry into the long-awaited age of reason, when our species sheds, at last, the cultural residue of the beast.

Let us look back, to the brief life of President John F. Kennedy and his opening



NASA

President John F. Kennedy commits the nation to send an American to the Moon, at a Joint Session of Congress on May 25, 1961.

of this door into the age of reason. On May 25, 1961, President Kennedy announced before a special Joint Session of Congress the dramatic and ambitious goal of, before the end of the decade, sending a man safely to the Moon and returning him to the Earth.

The achievement of such a bold undertaking for the nation, of accomplishing a mission that had never been attempted by any other nation, was not going to be done on a whim or a gamble. It required, as Kennedy understood clearly, long-term and visionary leadership, an economic driver and a scientific driver. As he clearly stated in that same speech to Congress,

Now it is time to take longer strides—time for a great new American enterprise—time for this nation to take a clearly leading role in space achievement, which in many ways may hold the key to our future on Earth.

I believe we possess all the resources and talents necessary. But the facts of the matter are that we have never made the national decisions or marshalled the national resources required for such leadership. We have never specified long-range goals on an urgent time schedule or managed our resources and our time so as to insure their fulfillment.

A Closed- or Open-World System?

The Apollo program wasn’t just a fly-by-night program. This program would become one of the greatest economic drivers the nation would ever experience. It never had to do with merely planting a flag on the Moon before the Soviets, and saying, “Been there, done that.” It was a commitment to what Krafft Ehrlicke had called an Open World System, or a “pro-growth paradigm.” We’ll come to this in just a moment.

In the course of eventually sending six missions to the Moon, we permanently increased the standard of living worldwide through thousands of spin-off technologies, and collaboration

FIGURE 1A

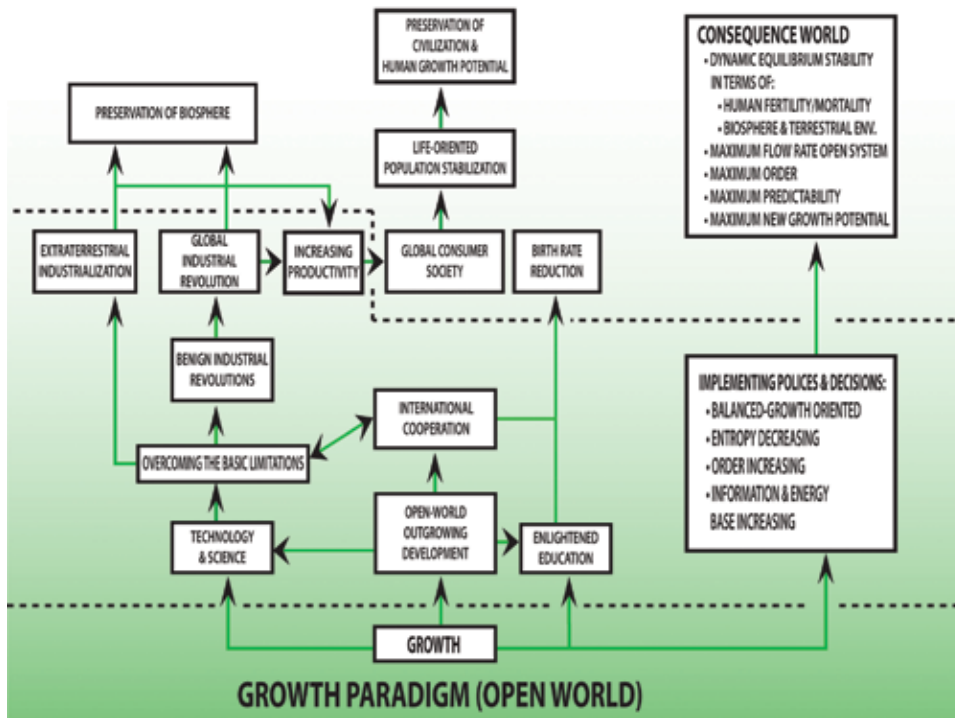
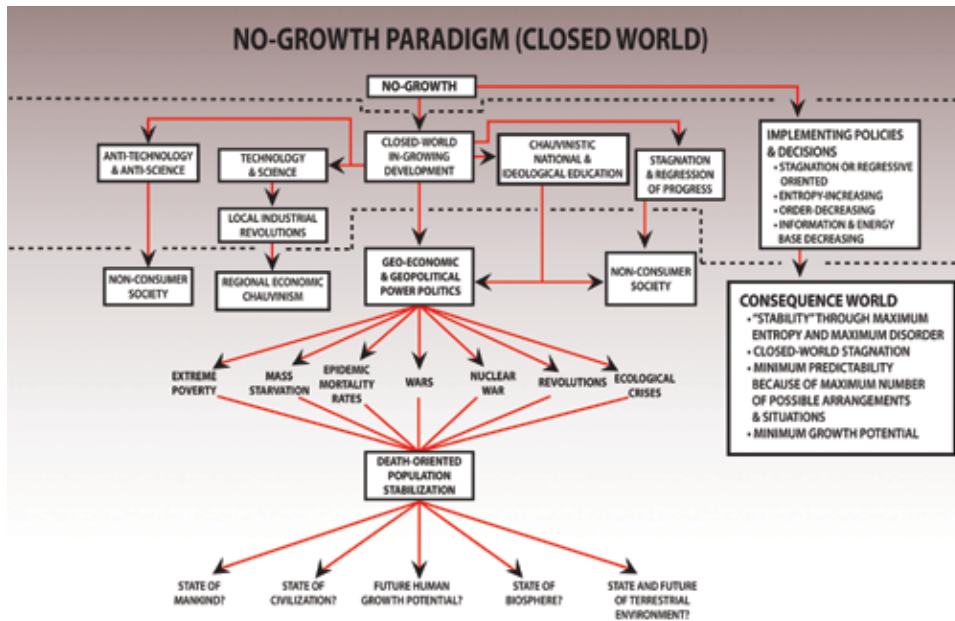


FIGURE 1B



among nations. These missions were to prepare the way for further exploration, development, and eventually permanent interplanetary settlements, such as Ehrlicke’s concept of Selenopolis, which is his depiction of a

on this panel, and the resurgence of what I would call an egotistical identity politics, that has nothing to do with who we are as human beings.

Under today’s “no growth” or closed world econ-

space colony on the Moon, and Lyndon LaRouche’s concept for Kepleropolis on Mars—both quite visionary in their artistic minds.

The consequences of a growth paradigm [Figure 1a] are the idea of making a conscious decision in favor of the idea of there being no limits to growth, in favor of technological improvement, and for advances of the living standard of your population; of rejecting birth rate reduction. When we shed all limitations to growth, this is what launches us into an Open World System, in which there’s no limitations to man’s progress in the universe.

But the full realization of that vision, as I explained earlier, exemplified by our space program with the Apollo mission, with the later vision of Krafft Ehrlicke and of Lyndon LaRouche, was shattered, as our nation and world were plunged into the budget-cutting, zero growth economy of a “Closed World System,” which started in full gear after the assassination of President Kennedy in 1963, and led to a permanent state of war—as we’ve seen, and many of us have lived in, in our entire lives—fake growth programs like the idiotic Green New Deal that you’ll hear a lot more about



LPAC

omy, the economy is treated like one of those “all you can eat” buffet table restaurants. Every sector has its own dish, and none is more or less important than the other. If you like space, you put some of that on your plate; if you like high-speed trains, you put it on your plate; if you don’t like brussels sprouts, or Wall Street gambling—don’t pick that, you know. You grab what you like.

Now I am going to tell you that this approach to humanity’s long-term survival on the planet, and in our Solar system, is not merely a wrong opinion, but it is tragic, and condemns human civilization to a miserable existence of war, poverty, and eventual extinction, sooner or later. These [Figure 1b] are the consequences of a no-growth system.

A far better metaphor to imagine human economy, is a vehicle driving us to our destination. If our destination is to raise society above the poverty line,—more importantly to eliminate poverty completely—I don’t believe in “raising above the poverty line,” I think we have to completely eliminate poverty—if our destination is to eliminate horrible diseases, to stop wars, to end cancer and AIDS, then the economy, as Lyndon LaRouche made clear in his “The Woman on Mars” broadcast, is the means by which we get to our destination.

In this metaphor of the vehicle of the economy is what is impor-

tant. What is the important part of the vehicle? What makes it go forward? The engine! And the most powerful engine known to man is human space exploration. Think about it.

Why Human Space Exploration?

Why human space exploration, and not something else? Why not more money in the economy?

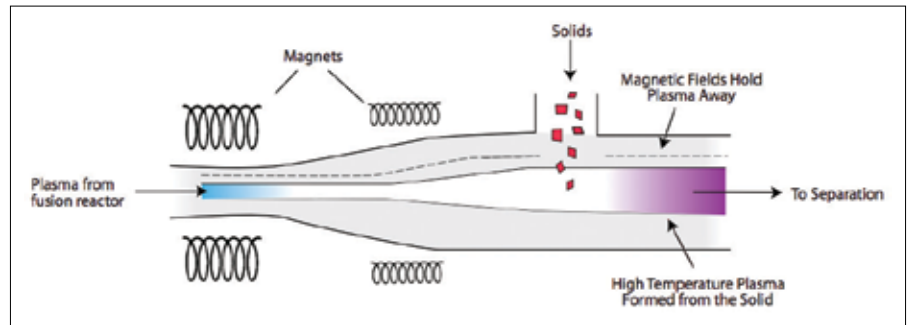
Because humanity is a space-based civilization. We live in our galaxy and Solar system, and whether you think about this or not, your day-to-day life is profoundly affected by activity in space. This is most obvious with the Sun, but also ca-

tastrophes caused by space weather and asteroid impacts. I don’t know if people remember this, but yesterday was the sixth anniversary of the asteroid explosion over Chelyabinsk, Russia. And, more importantly, through the millions of ways that technology spin-offs from human space exploration permanently increase the standard of living of society, everywhere it touches.

Quite simply, the most efficient driver of human progress, the one that gets us to our destinations of eliminating poverty, disease, and war, the fastest, is human space exploration. This may not seem so obvious, but it should become clear as we think about the subject and theme of this entire conference, and what we’re doing to raise a new epoch of mankind.

The achievement of a permanent lunar presence is the gateway to the development of a human economy in space and is essential to the development of a productive economy and city-building here on Earth.

FIGURE 2
Schematic Diagram of a Plasma Torch



I want to take a moment here, because this very much reflects the work of Mr. LaRouche's Fourth Law, in his "Four New Laws to Save the USA Now." Here you see [Figure 2] a basic schematic of a plasma torch. The idea here, is everything from seawater to landfill waste can be heated into a plasma, where it becomes magnetic, and then specific elements can be mined from that like nickel, gold, iron, and so on, and can be distilled out at the isotopic level, and used in the economy.

This is one reason why Lyndon LaRouche has emphasized that a program for the economic development of the Moon, in conjunction with a crash program for fusion power, would be one of the most important scientific driver programs for mankind. Fusion, which will be explained further, does not just help us to make faster rockets or producing abundant electricity, it allows us to have complete control over the isotopes of the elements of the periodic table.

In his [policy document](#), "The Four New Laws to Save the USA Now," published in June 2014, LaRouche wrote:

Progress exists so only under a continuing, progressive increase of the productive and related powers of the human species. That progress defines the absolute distinction of the human species from all others presently known to us. . . . A fusion economy is the presently urgent next step, and standard, for man's gains of power within the Solar System, and, later, beyond.

The Direct Fusion Drive

Let's look at some of the impressive work underway on fusion. There is a three-minute [video](#) that I'd like to highlight here, which shows the potential of fusion power. This gentleman, Michael Paluszek, at Princeton Satellite Systems (PSS), has given a presentation on helium-3 and interviewed with our organization before. He and the others at PSS have an impressive new program that they're working on, fusion for long-term space exploration.

The video tells the following story:

Dr. Samuel A. Cohen, Director, Program in Plasma Science and Technology, Princeton Plasma Physics Laboratory: Direct Fusion Drive is a new



PPPL
Michael Paluszek (right), Samuel Cohen (center), and Stephanie Thomas (left) inspect their Direct Fusion Drive device at the Princeton Plasma Physics Laboratory.

concept for propulsion based on fusion energy, and it provides in a single package both propulsion and electrical power.

Stephanie Thomas, Vice President, Princeton Satellite Systems: So this Direct Fusion Drive (DFD) is really a game-changing technology, enabling us to reach deep space destinations much faster than and with vast amounts of electric power. NASA's interested in a variety of deep-space destinations, such as getting to Jupiter in one year, Saturn in two years, Pluto in four to five years. A single DFD engine, on the smaller side, so, a 1 MW DFD engine, can do any of those missions.

We can literally fly straight to Pluto, fly straight to Jupiter, do not stop, do not pass Go, do not collective \$200, fly directly to your destination! That's a dramatically different way to operate deep-space missions. It will save time, it will save money and we'll be able to do more science when we get there.

Male: DFD is under development at the Princeton Plasma Physics Lab.

Cohen: In DFD, rotating magnetic fields created by antennas on the front and back of the vessel and on top and on bottom, create current in the plasma and that current helps to confine the plasma and to heat the plasma to about 1 billion degrees Centigrade.

So the purpose of the DFD is to make thrust, but the fusion reactor makes energy, it makes energetic particles, so you have to convert that energy into thrust. We



Courtesy of Krafft Ehrlicke

Krafft Ehrlicke

do that by allowing the fusion particles, the fusion products, to pass through the scrape-off layer, heating up the plasma there, and that plasma shoots out the nozzle, generating the thrust.

Male: DFD is different from other fusion concepts because it is much, much smaller.

Cohen: Ours, which you can see behind here, would be about the size of a minivan.

Michael Paluszek, founder and President, Princeton Satellite Systems: The current machine, PFRC-2, very efficiently heats electrons and we're upgrading the power supplies so that we can heat ions.

Cohen: If we can heat the ions, in this machine, to about 10 million degrees Centigrade, we could prove some of the physics theories that have told us we can make the fusion reactor.

Paluszek: A 1 MW power plant is ideal for a wide variety of applications. This includes military forward power, remote power, affordable power, emergency power, powering mines in the Yukon, and powering spacecraft.

Thomas: There's a lot of interest in searching for

life on Europa which is one of the moons of Jupiter. We could get there in one year with just a single DFD engine.

Paluszek: With a few kilograms of fuel we have enough power for more than 10 years.

Cohen: We could deflect asteroids that might be coming towards the Earth, that would cause major damage. Working on this is very meaningful: The ability to provide power to people on the Earth, the ability to explore the planetary system, to go beyond the planetary system.

Paluszek: We're excited about the future, because DFD opens the door to new applications that are not possible today.

Shed the Cultural Residue of the Beast

I would like to conclude my remarks with a quote from the great visionary and space pioneer Krafft Ehrlicke, who was a great friend and collaborator, mentor, of Lyndon and Helga Zepp LaRouche. His dedication to the true cause of space continues to inspire us.

Krafft Ehrlicke's [paper](#), "Lunar Industrialization and Settlement: Birth of a Polyglobal Civilization," in which he develops five stages of lunar development centered on the increase of what Ehrlicke calls the "human sector." Now, for time reasons, I'm not going to go through all of Krafft Ehrlicke's beautiful concepts of lunar colonization and lunar settlement, but I will share his words that well encapsulate his vision and principles: [**Figure 3**]

The most important aspect of Lunar development lies in the human sector. It bears repeating that technological progress and environmental expansion are no substitutes for human growth and maturity, but they can help the human reach higher maturity and wisdom.

That is our mission, to shed the cultural residue of the beast, and at last enter into the long-awaited age of reason. Let us again dedicate ourselves to the future of mankind as the Creator intended for us, as man in the universe.

I thank you very much for your time. [applause]

What NASA Has Done and Where NASA Is Going

This is the edited transcript of an address by Thomas Wismuller to the Schiller Institute conference in Morristown, N.J. on Feb. 16, 2019. Mr. Wismuller chaired the Oceanographic Section of the 2016 World Congress on Oceans held in Qingdao, China, and is a founding member of [The Right Climate Stuff](#) group, composed of “retired and highly experienced engineers and scientists from the Apollo, Skylab, Space Shuttle and International Space Station eras.”



Thomas Wismuller

EIRNS/Stuart Lewis

soundness, engine parts, so you don't have to break a piece of metal to find out when it's going to break. You don't have to take apart a plane. That saves an awful lot of money.

Human Factors Training (HFT) is how people behave in the cockpit in emergencies. That has been credited with saving a number of aircraft in emergency situations. NASA developed that technique. We've also pioneered research in lightning effects; not just planes getting hit by lightning, but the effects of lightning on ground con-

Let me start by letting you know that Kesha Rogers says what she means, and she means what she says. We've been involved with Kesha down in Houston at a number of presentations that she's organized; she's been invited to the NASA TRCS [The Right Climate Stuff] group. She is a firm believer in the continuity of the space program, and I applaud your efforts in that, Kesha. [applause]

NASA's Contributions Benefit the World

Sixty years and we're back on track and getting better. Most of you don't even know that we're back on track, but we really are. We've had almost a moratorium on space development over the last number of years. I'm going to talk about what we have done; how NASA has benefitted not just America, but the world. Then I'm going to talk about where we're going to be going.

We've had advances in aeronautics and spacecraft design, chemistry, clothing, electronics, exploration, medicine, physics, and maybe most important, technology management. Because that's where NASA really excelled. Let's look at some of these things.

Aeronautics & Spacecraft Design. We have safer aircraft because of NASA research on wind shear sensing. The pilot now has information that ahead of the plane there is wind shear; this was developed by the agency. Non-Destructive Testing (NDT) is used for aircraft

controls, and radars. We've been able to harden airports so that they don't get affected by lightning strikes. Spacecraft hatch door fixes—most of you know about the tragic fire that was on the pad where the astronauts couldn't get out of one of the earlier Apollo flights. One of the Apollo flights landed in the ocean, and the astronaut couldn't get out; we had to change that. Now we have easy egress in emergencies.

Heat shield systems we've improved. The International Space Station [ISS] structural integrity—The station, by the way, has components and modules that were developed in a number of countries. Canada has one, Japan has one, the European Space Agency has one. We've been able to put them together and manage so that the ISS is structurally sound; it's been flying for a number of years. Hundreds of astronauts have visited it.

Chemistry. How about chemistry? Most of you are aware of plastic wraps and space foods and things like that. Carbon fiber materials were also developed by NASA. They're lightweight and good for building things in space. NASA has made advancements in metallurgy, particularly powder metallurgy, coating. Jet planes could not fly as well as they do, without the powder metallurgy that makes turbine blades harder and less subject to heat strain.

Battery development and fuel cell development have been important. Fuel cells are important in even think-

ing about building a lunar outpost. Propulsion maneuvering for spacecraft—sometimes jets get stuck. In fact, Neil Armstrong was selected as the first person to land on the Moon because he had saved a prior mission—the spacecraft was out of control with an open fuel jet that was stuck, and the spacecraft was rotating at almost 1 rpm per second! He managed to save the mission and his life and astronaut Charles Duke’s life, too.

Look at environmental chemistry. All kinds of issues exist in space that astronauts have to be aware of. We have detectors on satellites that see what’s going on, on the planet. We’ve made major milestones in understanding our planet from space.

Most of you are probably wearing some clothing that was improved by NASA, particularly hi-tech fabrics (advanced composites). The integration of synthetic and natural fibers, fireproof garments. Every firefighter in the country now wears material that was developed by NASA, here on Earth, such as lightweight insulation, fastenings—not just Velcro, but other fastening systems; space suit technologies spin-offs are all over the place. Bullet-proof outerwear—police departments all over the world have them; soldiers have them.

Electronics. One of the problems we had in early space flight was that things were heavy; spacecrafts were heavy; vacuum tubes were heavy. So, transistor and microchip development.

We did not invent the transistor at NASA, but we improved it, and then we abetted it by integrated circuitry. All designed to shrink the electronics, make them lighter, and make them more effective. We have antenna development, worldwide GPS. None of that would have happened without NASA. Remote sensing—optical and electromagnetic; this is sensing things from far away, including an astronaut’s bloodstream, so we could sense that and send it back to Earth to let people know these astronauts are pretty healthy. Imaging systems have been improved markedly; the earliest photographs of the landers on the Moon were pretty grainy. Now, we have tack-sharp imaging systems. Photovoltaic systems. A number of household electronics have been improved. Blenders, vacuum cleaners, all have been abetted by technology developed at NASA.

Exploration. In 1990, the Hubble Space Telescope opened up the universe. We are the only species on this planet that can conceive of a Hubble Space Telescope, send it up there, and know what we’re looking at. It took us quite a while to get that going. More than 250 robotic and lander rover missions on the Moon, on

Venus, on Mars. Some of them are still functioning. Remote antenna development, so we can actually get signals back and forth, and improved camera data transmission rates.

We’ve gotten lots of lunar and martian rocks; actually we have 14 rocks from Mars that we found *on Earth* because they matched a composition of rocks that we knew were on Mars; we found them on Antarctica. It must have been a meteor that blasted into Mars millions of years ago, as we have found martian rocks buried in the ice in Antarctica.

Multi-wavelength exploration systems have improved our surface and subsurface analysis. Interesting is Near-Earth-Orbit asteroid monitoring; we didn’t have that before. We know that there was a giant asteroid that wiped out the dinosaurs, and one that hit the Chesapeake Bay 35 million years ago. We have advanced warning now; we never had that. Solar observation—the Sun is the most important thing for life on this planet; without the Sun, we’re all gone. Sending satellites near the Sun, NASA has learned an awful about the Sun. We now have a satellite inside the orbit of Mercury, studying the Sun.

Medicine. You can’t walk into a hospital today and not be positively affected by developments that NASA helped bring along. MRI and CAT scanning technology. Insulin and hematological pumps so you can do a heart transplant and continue the body circulation going; that was a development that was abetted by NASA. Infrared temperature sensing—you can now go into a hospital and they can sense your temperature without touching a mucus membrane; that used to be a great spreader of disease. Basically they look at the infrared signal coming off your eardrum; they don’t have to touch anything that would get you sick.

Human safety (food hazard analysis) has been developed. When you have a long-term mission on the Space Station or Apollo spacecraft, food can spoil. We have learned what makes food spoil, and how to prevent it from spoiling; that’s been passed on. Artificial limb design improvements—we’ve learned from designing the legs on robotic explorers how to better improve the legs on people who need prosthetic legs or arms.

Physics. Basic research has been abetted by NASA with space telescopes and things like that. We now know with precision where the planets are; that’s what I mean by solar system metrics. Astronomy advancement has been stunning, and we’re about to launch the

FIGURE 1



White House

Directly after signing Space Directive 1, President Trump accepts a toy spaceman from Jack Schmitt, the last human to walk on the Moon. Buzz Aldrin is behind Schmitt. Peggy Whitson is on the far right. Dec. 11, 2017.

Webb telescope that's going to see the universe in different wavelengths. I'm going to recommend postponement of that. Energy management. Better communication and bandwidth enhancement. Not just from Earth to space and between the planets, but here on Earth. We're able to transmit radio signals and TV signals far better than we did in the 1950s and 1960s when we first started doing the research.

Thermal research advances—aviation, aeronautical systems and safety. Your planes are safer. The “A” in NASA stands for aeronautics—National Aeronautics and Space Administration; there's a whole section of the agency that does this.

Technology Management. Here's something that NASA had started—open patents. If we had a patent that gave NASA information technology, it was an open patent; everybody could use it. It was not a secret, it was not sealed. Cost Plus Fixed Fee contracts and Cost-Plus Incentive Fee contracts—if we wanted to do something that we didn't know could be done, we would ask contractors to do the research, and we would pay them an incentive fee if they got it right. Sometimes we had no idea we could do it right. Progress reporting, program evaluation and research techniques—Kepner-Tregoe (KT) and other problem-solving systems. It was the KT system that figured out what happened to Apollo 13. That was a situation where we had no evidence whatsoever, no hard evidence to look at, and we figured out what happened.

Most important maybe is the work breakdown structure. In order to send a spacecraft to Mars, to the Moon,

you have to know *every little piece of information* that has to happen. We would color-code them: green would be something that we know somewhere we could build; orange would be something that maybe we could build; red was, “Oh, this is not going to work; we have to do something to find out.” We did those work breakdown structures for every launch, every Moon mission. They were stunningly competent. Why? Because when all the blocks in the work breakdown structure were filled, we knew we could make it happen; and we did.

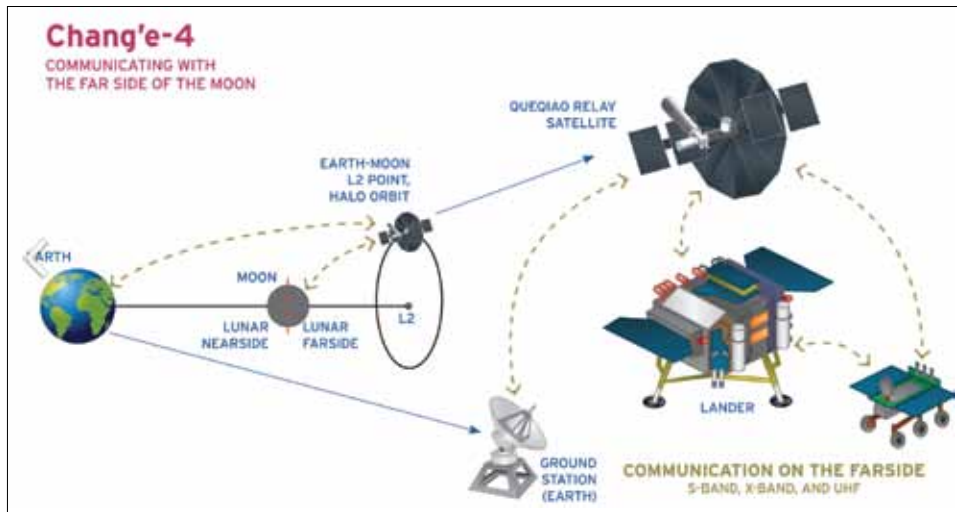
Where to, NASA?

On December 10, 2018, President Trump signed a new space policy and program directive, “White House Space Policy Directive 1,” ordering NASA to go back to the Moon. So, here [Figure 1] you have Jack Schmidt, the last guy to walk on the Moon, giving President Trump a little spacesuit guy. Buzz Aldrin is behind him. Buzz doesn't want to go to the Moon; he wants to go to Mars. I'm going to talk about Buzz in a bit. And there's Peggy Whitmore, who has spent more time in space than anybody else: three missions, 600 days in space. We're all celebrating that directive.

We have never landed anybody or anything on the far side. But guess what? China did, and China just did that last month! [applause] Here's how they did it. They put a relay satellite behind the Moon at Lagrange Point 2 [Figure 2]. That's the point where, if the Moon rotates around the Earth, that point rotates around the Earth with it. So that relay satellite will always be in the same spot. (Notice it goes around in a circle.) Why? Because, from Earth, you want to be able to relay. The Chinese put that relay satellite in orbit, and then on January 3, 2019, they put down a lander and a rover.

We have a 2-minute [video](#) for you to see the landing of the Chang'e-4. You'll see the horizon slowly compress. Two billion people have seen this video, very few of them Americans. Starting out at about 10 miles up, now, Chang'e-4 is coming down. Notice the horizon is getting tighter and tighter as it comes down. Now the spacecraft is getting close. Then something strange happens: now, look where it's heading, close to a hill. If it lands on that hill, that's a little bit dangerous.

FIGURE 2



CC/The Planetary Society/Loren Roberts

So as it's coming down closer and closer to the hill, the Chinese controllers said "Uh-uh! We're going to go somewhere else." And they could do that, through the relay satellite. If it were to land on the hill, it may tip over a little bit. Now, you'll see a zoom in on the lander. It's not going to land in a crater here; here's another hill. It's heading right toward it. Can't do that! It takes 3 seconds for the correction signal to get back from Earth, that's why there's a little bit of a delay. Now it moves slightly off that hill. It's coming down; it's landing, there's dust getting kicked up, and dust settling; and you're going to get a tack-sharp look at where Chang'e 4 landed on the lunar far side. That's worthy of applause. [applause]

In the background [Figure 3], by the way, you can see the hill that it missed. This is not the one you want to land on. Then, the Yutu-2 rover was sent out [Figure 4]. You can see the tracks it has made. It's doing exploration right now, taking very good pictures. Go online, google Yutu-2. They've made a beautiful panorama of the lunar far side where they landed. This is a neat achievement.

Why hasn't America done this? We basically put our

FIGURE 3



CNSA

FIGURE 4



CNSA

space program on hold for the last eight years. We've had remote satellites, but those projects were started in the 1980s and 1990s, and they went to the outer planets.

Get NASA Going Again!

We need to get the agency going again. How are we going to do that? When we went to the Moon with Apollo, we went directly to the Moon and we landed. That was very expensive, and it required a big rocket. It was President Kennedy's achievement, and of course

of the Apollo astronauts.

We need to have way stations in between; the International Space Station, depots, and space tugs. We've decided on the Lunar 'Gateway' Project. The Lunar Gateway has space tugs; they never land on Earth. They get taken into space, and shuttle back and forth between the Moon and the Gateway.

Buzz Aldrin was in that Space Directive 1 signing ceremony, because he wants to go to Mars, and Mars is part of the Lunar Gateway idea. He was very happy about it, because this is going to be a gateway to Mars, too. This is what the gateway looks like [Figure 5]. It's going to orbit the Moon. It's a couple of modules stuck together with some solar cells; we're going to be able to put people in there.

Jim Bridenstine, the new administrator of NASA, about two days ago was talking to industry about how we are going to use the lunar gateway; putting it out for

FIGURE 5



NASA/Dennis M. Davidson

Artist's depiction of human activities on the Moon.

they're going to pick them, and then they're going to put together a decent program [Figure 6]. We want to have rovers and habitats on the Moon, people being able to walk around. People looking for helium-3, which you can take back to Earth and incorporate into fusion technology.

Buzz Aldrin has a picture of himself standing there in front of Stonehenge with a great T-shirt on that says, "Get Your Ass to Mars!" This is typical test-pilot language. Phobos is the fast-moving, inner moon of Mars. It goes around the planet three times in one day; very fast. I'm suggesting that we go to Phobos first, before we go to Mars. Phobos [Figure 7] is a fascinating moon, with stripes—geologists would have a

FIGURE 7



NASA/JPL-Cal Tech/Univ. of Arizona

Phobos

FIGURE 6



NASA

The Gateway Lunar Orbital Platform.

field day there. This image [Figure 8] is what Mars looks like from Phobos; that's how close it is to the planet.

By the way, it's easy to get back from Phobos. Number one, when you go there, the moon is moving so fast you don't need that much fuel. When you take off to go back to Earth, get off on the other side, and you can save fuel on the way back.

Going to Mars is not that important, even if I just told you about going to Phobos. Why? It's what we learn by the journey, the technology we develop, the same kind of thing we did with Apollo. We're going to spread it all over the world again. That's how we use it; that's how humankind will flourish.

Space-faring is a wonderful alternative to war. Thank you, folks.

FIGURE 8



Artist's depiction of Mars as seen from Phobos.

What Makes People Exceptional

This is the edited transcription of Larry Bell's address to the Schiller Institute conference in Morristown, N.J. on Feb. 16, 2019. Mr. Bell is an endowed professor in the University of Houston's Hines College of Architecture and founding director of the Sasakawa International Center for Space Architecture at the College of Engineering, University of Houston. His name was on the first rocket that took Americans up to the Space Station with the Russians.

I think the title of my talk tonight is quite appropriate. We've heard a lot about an exceptional person today, and that was very interesting to me; a pretty remarkable person. I've had the good fortune to know a lot of remarkable people, including most of the Apollo astronauts and the people who built that program. I'm pitch-hitting tonight. Walt Cunningham, Apollo 7 astronaut, was supposed to speak here tonight. So, I got a call from Tom Wismuller a couple of days ago, and he said, "Do you want to go to New Jersey?" I said, "It's a lot warmer in Houston." So, Walt couldn't come. He's a dear friend of mine; we've been friends for many years. He had an appointment with the doctor, and he said, "I want you to please tell everybody, I really wanted to come." It was very genuine.

People in the space program like to deal with complex stuff. That can get us into a lot of trouble, because climate is complex stuff; it's very challenging. I know Tom also from the Climate Camp; a lot of people that Tom helped organize at the Johnson Space Center are applying their analyses that they developed and their technological approaches to problem-solving to look at how climate works and how the media doesn't. So, a lot of us became "climate junkies" as well.

Climate of Corruption

I wrote a couple of books on climate. One is called *Climate of Corruption; The Politics and Power Behind the Global Warming Hoax*, which gives you a pretty good idea of what the book is about. It was dedicated to Al Gore, and the dedication said, "Dedicated to Al Gore, whose invention of the Internet made this book possible, and whose invention of facts made it necessary." I didn't get a publisher right away, because most of them are located on the East Coast and the West Coast. I had to go to Austin to get an agent.

But anyway, I got in enough trouble on that book that some of my scientific friends said, would I write another book? I write a lot; I've written coming up on 600 articles for Forbes Newsmag, on a lot of different topics. I guess I'm coming up on nine books, just in the past few years.

Remarkable People

The book I'm working on now is being co-edited with someone you just saw, Buzz Aldrin. *Beyond Footprints and Flagpoles* is the name of the book. Buzz really wants to go to Mars, and he thinks we should go one-way. He says, after we go to all the cost of taking people to Mars, why in the world would we bring them back? And he's serious; Buzz is passionate. Buzz is one my very closest friends; has been for 40 years—house-guest and friend and buddy. There are two things he cares about: He cares about space, and he cares about his family. He's really a remarkable person. I didn't go to see the "First Man" movie for two reasons. One, because it was the first *men*, not the first man.

The Apollo program, and that landing in particular, involved three astronauts. Two of them went to the surface, and they got there, their butts hit the ground at the same time. They took the same risk, and they're both outstanding people, and I knew them both. I know one of them, and I knew the other one. Quite different kind of people, but they're marvelous people. You think of the history: They were jet pilots in the Korean War. Neil nearly got shot down, and lost a wing, and Buzz shot down two Soviet MiG fighter jets. Both of the pilots ejected, and he's pleased that that happened. But Buzz actually sat in his class at West Point; he's not a dummy. He got his PhD at MIT in orbital mechanics.

These are remarkable people. I look at the astronauts, and I look at NASA, and I know so many of these people. And they're a bunch of grown-up Boy Scouts and Girl Scouts; they are so straight arrow you wouldn't believe it. But they're different also; they have different personalities, they have different views, but they have some other important things in common.

So, I was very pleased, I knew nothing about this conference. I'm very pleased to be invited. I'm equally pleased at what I saw today. It was inspiring to me; it was interesting to me, the people I meet—you people.

I write a lot, and writing is very solitary. I sit in my office, and I type with two fingers. I figure when I write a book, it's like 100 pages; I figured out a 300-page book is 100,000 words. There are about five letters in a word, and then I miss every three words. So, I figure it's a million keystrokes. My finger was this much longer before I started doing this, and I never learned how to type because when I was in high school, only the dorky guys would take typing. Unless you wanted to pick up a girl, why else would you take typing? And look at me; do I look like I needed to go to that level? Come on.

But this conference has been really an eye-opener for me, and a mind-opener, and I think a soul-opener. I thought the music today was absolutely wonderful. I've never gone to a conference where they had a concert before; certainly not NASA.

The Wrong Climate Stuff

I write about many things—and the climate stuff is one. NASA does wonderful things, but they do crappy climate science. They've got this little office in a Manhattan office building called the Goddard Institute for Space Studies. Now that is a travesty; Goddard is the father of space flight. Whenever you hear “the warmest day in 100 years” and all that stuff, it's coming out of the Goddard Institute for Space Studies. They have the audacity to attribute it to NASA, and it's disgusting.

So, in my first book, which got me into some trouble, but it's good trouble, Walt Cunningham—I'll share some words with you—he wrote a tribute on the back of my book. This goes back a few years. Here's what Walt said:

Those of us fortunate enough to have traveled in space, bet our lives on the competence, the dedication, and integrity of the science and technology professionals who made our missions possible. In the last twenty years, I have watched high standards being violated by a few influential climate scientists—including some at NASA—while some special interest opportunities have dangerously abused our public trust... This important book shines light on these self-serving agendas, shady political dealings behind the global warming hoax. We absolutely must change while there is still time.

Commercialization of Space

Science got us to the Moon. We didn't always know we were right, but we wouldn't have gone if we didn't think we were right. I have links both in the government side of things, also the commercial side of things. One

of the companies I started was with Maxime Faget, chief engineer at the Johnson Space Center, who started the Shuttle program. Then, two of the former directors of the Johnson Space Center were on our board, as well as Neil Armstrong and so on. That company grew to over 8,000 people, was on the New York Exchange, and then General Dynamics bought us.

So, I believe in commercialization of space. I believe that there are opportunities, I'm excited that we see what Elon Musk is doing. I don't like all his dealings with Tesla and our tax subsidized cars that we're doing for him, and some of this other stuff. But they are making progress. We see now Jeff Bezos and others who are making progress, and I think we're going to see the cost of entry to space greatly improved, which will make everything much more economically reasonable with the commercial sector really now being involved. Right now, I think it's mostly NASA's out-sourcing of work, rather than really going there for the gold. But hopefully that will come. Certainly the satellite business came out of the space program, and your GPS and everything else that came out of that is attributable to the space program.

I want to pick up on a comment that was made earlier today, and this is out of sequence, but it was a discussion of pessimism. And that word I think is such an important one at this conference and I think in our country. But I would like to add, my comment is that pessimism has been weaponized by identity politics. We've heard from LaRouche and others that we should look forward and pick a tall flagpole to direct our planning to, beyond our children, perhaps beyond their children, and guide ourselves by that longer flag. I think the notion that we can do things, that we can believe that we can accomplish things, is just terribly important.

Whole-Brain Thinking

I wrote a book, *Thinking Whole: Rejecting Half-Witted Left & Right Brain Limitations*, on what it is that makes people really exceptional; which is the topic of my talk. And I'm going to have to cut this short. In that book, I look at personal friends of mine—Jane Goodall is a good friend, and she went to Africa and tried to find out what we can learn from chimpanzees that made us more human. And found out that no, they kill each other and bite each other's faces off. So, we have to depend on ourselves rather than chimpanzees. Chimpanzees are cute; I have nothing against chimpanzees.

In my book, I broke it down into five categories of things that people care about. One is that they're observers; they care enough about the world and what's

going on around them—that they observe things that are going on around them. I think creativity is an analog activity; you see something here that you notice, and you apply it to something over here. And someone says, “Yeah, but that was purple, and this is red.” And you say, “Yeah, but they walk differently.” It’s the ability to observe things; and we all observe different things from our own perspective and our own background. But being tuned in to what’s around you is so important, politically and naturally and everything else.

The other thing that I think defines people, that makes them incredibly successful—it doesn’t always end well for them, but we learn from them—is that they have the capacity to care about something. They really, really care; which is why it makes them persistent. The reason they keep getting up and they keep doing things is because they really care. I broke this into five categories, from looking at my friends and people from history and so on. One category is the humanitarians. Humanitarians are very caring; they’re people people. You see them as hospice workers and doctors and teachers and people who really put themselves out there and connect with other people. Any of us who have been to the hospital a few times know what that means.

The second category I put are the visualists. We saw some of them today playing music for us and so on. I don’t call them artists, because people think art is something you hang on a wall. It’s the visionaries, the ones who have the vision of the music, the vision of the beauty, the vision of humanity and so on. They’re sculptors, they’re architects, they’re people who have a vision you can’t really quantify, but you feel it.

The third category I have are the scientists. The scientists want to solve how does quantum theory work? It violates Newtonian physics: How can it work? But it works. And now we have quantum computing right now that shows that it works.

Space Provides Us with So Much

I wrote another book, *Reinventing Ourselves; How Information Technology Is Rapidly and Radically Transforming Humanity*. Some of it is really scary. We can Skype now with grandma, and we can do these things. My analogy is, it’s the boiling frog analogy. We’re submersed in this water, there’s technology around us; we have social media, we have all these other things. Our bodies keep adjusting to the temperature, the water keeps increasing in temperature. They say, “Well, we’ll give you more security cameras everywhere. Never mind that Siri is listening to you and so

on—oh, I forgot; she’s here. Never mind this; just give us a little more of your privacy, and we’ll give you more security, we’ll give you more convenience.”

Pretty soon you can’t jump out of the pan, and you boil. I think that’s where we’re heading; so I wrote the book. I thought: Is this my worst nightmare, or an exciting dream? With technology, I can now telecommute to work; I don’t have to drive to work, I can do stuff.

We have a choice. We can look at space, and we can say, “OK, where did the space program come from?” It came from buzz bombs flying out of Germany, being built at Peenemünde; they were raining down on London. We had Apollo-Soyuz, which was, “Can’t we all get along?” during the Cold War. Can’t we all get along? We’re looking at the Earth now from space, and it’s very fragile. The atmosphere of the Earth is like the skin of a grapefruit, thick compared to the Earth. So, can’t we get along? Can’t we go to Mars together? Can’t we be part of this larger humanity?

We Go into Space Because It’s Our Destiny

I have students from all over the world. I’ve got Siberia, I’ve got India, and so on. They come into the program for a year and a half. We look at every aspect of space—mission planning, trajectory, spacecraft design. You think of space being specialized on a lot of stuff. We learn about radiation issues, cosmic radiation, solar energy particles. How do you land something; how do you move it; how do you connect things together; what happens when your muscles and bones demineralize because of low gravity; and all that kind of stuff. That’s what we do.

I ask my students—because they come here from all over the world—why would you give up a year and a half of your life to do this? You must think there’s a future.

I want to pick up on what Tom said. Why do we go to space, when there are so many other priorities? Why do we go to space? One reason is, I think, we do it because we want to, because it inspires dreams and inspires exceptional achievements. It’s something that lifts us, draws us, expands us. We do it to expand advanced technology, science, global culture—things that Tom was talking about. We go there to motivate learning; to get young people thinking about something that maybe they can apply, maybe they’ll learn something about physics and sciences. Maybe, if we’re really lucky, they’ll even learn about global warming.

We go there to transfer lessons, as Tom was saying, about how we do things, so we can keep the planet from becoming an extreme environment. And, we go to space because it’s our destiny to do so. Thank you.

BENJAMIN DENISTON

LaRouche's Strategic Defense of Earth

This is the edited presentation of Benjamin Deniston, a leader of the LaRouche PAC Scientific Research Team, to the Schiller Institute conference in Morristown, N.J. on Feb. 16, 2019, as prepared for delivery.

I'm going to discuss mankind's future in space, but from a slightly different perspective—from the standpoint of the Strategic Defense of Earth from the threats and challenges posed to all mankind by the very nature of our existence in the Solar system and in our Galaxy beyond.

We are going to look at the threat of asteroid and comet impacts on the Earth, the danger of solar flares and electromagnetic pulses, and the challenges, the *real* challenges of climate change, which are the natural climate variations that mankind has to deal with to survive.

We tend to think of ourselves as living on Earth, with Earthly origins, and Earthly destinies. That mentality is no longer going to cut it. We don't live on Earth, we live in the Solar system, and in our Galaxy.

Mankind has a choice: we can rise to that level—to become a species of the Solar system, an inhabitant of the Galaxy—or we can deny that destiny and ensure our own extinction. This is a question about the true nature of mankind.

LaRouche's SDI Principle

The Strategic Defense of Earth, or SDE, was named in reference to the Strategic Defense Initiative, the SDI. If we wish to truly understand the SDE, we have to look to Lyndon LaRouche's unique conception for the policy of the SDI. Mr. LaRouche was one of the original authors of the SDI policy. He operated as a backchannel between President Reagan and the Soviet leadership.

References to the SDI continue to have existential importance for today. Still today the world is threatened



EIR/Stuart Lewis

Benjamin Deniston

by geopolitical conflicts, and the looming danger that tensions between the United States and Russia and China could be pushed over the brink, leading to full-scale nuclear war and civilization's likely annihilation. The fundamental question remains the same today, as it was when LaRouche authored his conception of the SDI: On what scientific basis is it possible to sustain peace among the leading powers of the planet?

It is impossible to answer this question without also understanding the true nature of the human species, the scientific distinction which separates mankind from all other forms of life on this planet—and that's the secret of Lyndon LaRouche's unique and superior policy.

I would like to briefly highlight his March 30, 1984 [Draft Memorandum](#), "The LaRouche Doctrine: Draft Memorandum of Agreement between the United States and the U.S.S.R."

In that memorandum, Mr. LaRouche outlined the full breadth and scope of his SDI policy, proposing a policy for U.S.-Soviet relations. It is composed of seven articles, and it's not until Article 5—halfway through the document—that military policy and missile defense are even mentioned.

Towards the end of Article 5, LaRouche writes:

If both powers and their allies were to deploy simultaneously the "strategic" and "tactical" defensive systems implicit in "new physical principles" [LaRouche's SDI program], the abrupt shift to overwhelming advantage of the defense would raise qualitatively the level of threshold for general warfare. . . . For a significant period of time, the defense would enjoy approximately an order of magnitude of superiority, man for man, over the offense, relative to the previous state of affairs . . .

This would permit negotiation of a tempo-

rary solution to the imminence of a “Launch on Warning” posture by both powers: a solution which might persist for 10, 15 years, or longer. The true solution must be found in the domain of politics and economics, and the further shaping of military relations between the powers must produce military policies by each coherent with the direction of development of the needed political and economic solutions.

Articles 1-4 of this memorandum stipulate the leading, principled features of the required political and economic solutions.

What are the first four articles of the LaRouche Doctrine? They define the scientific nature of technological progress, how mankind can uniquely increase its potential relative population-density, and how to define the economic and monetary policies that ensure these anti-entropic results.

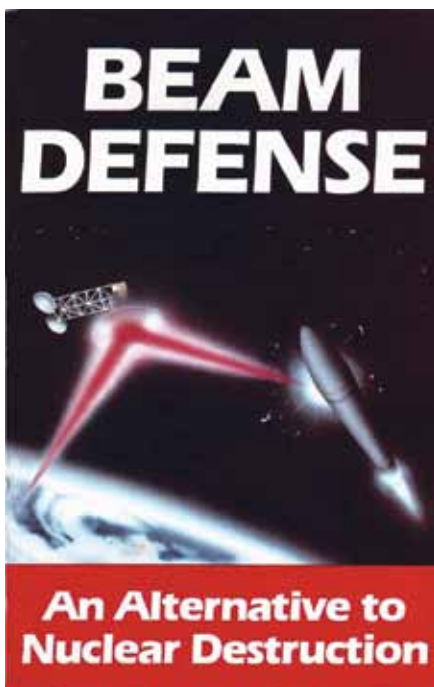
The General Conditions for Peace

As Mr. LaRouche states in the very opening of Article 1 (General conditions for peace):

The political foundation for durable peace must be: a) The unconditional sovereignty of each and all nation-states, and b) Cooperation among sovereign nation-states to the effect of promoting unlimited opportunities to participate in the benefits of technological progress, to the mutual benefit of each and all.

The genius of LaRouche’s SDI program was the science-driver characteristic. The directed energy systems to defeat nuclear missiles required major technological breakthroughs, and if these technologies had been implemented in the civilian U.S. and Soviet economies, they would have generated massive increases in the productive powers of labor, and in the potential relative population-density of both economies.

Combining this science driver program with a program of technology transfer to the formerly colonized



Cover of Beam Defense, a book published by the Fusion Energy Foundation in 1983.

world—allowing the so-called Third World to become modern, industrialized, and productive economies, participating in these advanced technologies—LaRouche knew this was the only true, scientific, and lasting basis for peace.

The specifics of directed energy technologies for missile defense were just a subsumed element of the true policy, while the full realization of the policies required for peace demanded the continuation of the most advanced science driver policies—requiring the challenges posed by mankind’s conquest of space.

As Mr. LaRouche stated near the conclusion of the LaRouche Doctrine,

The powers jointly agree upon the adoption of two tasks as the common interest of mankind, as well as the specific interest of each of the two powers: 1) The establishment of full economic equity respecting the conditions of individual life in all nations of this planet during a period of not more than 50 years; 2) Man’s exploration and colonization of nearby space as the continuing common objective and interest of mankind during and beyond the completion of the first task. The adoption of these two working-goals as the common task and respective interest in common of the two powers and other cooperating nations, constitutes the central point of reference for erosion of the potential political and economic causes of warfare between the powers.

As fundamental, underlying principles, these remain just as valid today as they were when LaRouche authored this document 35 years ago.

From SDI to SDE

Even though LaRouche’s SDI program at the time was not successfully implemented, echoes of this perspective continued following the fall of the Soviet Union. Interestingly, it was right around this time that leading scientific figures began to realize the active

threat of asteroid and comet impacts with Earth.

Veterans of the SDI and parallel efforts in Russia came together around joint U.S.-Russian cooperation in defending Earth from incoming asteroids and comets. Among other locations, a series of high-level international scientific conferences on the subject was held at the Los Alamos and Lawrence Livermore national labs in the United States, in Erice, Italy, and in Russia's formerly secret science city of Chelyabinsk.

Many of these discussions were at the high-technology laboratories involved in missile and nuclear weapons research and development.

Towards the end of the 1990s, explicit support for an SDE policy faded away, although the idea—like any truthful principle—remained just beneath the surface.

In 2011, Russia-U.S. cooperation in asteroid defense was again put on the table, this time by Russia's Dmitry Rogozin—who at the time was acting as a special envoy to NATO on the subject of missile defense. The Russian offer was clear: Rather than supporting the eastward expansion of NATO right up to Russia's borders—threatening an outbreak of nuclear war—the United States should work with Russia on a joint program of missile defense and the defense of all Earth against the threat of asteroids and comets.

This offer was given the name SDE, the Strategic Defense of Earth.

The offer, combined with the February 15, 2013 surprise explosion of a relatively small asteroid over the city of Chelyabinsk, Russia [Figure 1], led to an array of high-level Russian officials putting their support behind the SDE idea.

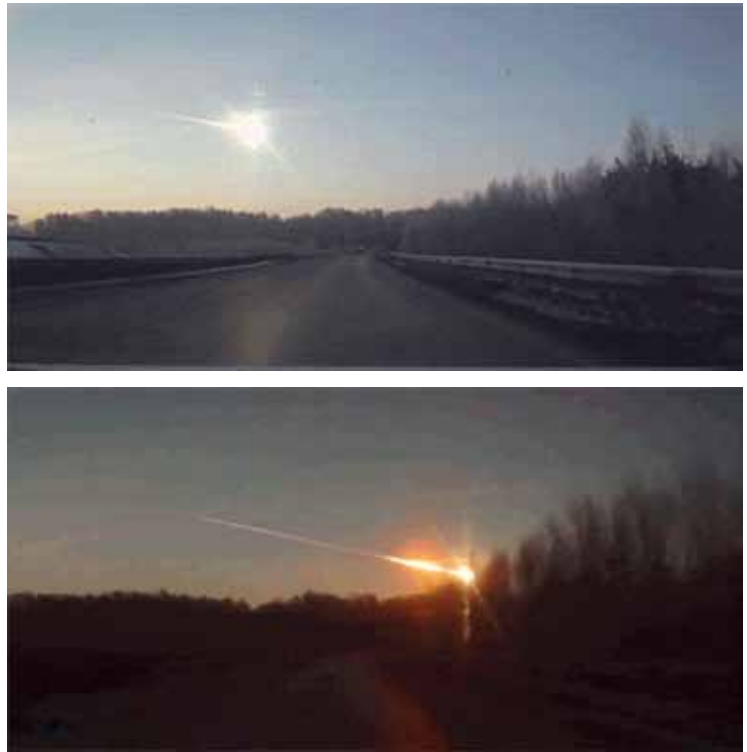
So, the idea for joint cooperation in the strategic defense of Earth has a long and important history and is rooted in the LaRouche Doctrine *based on the scientific principles of a lasting strategic peace*.

Today's Extended SDE

Let's now look at of the Strategic Defense of Earth from the broadest perspective. In doing so, we define a complete coherence between the joint defense aspects of LaRouche's SDI, and LaRouche's deeper insights into the necessity of space colonization and related scientific and technological developments.

The threat of asteroid and comet impacts is very real

FIGURE 1



Explosion of a small asteroid over Chelyabinsk, Russia, on Feb. 15, 2013.

and very dangerous. Although this threat has been talked about, as we have seen, the commitment among nations to establish joint institutions and shared observational data and technologies to address the threat, has yet to occur. Mankind is slowly waking up to the existence of additional existential threats, including solar flares and electromagnetic pulses, natural climate change, and even the frontiers of our relation to our Galaxy.

I will now discuss each of these threats.

Asteroids

Starting with asteroids, there has been some success, led by NASA, in detecting and tracking some of the largest asteroids in the inner Solar system. However, we've barely scratched the surface.

As was demonstrated by the surprise explosion of a small asteroid over Chelyabinsk in 2013, we still do not know where the vast majority of potentially hazardous asteroids are.

This is especially true regarding the smaller and medium-sized asteroids, objects that could easily wipe out an entire city, or even devastate an entire country or

large portions of a continent. For objects of this small to medium size range, it's estimated that there are hundreds of thousands out there, which we presently know nothing about.

For example, a few weeks ago, on February 4, NASA detected a new asteroid that was only seven days away from a close pass by the Earth. They didn't even know it was there until a couple of weeks ago. If it happened to have been on an impact trajectory, mankind would have had absolutely no defense.

The map of Bolide events 1994-2013 [Figure 2] shows a large number of small asteroid

explosions in the upper atmosphere, from the 1990s up until recently. None were large enough to be felt on the surface of the Earth, but many of them, nevertheless, release the energy equivalent of small nuclear bombs, thus demonstrating that such events are regular occurrences, and it's only a matter of time until a large body strikes us—that is, unless we're prepared to stop it.

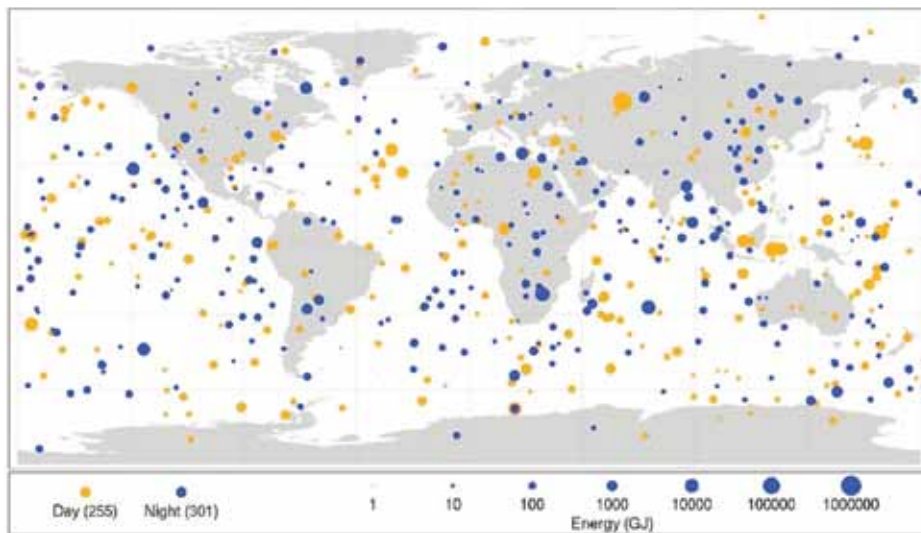
Currently, we have absolutely zero defense for such an event. It is beyond time for the United States, Russia, China, and other leading powers to create shared capabilities for the defense of Earth from such threats.

Comets

Asteroids are not the only issue, nor even the most serious. We also have the even more challenging threat of comets—which tend to be significantly larger than asteroids, with different orbital characteristics, in the range of a few kilometers in size, but which are nearly impossible to detect with our current systems, as the majority of them reside way out in the farthest reaches of our Solar system. One (or more) of these massive objects could be no more than 5 or 10 years away from an impact on the Earth right now. With the current state of our capabilities and understanding we simply don't know.

An example: On January 30, 1996, scientists discovered a new comet, which they named C/1996 B2, originating in the farthest outskirts of our Solar system. By the time they saw this comet, it was only

FIGURE 2
Bolide Events 1994-2013
(Small asteroids that disintegrated in the Earth's atmosphere)



NASA Planetary Science

two months away from what, fortunately, turned out to be only a close pass by the Earth. If that comet happened to have been on an impact trajectory, we would have had no ability to stop it. An impact from an object of this size, coming at us at around 480 km per second, would have been on the border line of an extinction-level event. It'll be back in about 70,000 years.

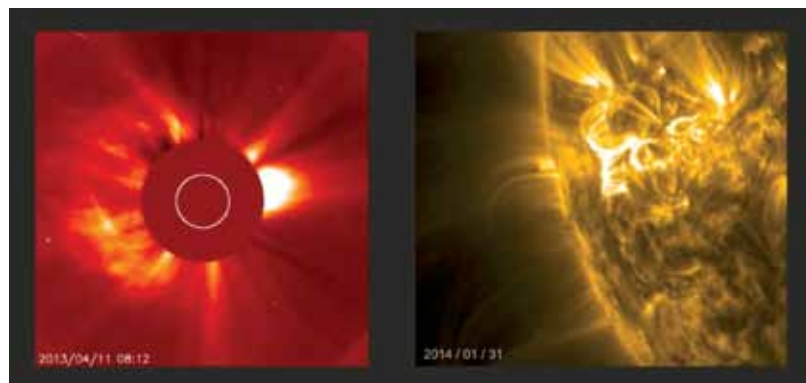
Rogue Planets and More

Beyond asteroids and comets, we face even more exotic threats. To the best of their knowledge, scientists expect that there are countless "rogue planets" out there that have been ejected from their respective stellar systems and are flying randomly around the galaxy. Were a rogue planet to simply pass through our solar system—even without hitting anything—its gravitational effects could substantially alter Earth's orbit around the Sun, rapidly and dramatically altering our climate.

In order for us to even have the ability to competently assess such a threat, we will require a far greater understanding of our nearby galactic environment. Stepping away from asteroids, comets, and other miscellaneous planetary bodies, we will now take a look at yet another category of danger: cosmic radiation.

Only relatively recently have scientists grasped the dangers posed by large solar flares [Figure 3], and the explosive release of plasma blobs from the Sun [coronal mass ejections] that can generate electromagnetic

FIGURE 3



A solar flare event (l.), and loops of plasma reflecting solar magnetic activity (r.).

pulses impacting the Earth’s magnetic field.

For example, in 1859, Earth was struck by a massive outburst of solar activity. The coronal mass ejection hit Earth’s magnetosphere, generating one of the largest geomagnetic storms on record. Auroras were visible as far south as Florida, bright enough to permit the reading a book outside in the middle of the night. Telegraph operators at the time reported received electric shocks, as the electromagnetic surges in the Earth transferred to their telegraph wires. This was later named the Carrington Event.

A similar event today would be catastrophic for the electric power infrastructure throughout the high latitudes. Long-distance, high voltage electric transmission lines are particularly vulnerable, and the surges from such a solar-driven electromagnetic pulse would destroy the largest and most difficult to replace electric transformers. Were a Carrington Event to happen today, we could have dozens of major metropolitan areas without power for months, creating a humanitarian catastrophe.

And solar events of this size are really not all that infrequent. In 2012 a solar ejection occurred comparable to the one that caused the Carrington Event. It missed the Earth by a mere couple of weeks. The vast majority of the world’s population was completely ignorant while we narrowly missed catastrophe; the vast majority to this day don’t even know that this happened.

These singular and large explo-

sive events represent one end of that challenge, but we also have much to learn about slower and more gradual changes that occur over the course of decades and centuries. Some of the most significant climate change in relatively recent human history corresponds directly to changes in solar activity.

The so-called Little Ice Age from around 1645 to 1715 coincided with a period of weakened solar activity known as the Maunder Minimum.

Regional or global cooling of this scale, even over the course of decades, will have major consequences for agricultural production in various parts of the world. A few

independent scientific teams globally think that we could be heading into a similar period of solar weakening during this century [Figure 4].

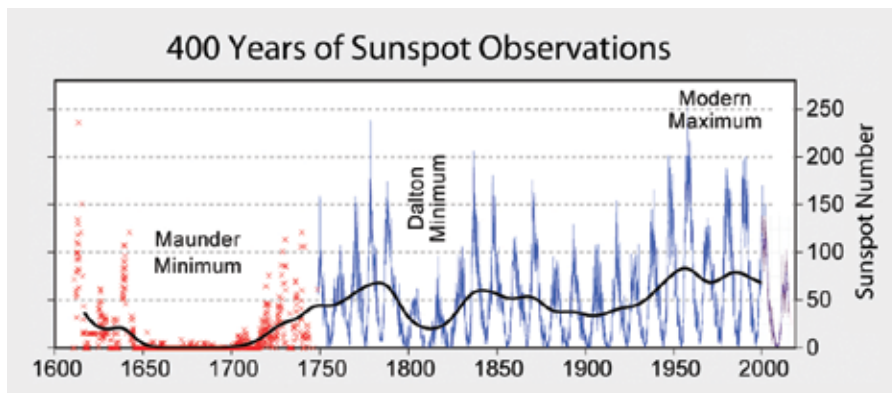
We have to better understand our own Sun, which also requires studying other stars similar to our own—to learn what we can expect, and how to prepare in advance to respond to trouble.

Galactic Relations

From here we can also briefly recognize changes on a truly grand scale, those corresponding to the changing relation of our Solar system to our Galaxy [Figure 5]. Although these changes are measured in time scales of millions of years, we have provocative evidence indicating that, somehow, the evolutionary development of life on Earth may reflect some causal relation to changes in our galactic position.

These galactic relations challenge our most fundamental understanding of science. How shall we come to

FIGURE 4



CC/Robert A. Rohde

FIGURE 5



NGC 2683, a spiral galaxy, observed by the Hubble Space Telescope.

understand gravitational anomalies attributed to so-called dark matter, the astronomical enigmas known as supermassive black holes, and the dynamics and organization of entire galactic systems? We stand at the brink of new eras of science, defined by the higher-order levels of physics associated with galactic systems.

Today's Science-Driver Missions

We've covered quite a range of subjects encompassed by the Strategic Defense of Earth. The threat of asteroid and comet impacts, gravitational interactions from rogue planets, electromagnetic pulses generated by solar mass ejections, Sun-driven climate change, and some deep questions about the effect our Galaxy has on life on Earth and other processes here on Earth.

This may sound like a scattered array of different subjects. There is, however, really one unifying principle underlying all of this, which is that the future existence of mankind requires eliminating the conception that we are simply of an earthly existence. Mankind's destiny requires rising to the level of being a species of the Solar system, and a species of the Galaxy beyond.

And this brings us back to Lyndon LaRouche's principle—the true basis for a sustainable peace. The idea of the SDE is that leading nations must bring together the greatest scientific and technological capabilities in pursuit of revolutionary, new technological breakthroughs that will give mankind the capability to handle all the threats I have spoken of, and more. And these technologies must not be hidden away in mili-

tary domains, but must be made readily, freely available for the application to economies worldwide.

We should be thinking about a complete revolution in mankind's relation to the Solar system, and what technologies would be required for that. We need things like designs for vacuum-tube, magnetic-levitation space launch systems, which can lower the cost putting payloads into orbit by two orders of magnitude, completely revolutionizing mankind's access to space. If we want to be a space-faring species, we need to look at

revolutionary ways of having much more rapid and large-scale access to space.

As was discussed earlier, we need fusion propulsion technologies, allowing continuously powered flight—completely moving away from these incredibly slow orbital trajectories and really opening up the entire Solar system to rapid and dynamic access by mankind. We need the capabilities to mine, process, and even manufacture resources directly from the material on other planetary bodies. Perhaps one of the most intriguing initial examples is the unique potential to mine helium-3, as a fusion fuel, from the surface of the Moon.

The space infrastructure needed to really support manned outposts on the Moon and eventually Mars—just as LaRouche outlined in his 1980s proposals for a Moon-Mars colonization program—is another critical element required.

These are the types of crash programs that are required for a true strategic defense of Earth. We have to give mankind an entirely new platform of economic potential and activity throughout the Solar system, allowing us to handle the types of threats discussed earlier, while, at the same time forcing the required rapid rates of technological breakthroughs that are needed to ensure, as Lyndon LaRouche brilliantly called for, "Cooperation among sovereign nation-states to the effect of promoting unlimited opportunities to participate in the benefits of technological progress, to the mutual benefit of each and all." This is what Mr. LaRouche identified as the absolutely necessary precondition for peace.

HAL COOPER, JR.

Rail, Energy, and Water Infrastructure for the Full Economic Development of Africa

This is the edited transcript of the remarks of Hal Cooper to the Schiller Institute conference in Morristown, N.J. on Feb. 16, 2019. Dr. Cooper has been a civil engineer for many years. He has collaborated closely with the La-Rouche movement over decades in working out the details of the Schiller Institute's proposals for the Silk Road and the World Land-Bridge. He has a long history of cooperation and work with African nations and has discussed in detail with their representatives how rail in particular and other transportation networks ought best to be arranged in Africa.



Hal Cooper

EIR/Stuart Lewis

expanding to South Africa, and all the countries in between both on the east and west sides of Africa.

An Enormous Potential For Energy

Africa has an enormous potential for energy development, in parallel to rail development and water development in certain areas. However, there is a large mal-distribution of particularly the water. New hydroelectric power

Thank you. I'm very happy to be here. I'm going to be speaking tonight on rail infrastructure development in Africa, and I'm going to finish up afterwards by talking about one of the provisions that was in the Green New Deal. It is the subject of a U.S. national high-speed rail system, which I will discuss after I finish the presentation on Africa.

A Full-Scale Rail System for Africa

Africa is a big continent, up to 3000 miles wide and 5000 miles long—parallel to South America. Those are the two continents of the world that have had the least economic development to date. We're talking about what we need to do to help Africa in the present, and especially in the future. This [Fig. 1] is a diagram of what might be a full-scale rail infrastructure program development, which is actually based upon earlier work by the LaRouche organization going back to the 1980s.

I was asked several years ago by one of the La-Rouche members, Thomas Fuller from Tacoma, Washington, to do a feasibility study of what we could do to develop a rail network in southern Africa; particularly focusing around the Democratic Republic of the Congo,

FIGURE 1
Proposed High Speed Rail Network for the African Capitals

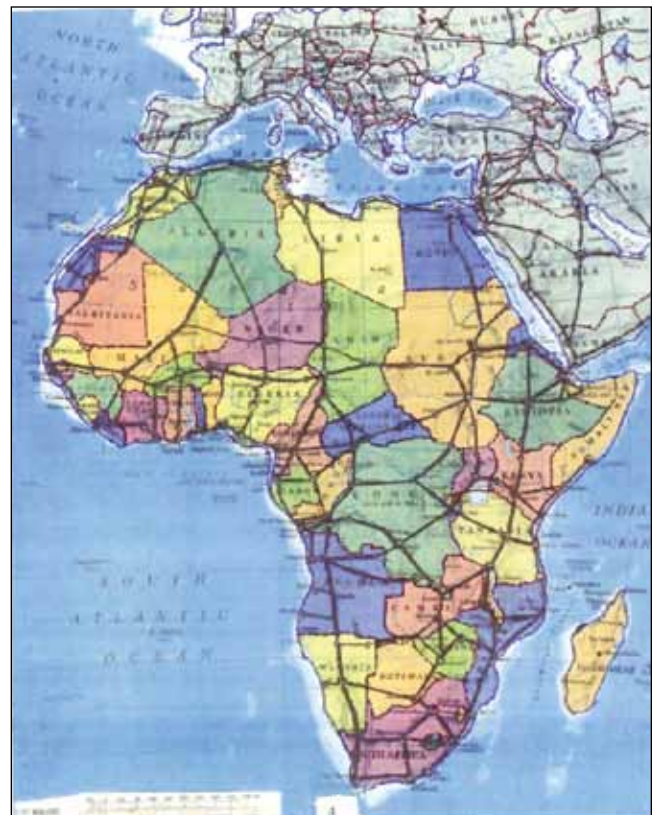


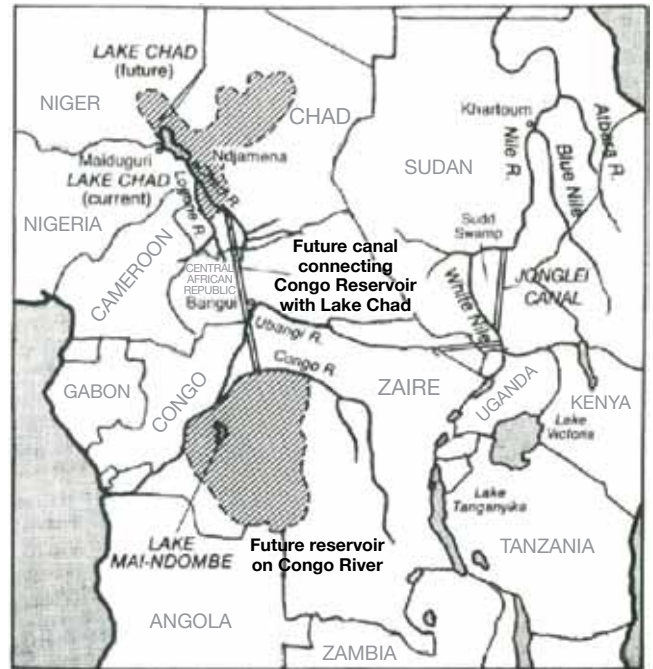
FIGURE 2
Africa River Basins



facilities could be located along rivers. The Congo River is the most important, followed by the Nile, followed by the Niger, and then the Orange River in South Africa. This [Fig. 2] is the river basin diagram of Africa. Again, you have the Congo, which has the largest water flow; the Nile, and a number of other rivers; and the Niger River, Orange and numerous others in Africa. Most importantly the Congo, because it's the second-largest river flow in the world next to the Amazon, and it's in the same tropical region, of course, where the maximum water potential is available.

The one country in Africa which has, to date, had a major economic development of railroads, which goes back to early in the 20th Century and actually into the late 19th Century, is South Africa. The South African railways are the ones that have been the most developed in the world. It actually is primarily a narrow-gauge railroad, a smaller gauge than we have in the United States. It's about 3-feet 6-inches, versus 4-feet 8.5-inches; and in Russia, of course, you have the 5-foot Russian gauge. If we're going to have a successful system, it's all got to

FIGURE 3
Lake Chad-Congo Basin



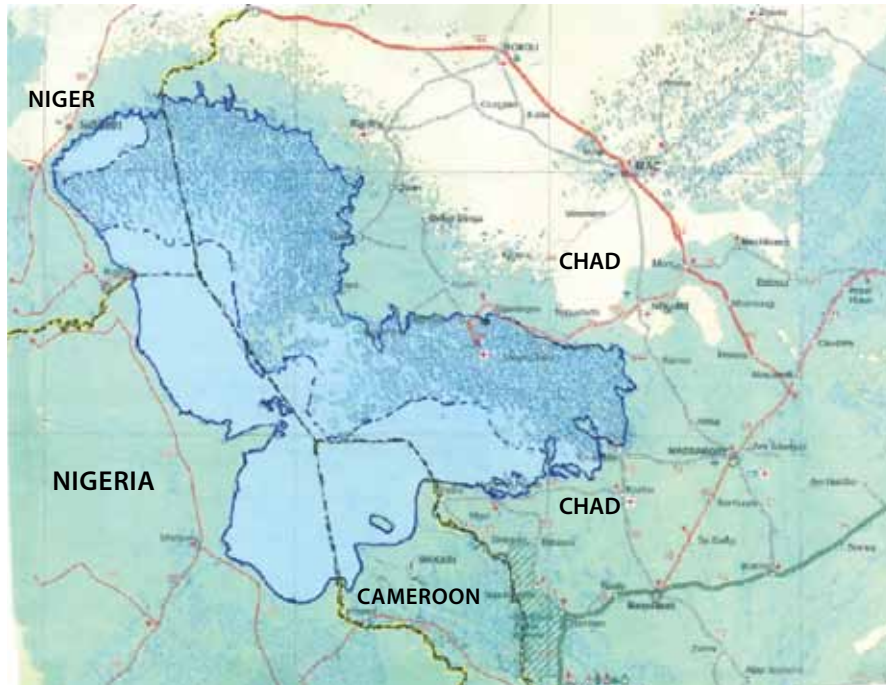
be the same throughout Africa ultimately. We'll discuss in a minute what the rest of them are.

The Transaqua Project

I believe there's been some discussion today about the Transaqua project in Africa [Fig. 3]; which would take water from the Congo River and put it into Lake Chad in north central Africa, which is in the sub-Saharan region just at the southern end of the Sahara Desert, refilling this lake, which has been slowly evaporating. And of course the country of Chad and the neighbors around it have been forced by the British policy of no inter-basin transfer of water, which basically means they're eventually going to run out, which is exactly what has been happening. Now this change completely eliminates that policy, because the Congo River has far more than enough water to supply them, and it could be very helpful to the countries to the north, without any detrimental effect on the Congo River. It's a huge river.

The Transaqua project involves actually building a canal or series of canals from the Congo River up to Lake Chad and refilling it. Lake Chad is a basin that actually doesn't have an outflow; it only has inflows. But it would become the center of a major agricultural region, and other industrial developments as well. It

FIGURE 4
Previous Shoreline and Existing Levels of Lake Chad with Reduced Volumes



would benefit Nigeria, and several other countries, plus Chad. The clear blue section of Lake Chad [Fig. 4] is the part that has water today. The part that is shaded and has other blue increments is actually what was evaporated or gone away, because of the lowering of the lake with the flow. That needs to be corrected by bringing in water from the South from the Congo River Basin.

The restoration of Lake Chad would lead to the fostering of economic development around the lake. That means railroad, plus roads, plus industries and agriculture for the entire region for the benefit of all of them. This is an area right now where, particularly in Nigeria in the north, you have a lot of terrorism activities from certain Muslim extremists, just like you have in some places in the Middle East. Well, if all this became prosperous, there would be no need for the terrorists.

We should actually have two canal systems—one coming from the western part of the Congo River and a second one more to the east, transversing the Central African Republic and Democratic Republic of the Congo into Chad and Nigeria.

There has been some talk of having an equivalent of the North American Water and Power Alliance, as the

African Water and Power Alliance, which would be a comprehensive water distribution network throughout Africa. A large part of it would involve bringing water from the Congo River into the Niger River, and also into the rivers in South Africa and into the southern part of the entire continent of Africa.

Electricity Production and Distribution

Then if you're building water, you've got to have a transmission for electricity. Right now, probably 70% of the entire electric generation of the continent of Africa is in South Africa; and it's primarily through 44 coal-fired power plants. They have plenty of coal in South Africa, and they'll continue to use it, but you have to have other supply sources, hydroelectric power being one, and one that's particularly applicable of course is nuclear energy. Then, because of the intense sun near the equator, solar energy, in the desert areas in particular of the Sahara.

Electric generating capacity in Africa is presently around 130,000 MW; the idea would bring it up to close to 400,000. In increasing this, South Africa and the eastern part of Africa, the rest of Africa would be very much a factor. And the Democratic Republic of the Congo would be the largest single generator, primarily because of the dams on the Congo River. And especially the existing Inga Dam, which at 3,000 MW right now, could be expanded to as much as 50,000 MW.

Rail Development

Lets look at rail development in the different countries of Africa—what it is now, and also what it could be in the future.

Here is what it was in 1990. [Fig. 5] What it would be is seen here. [Fig. 6] Much more comprehensive. You'd have parallel tracks for passengers and freight, ultimately electric to the extent possible. There is considerable electrification of railroads in South Africa, but nowhere else in Africa.

FIGURE 5
The State of African Railways in 1990

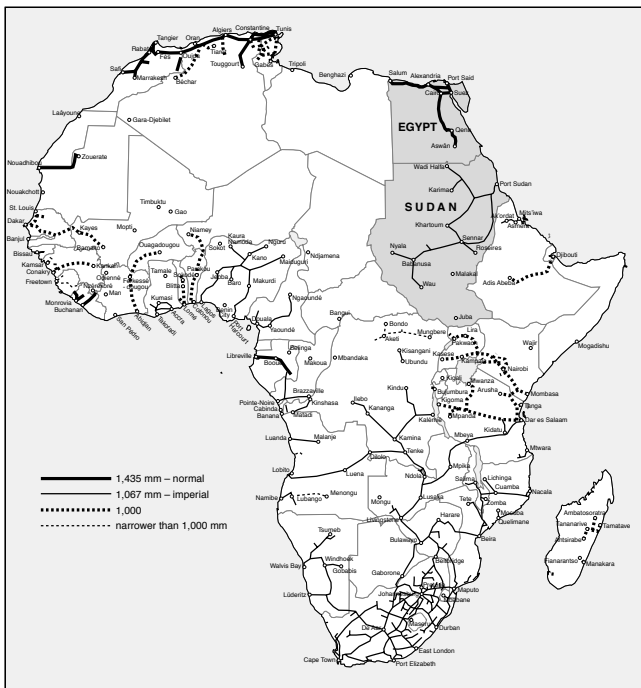
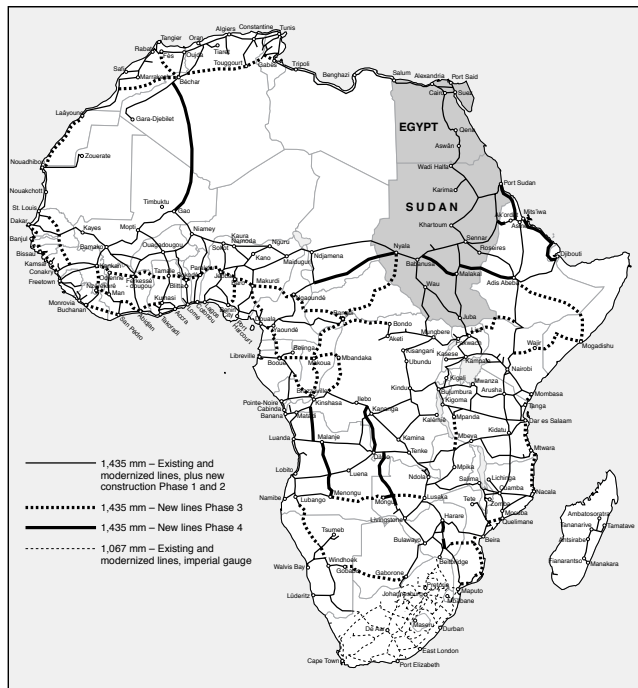


FIGURE 6
Projected African Railway Network (Main Lines)



Sources: Fusion Energy Foundation, *The Industrialization of Africa*, Wiesbaden; Campaigner Publications, 1980; *The Times Atlas of the World*, New York; Times Books, 1990.

We have also mapped out a rail development in the Sudan region, as well as to the north in Egypt and so forth. Here's a cross-corridor from east to west in

Africa [Fig. 7], from Pointe-Noire in the Congo Republic all the way over to Tanzania and Kenya, including a bridge across the Congo River between Kinshasa, the capital of the Democratic Republic of the Congo, and Brazzaville, the capital of the Congo Republic, which is about 2.5 to 3 miles long. It would be a road and rail and telecommunications and electric transmission bridge; all those, and pedestrians as well. That's been proposed, but unfortunately never built.

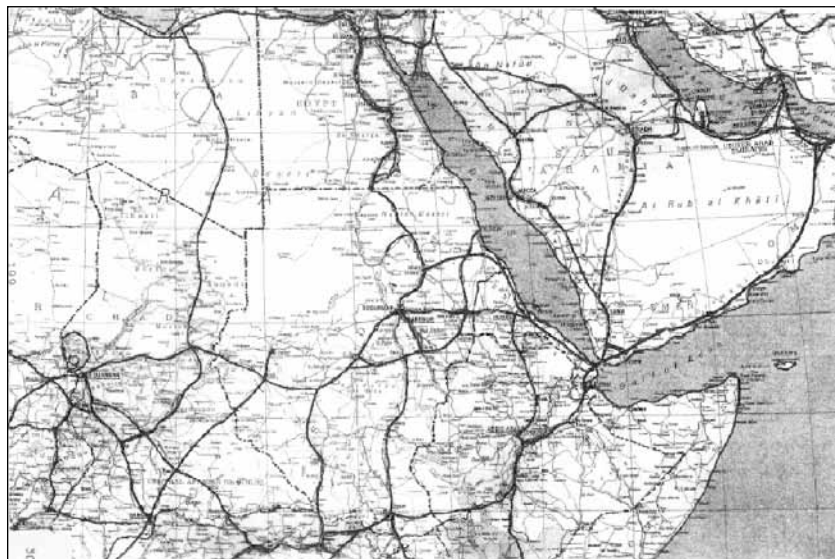
FIGURE 7
Major Bukavu East Route Railway Corridor Across Central Africa



Similarly, we have the issue of Sudan, and the connection across the Strait of Bab-el-Mandeb between Djibouti and Yemen in the southwestern part. [Fig. 8] It sure sounds like a better alternative than the war in Yemen, doesn't it? Sudan and South Sudan, getting them at peace, and then getting the rail systems built and the economic development across the Strait of Bab-el-Mandeb through the Arabian Peninsula is necessary, including across to the Persian Gulf.

FIGURE 8

Proposed African Railroad, Electricity Transmission and Water Corridors in Northeastern Africa



This is a picture of a crossing of the Nile River in the northern part of Sudan [Fig. 9], which would have a north-south railway across, and then rail line across the bridge which would be about 1.5 miles wide. All of this

is part of a cross-Africa corridor from east to west, which is about 3000 miles. There actually has been a proposal made by the Chinese to those countries, only some initial studies have been done; nothing else. The total cost of the project would be about \$1.5 trillion for the entire project. And with that, I'm done.

The Green New Deal

We're done with Africa, but we're not done with the Green New Deal program that has just been made by the Democratic Party. I want to just discuss that very briefly. There's been some discussion today at this meeting about that program. It sounds like a no-growth policy, and it sounds like an anti-technology program; that's exactly what it is, with one exception. A national high-speed rail network. I think that's some-

thing that this organization needs to promote as the one positive element of the Green New Deal that puts Green in the right perspective, rather than the wrong one. And with that, I thank you.

FIGURE 9

Nile Crossing of Proposed African Railway



Panel III: The Frontiers of Science

From the Question & Answer Session

Panel III of the Feb. 16, 2019 Schiller Institute conference, in Morristown, N.J., concluded with a question and answer session moderated by Jason Ross. An edited transcript of selections from the question and answer session follows.

Jason Ross: Well, with that, we will be able to take questions.

Question: Hi, my name is Ian from Maryland. My question is about the potential future of exploration on the Moon, Mars, and possibly further to Europa, Ganymede, and even Phobos. What would be the future after, say, the Mars rovers, after the Chang'e-4 and the Yutu-2, and what are the potential futures for exploration of Europa?

Larry Bell: As I see it, we're looking at a phased program. We would go to the Moon in order to develop and test the technologies that we'd use to go to Mars. This has to do with testing ways of establishing habitats. But I think, in particular, the big mother lode in the Moon and Mars will be water. The reason we'll be looking for water is really for fuel, so we can reduce the amount of rocket fuel we have to bring with us.

We'll be going to the Moon, because it's so much more difficult to go to Mars; it's a lot farther away from the hardware store if something breaks; you don't have the windows to get back when something goes wrong. You have to be absolutely certain that things will be reliable.

I think, among the biggest issues we face—and the least understood—is radiation, cosmic radiation in particular, because it's very hard to shield against, and also solar radiation. So, we'll be looking at ways of providing shielding. Also, we're going to be interested in knowing how long people can work effectively in partial gravity. On the Moon, it's one-sixth the Earth's gravity; on Mars it's about 40 percent. We need to look at the biological issues.

We'll be looking at whether we can grow food, and how much nutritional value we can get from doing that. We'll go to the Moon, we'll be testing the technologies,

and then, in parallel, we'll be moving to Mars. It won't be one and then the other. The hope is this time it won't be [just] footprints and flagpoles: that we will establish infrastructures, where we can reduce the amount of back-packing. We're looking at 3D printing. I'm a little skeptical whether we'd be printing structures with 3D printing, but I think we'll be increasingly producing a lot of our equipment.

One of the big opportunities for technology is in the area, first, of tools to fix things; then of parts that have motors and gears and pumps inside of them. And understand that the things we put on the Moon or Mars, we can't exchange them; so we're going to have to have a whole new paradigm of thinking now, in which we focus on the things we can build and augment later. But we're augmenting with things we haven't even invented yet!

This is where the LaRouche idea comes in, where you have to look forward, beyond,—where we're going to be going, what are we going to be doing? And how are the systems and technologies we're using for the Moon going to be applied to Mars? Actually, I'd reverse engineer it. If we go to Mars, what do we need to test on the Moon, to be certain we can do that?

Optimistic China To Share Technology

Thomas Wismuller: I just want to bring out one thing here: The far-side Moon landing by China's Chang'e-4 was a spectacular achievement. Larry Bell and I know the complexity of the work breakdown structure that you need to make that happen. The fact is, thousands of things could have gone wrong, *but none did*.

Here's the positive: We have two countries that have advanced space programs, that now can start thinking about working together, and combining that knowledge and have us acting as a *planet*, as opposed to a nation, where we explore the rest of the universe. We've actually put a stop to a lot of the technology sharing, because of technological theft and things like that. However, China has made up its mind to share a lot of what they have achieved. If you go on the Internet, you're going to find a

lot more. We didn't do that, but China is. This is like a negative shot across the bow; China is saying: "Hey, we're going to share technology, why don't we start working together? We're already doing it with the Russians."

So I'm very optimistic about a future for humankind.

Question: My name is Faz. I'm from Michigan. I've got a seven-year-old, and we've actually "been" to Mars and to Europa—in our bedtime stories. He's designing a probe to go into Jupiter's atmosphere and figure out what's there. So we just make this stuff up.

But, my question is about terra-forming Mars. Is it possible to rebuild the magnetosphere of Mars, and have that rebuild its atmosphere?

Kesha Rogers: I want to answer that by thinking about first of all, is it possible to do this? Well, we're going to find that out as we explore more and develop the Moon. We'll learn a lot from the discoveries and the development of permanent settlements on the Moon and developing cislunar space. This is key, and I think it also answers the previous question.

One of the exciting things—Tom just brought this up—about what China's doing, is it wasn't just a one-time mission to get the Chang'e-4 to the far side of the Moon. It was a first, it was an achievement that had never been done before—but the Chinese don't expect to stop there. As a matter of fact, they just laid out their long-term proposal for six additional missions: Chang'e-5 for lunar sampling on the near side; Chang'e-6 will continue to look at the South Pole of the Moon; Chang'e-7 and -8 will start to advance our understanding of the lunar soils and what's there, and our capabilities for building permanent lunar bases and settlements.

I think we can accomplish what you're saying: Yes, that's the idea, that we can discover new means of life on Mars, in terms of advancing the magnetosphere and so forth, but we have to do this in terms of scientific economic phases that are going to build up the whole of the Solar system.

The Oomph to Escape Earth Gravity

Follow-Up: Should we use fusion power, or fusion rockets, to go to Mars, as a different and faster way? And then fusion power, to power something like an artificial magnetosphere—capabilities that we don't have today? These rockets that [Elon] Musk and [Jeff] Bezos and so forth are using are the same

things that we've had for 60, 70 years.

Rogers: As Mr. LaRouche has continued to emphasize, we need increased, high energy density drivers of fusion for propulsion. I disagree with Mr. [Buzz] Aldrin, with all due respect to him and all his accomplishments, but the idea is not to send humans to Mars on a one-way mission that's going to take nine months to two years, and we don't even know if they're going to get there, if they're going to be a puddle of putty, or if they're going to be able to be productive on Mars, and be able to come *back* to planet Earth.

We do have to go with higher energy densities of fusion propulsion, and to advance 1-g acceleration, to get people more quickly to Mars in a short period of time and be able to return them safely. We want to get them to Mars, and be able to return them safely to Earth, and collaborate back and forth.

Bell: I'd like to comment just briefly on propulsion systems. We'll probably be using chemical propulsion systems for a very long time. When we talk about ion systems, what happens when you're launching from Earth, it takes a tremendous amount of energy to break through the gravity pull of the Earth to go to orbit. These rockets are going to be chemical-propulsion systems for the foreseeable future.

Ion-propulsion systems are a very efficient system once you get out of the Earth's gravitation pull. It's very low thrust. Unlike the chemical systems where you want a big blast, and it takes some tremendous amount of energy, ion systems once they get into orbit, they keep going and they keep accelerating; they keep accelerating, they keep accelerating—but the thing is, it takes a long time to get out of the Earth's influence.

And we also have this really nasty area called the Van Allen belts surrounding the Earth; it's very radiation intensive, probably worse than the whole Solar system surrounding the Earth. So, we want to get people through that area as quickly as possible, and we're not going to do it with ion systems. It takes them too long to get out and to get there. Once they're out there, then we can keep them in big cycling orbits like what Buzz [Aldrin] has been proposing with the cyclers and so on.

The point is, we're going to be using chemical systems for a very long time. They're going to be either hydrogen-oxygen or eventually, if we go to Mars, maybe we'll harvest methane, and do this. We're going to need power.

Think Long-Term, Like LaRouche

One of the things that needs to really be developed is nuclear power, whether it's fusion, helium-3, like [Harrison] "Jack" Schmitt and others have been proposing; but we need power, and we're going to need nuclear power. We don't have enough access to sunlight to electrolyze the water and get the resources and so on, we're going to have to have advanced nuclear systems. Those systems need to be developed on Earth, to be tested, at the scale we can use, like 100 kilowatts, not megawatts, but we'll need nuclear power.

One thing we can use as a model is the Antarctic Treaties, where we've had international cooperation, and that basically was leveraged into the Space Station program, where we have international cooperation on the Space Station, although China was excluded because of technology transfer issues. Whether or not we'll be able to bring China into that community, in terms of technology transfer, I think is going to depend a lot on what Donald Trump does, now, in terms of these treaties, in terms of protecting proprietary information.

As I said earlier, space can be a dream or it can be,— we can think of space as nuclear, as North Korean missiles coming down on our head: That's space. Or, you can think of space as going together forward, to the Moon and Mars and so on. These are very expensive programs; they're long-term programs. One of the concerns is, let's say you team up with China or Russia, and you have this long-term program, and they're going to develop a critical element in that program that you depend upon. And now you're at war with them, or you have a Cold War; they don't deliver their part of the program that's critical to getting there.

We have a choice then: I believe that the U.S. has to be in a position to say, "We're going to go, and if you want to join us, you can, but you're going to have to demonstrate that you're a reliable partner." And that's going to be a very big hurdle to solve. These are enormously long-term programs, they have to be long-term programs, but because of this, they force us to look at the future, and I think that's what Lyndon LaRouche was urging us to do.

Ben Deniston: Just briefly on propulsion. I think it's an issue of the priorities and the vision. We had a pretty much fully functional nuclear fission rocket in the early 1970s, where every element was tested independently, and instead of putting it together and flying it, we decided to abandon that perspective.

When it comes to propulsion, Mr. LaRouche's perspective, which I thought was very insightful, was that you need *high-thrust* fusion propulsion, not just simply *low-thrust ion*, but high-thrust fusion propulsion for avoiding the radiation issue in space. Reduce the travel time to Mars to an issue of weeks, instead of the many months which is currently proposed, with all kinds of health issues.

So I think we fundamentally need a return to a science-driver perspective and program as Lyn said in that video, as we had in the Kennedy era. That's really what we have to be fighting for.

The Stretto

Ross: Given the time we have left, I think if everybody takes 45 seconds to ask a question, let's hear from everybody, and then we'll give a very, very brief response.

Question: I'm Mrs. Turner from the Bronx. This question is for Professor Cooper. I don't think we're ever going to get these projects done in Africa, as much as I would like to. I have heard that Libya was going to do something similar, but they were stopped in their tracks. They had a wonderful water system in their country; Qaddafi had a plan to make the African gold dinar, to help Africa get out of its underdevelopment stage and build Africa up with gold dinar, just for Africans. Get rid of the dollar, get rid of the franc.

Question: Joel from Houston. The Direct Fusion Drive (DFD), I don't know if it came through in the video, but DFD devices are using deuterium and helium-3 as fuel, thus generating charged particles as fusion products that can be controlled by magnetic fields.

Now, when we met with [Michael] Paluszek, he mentioned that Apollo 17 astronaut Harrison Schmitt called for going back to the Moon to mine helium-3. Paluszek said that the Apollo astronauts were the first helium-3 miners. And if we don't get on the stick, we're going to import our helium-3 supplies from China. I'm sure they will sell it to us at a slight markup. We need to tell Buzz that if he wants to come back from Mars, he can ride one of these direct fusion drive rockets. Paluszek is a fellow MIT graduate, so Aldrin would be in good company.

Question: I'm from New York. I would like to say thank you for this good conference, with the great music

earlier to celebrate the great man. I'm a member of this organization, and surely I'm so thrilled with that man's great work.

My question tonight,— the theme of our conference is “Let's Create a New, More Human Epoch for Mankind,” and I'm asking, can that be physical? Although we have great things happening with technology, we also have the other side of it, for example, what happened in Cuba. I don't hear people talk about that. And Monsieur Jacques touched on that this morning, about the mind control—we didn't talk about that as well.

Question: We could probably get the Greenies off our back about terraforming Mars, by pointing out that Phobos is doomed, and if we don't intervene, it'll crash into the Mars. So if they want to keep everything in the Solar system just the way it is, there's only one alternative, that's to let us get out there and keep it the way it is!

Question: The topic of space exploration, albeit a truism for the necessity to expand the realm of civilization, to me has a similar ring to the call of manifest destiny, leading to one of the softest genocides of cultures, you know, roughly 80 million Native Americans, on the behest of cultivating national identity.

This is a three-part question:

First part, how can we be sure that powerful figures like Elon Musk or Jeff Bezos, worth over \$140 billion or whatever, or other corporations, would treat the resources of celestial bodies better than their own home?

Part 2: Who gets left behind, or who is allowed to explore space? I think that's a pretty important question.

And 3, you can decide to answer this or not, kind of a joke: Should we be sending war criminals to space using magnetic propulsion systems instead of chemical propulsion?

Question: Ed from Wilmington, Delaware. I'm glad to hear that we're talking about the Strategic Defense of the Earth that LaRouche put forward years ago, and Ben, you've done some great work on this stuff. I'm just concerned, because I'm not sure people understand how vital this is. It may not be as remote a possibility as people may think. There were extinction events many million years ago, but some people believe, based on lots of evidence, that the Earth has been hit by celestial bodies within the last 15,000 years, *twice*, and this caused major disruptions of the planet. So, it's a lot more urgent.

How Will African Rail Get Built?

Question: My name is Innocent, from the Ivory Coast, and now a New Jersey resident. The question is about the rail in Africa. One of the observations that people might not know, is the influence of the French government in certain parts of Africa. They have their hands on everything—the economy, and everything. How would you deal with these issues, to develop these types of project? Thank you.

Ross: Given our time, I am going to answer all of the questions, except for the one about African rail, which Hal, who has not spoken on this panel, will respond to.

Thank you for the point that the DFD is using helium-3. This is very important. As Joel said, helium-3 is a very special fuel, because all of its fusion products are charged, allowing its easier use for propulsion and for power generation.

Regarding whether it's feasible to achieve our goals, given mind control and other sorts of things, we're going to have to determine that. Many people would believe that it is not possible for the universe to exist in a state that we can't achieve good in it. I'm among them.

Good luck with the Greenies and Phobos.

Definitely war criminals should be sent to Mars, using perhaps the StarTram technology. They might not even make it off the planet.

Let's turn next to Hal Cooper for a very brief response about the Libyan rail. We're then going to have two important concluding remarks.

Hal Cooper: I'm going to answer the questions about the rail. Yes, the British got their hands in it. The rail lines need to be nationalized by the individual governments, and I think ultimately you're going to have rail networks constructed not by the British, but by the Chinese in particular.

We also have the issue of helium-3. I had some information that was presented to me by one of the companies that is producing helium, and they tell me that in western Kansas, near Hays, Kansas, the helium deposits have 100-150 ppm of helium-3.

Ross: Interesting!

Cooper: Can that be recovered by fractional distillation? It certainly can!

LYNDON LAROUCHE

Concluding remarks from Lyndon LaRouche, taken from his 1988, Woman on Mars nationally televised broadcast.

It means a much better way to live, than the drab misery, illiteracy and decay, into which our nation has drifted in the past 20 years.

Then, 39 years from now, we shall hear the broad-

HELGA ZEPP-LAROUCHE

Mrs. LaRouche is the founding President of the Schiller Institute. She convened the Feb. 16, 2019 Schiller Institute conference, in Morristown, N.J. These are her closing comments to the conference.

I want to thank all of you, especially for the extreme expression of love which I have felt over the day and also the last couple of days. That's the one thing which was not mentioned today about Lyn: That he was—in one sense, *is*—the most loving person I have ever met. Love, in the true sense, is love for mankind, passion to improve mankind. And I was so struck, not the first time, because it's one of my absolute favorite pieces of music, by the *Choral Fantasy*, and for those who understand the German, it says,

*Nehmt denn hin, ihr schönen Seelen,
froh die Gaben schöner Kunst:*

“Thank you, beautiful souls, these donations of

cast from Mars, announcing that the first permanent colony there is operational. Among those colonists will be some of the children and grandchildren of you watching this broadcast tonight. Many of you will be watching that first television broadcast from that new colony. Already, the woman who will speak to you then, from Mars, has just recently been born somewhere in the United States.

We shall give our nation once again that great future which our children and grandchildren deserve.

great art,” as a celebration of creativity. And this was actually leading to the Ninth Symphony—Beethoven's composition, which is a composition of the *Ode to Joy*. If you know the text there, it says, “All men will become brethren. Above in the skies, there must live a loving Father.” It is that celebration of the beauty of the universe, and the beauty of mankind which we have been celebrating today.

Having listened to the many comments from Lyn, here and there on all these different subjects, I think we should go out of this conference, with an absolute solemn commitment, that each and all of us become better people. Because this is the precondition for making the new epoch of mankind—it will start with us. We must take up the torch, we must be the example of what the New Renaissance means. If we improve our relations among each other and celebrate each other's creativity, then, we will be the shining example of what the new world, the new epoch, the new paradigm can be.

So with that, I want to thank all of you. And, go out and multiply.



III. Human Potential

September 19, 2012

END THE FOLLY IN SENSE-PERCEPTION:

Metaphor!

by Lyndon H. LaRouche, Jr.

*From the lifetimes of such as Heraclitus, through Socrates and Plato, as through Eratosthenes, and, as in modern times, from Filippo Brunelleschi, through Cardinal Nicholas of Cusa, and such of their followers as Leonardo da Vinci, and Johannes Kepler: the true mainstream of modern science had, thus, subsequently expressed itself in the ontological realities of what had been the Classical artistic principle of **metaphor**. Nicholas-of-Cusa successor Johannes Kepler's introduction of the demonstrated, metaphorical principle of **vicarious hypothesis**, has supplied the crucial basis for the competent practice of modern physical science, that, specifically, of Kepler's outstanding contributions to the creation of modern physical science, still today.*

So much for the subject of those essential definitions. The practical issue which must be featured from that standpoint, is the fact, that human sense-perceptions, when considered as such, are merely shadows cast, mere shadows which the credulous folk substitute for "reality." That is done in place of that which is defined as truly efficient "substance." All efficient truth is located, ultimately, within the bounds of the effective intention of what is to be defined as metaphor; it is that efficient intention, when assigned to metaphor, as I have just defined it here, which is inherently, by its nature, the truly proper subject to be considered here and now.¹

1. E.g., Shakespeare's character Hamlet wrote: "... Thus conscience does make cowards of us all; and thus the native hue of resolution is sicklied o'er with the pale cast of thought; and enterprises of great pith and merit, with this regard, their currents turn awry, and lose the name of action"

The grave error which we must first consider in this report, is located in what is commonly recognized as the quality of error which is intrinsic to reliance on the notion of "sense perception as such." Such faith in "sense perception" is the typical root of an entire system of error; a type of error currently still deeply embedded in the customary general practice of sense-perception by populations generally. This custom must be strictly defined as a continuing sort of an active practice of "error," rather than the notion of being merely a particular lack of proper education. The corrected replacement for the mere notion of sense-perception, the replacement properly named "metaphor," is to be regarded as mandatory, for the reason that the correct view of the subject-matter had already been defined in certain known, ancient cultures. Those included cultures existing prior to the resurgence of a leading reductionist kind of depravity, a kind of resurgence which had become practiced under modern systems of oligarchical depravities such as the culture of the British empire-system, among other victims, still today.

Consider the most essential features of the relevant history of this matter of the foundations of modern science:

The revolutionary progress associated with the Fifteenth-century "Golden Renaissance," had reached its relatively highest rate of underlying scientific progress, under the globally extended influence of the referenced Cardinal Nicholas of Cusa (A.D. 1401-1464), during and beyond his lifetime. Cusa had been a most crucial thinker of his time, probably the most crucial of both his own lifetime and that of his immediate posterity from among the founders of modern science. Among his



with precision in his *De Docta Ignorantia* (AD 1440), and, as this discovery by Cusa is reflected in the unique, existential principle of astrophysics, metaphor, which was to have been introduced as a discovery by Johannes Kepler.

While Cusa's seminal achievement in that and related matters, has been unique to modern science in all leading respects, his achievement must also be recognized as both a reflection, and a correction of the great earlier achievements of Plato and his circles. The significance of that part of the history of the European Renaissance for modern society today, is best typified by the unique achievements in physical science due to Johannes Kepler. Unfortunately, lately, despite the great achievement of the 1648 Peace of Westphalia, the extended practice of tyranny by the so-called "New Venetian party" of William of Orange, et al., had led modern Europe into the subsequent establishment of the British empire as an empire-in-fact, as under Lord Shelburne already in February 1763. Matters went onwards from that earlier imperial victory of his, to emerge, soon, as the modern British Empire launched by means of Shelburne's 1782 establishment of the British Foreign Office.

The British empire, as it was established then, is still the relevant party of world empire today—a role which the British monarchy shares currently with the same Saudi Arabia which has played a key role in the mass-killing of U.S. nationals in the so-called "9-11" incidents of 2001, and, later, the recent slaughter of U.S. diplomatic nationals in Libya.

Those recent murders, which have been prompted by the policy of practice of President Barack Obama, reflect the pattern of frauds which some have practiced

"All efficient truth is located, ultimately, within the bounds of the effective intention of what is to be defined as metaphor," LaRouche writes. Leonardo's use of "sfumato" (seen as if through smoke) and "chiaroscuro" (light/dark), to convey ambiguity, i.e., metaphor in painting, are evident in his "Virgin of the Rocks" (Louvre, ca. 1480)

other leading achievements, Cusa was the founder of a systemic comprehension of that then newly-stated principle of physical science, an authority which is defined

in the course of promoting such imperialist atrocities as a presently global prospect of general thermonuclear warfare. The presently immediate prospect of a war which would suddenly lead virtually, or actually to the threatened extermination of our human species, now demands an immediate institution of that specific quality of alternative order of global society, a quality, the which, by its very nature, eliminates the threat, but without destroying what we must now restore as the continued principle of the system of sovereign nation-states.

Those just stated facts, lead us now into the core-subject of the crucial matter so placed before us now: the matter of the little known, but truly knowable principle of the human mind. I explain, as follows.

I. The Principle of the Human Mind

The both conventional and also inherently mistaken, “popular” doctrine, which is familiar to us as the trust in “sense-certainty,” should now become recognized correctly as having been obviously absurd in principle, as it had also been virtually universal on precisely that same account. That doctrine has been a generally accepted, if nonetheless wrong belief, which had been established about “as far back” as a current “popular opinion” respecting “text,” has been enabled to reach, up to the present time.

Nonetheless, there had been significant, nobler exceptions to such misguided, or otherwise faulty opinions as those presently common among the broader strata of populations. I mean those exceptions among those rarer minds which had been developed to a higher degree, a degree associated with what had been commonly known, formally, as rooted in truly Classical modalities in music and poetry. Such had been the distinction of what was recognized as “a Classical form of implicitly sung poetry.”

Now, to get to the root of the problem which we are considering here, we must now look deeper, much deeper. The problem which we need to address, is the absolute distinction of the human mind’s essential functions, as contrasted to what is merely human sense-perception. On that account, we should focus attention on the considerable importance of examining the specific agreement to be reached on the definition of a truly universal notion of the exemplary quality of the efficiently

ontological existence of the human mind, as that quality was shared on behalf of an explicitly defined matter of agreement reached between the physicist Max Planck and his associate Wolfgang Köhler.

This unique principle respecting mind, which resides in the ontological basis of specifically human creativity, is therefore, now to be located by our human species in the functions of what are conveniently defined as trends toward “Classical artistic composition:” a function which also underlies man’s ability to develop true discoveries of universal physical principle. **The crucial principle is that to be located in the distinction of the functions of the true human mind, as distinct from the relatively superficial human practice of sense-perception. The crucial conception needed for that principled purpose, is that of metaphor when properly defined.**²

There are certain complications to be mentioned here, such as what are called “asides,” “asides” such as what are often identified as “ups and downs” in the known history, geographies, and varying cultures among civilizations. The principal types of systemic intellectual and related failures among peoples and their cultures, fall under the title of the effects of *oligarchism*, as such effects have been typified by the familiar historical cases of the Roman, Byzantine, Venetian, and the “New Venetian” (e.g., British imperialist) systems.

Since the Ouster of Bismarck

The most recent among the principally successive waves of depravities experienced by trans-Atlantic civilization, had been launched by the 1890 dismissal of Germany’s Chancellor Otto von Bismarck from his office. The general sweep of cultural degeneration throughout the trans-Atlantic regions, for example, was set into motion immediately following the ouster of Bismarck, as was demonstrated by the British Prince of Wales’ alliance with Japan for their war against China, and by the 1894 assassination of France’s President Marie François Sadi Carnot.

The entire sweep of the interval from the 1890 ouster of Bismarck, through to the present moment of threatened global thermonuclear warfare, has been

2. The currently, widely and wildly misdefined meaning assigned to the name of *metaphor*, is chiefly a product of a cultural degeneration which became embedded with the replacement of “Classical” by the decadence of trans-Atlantic “Romantic” and “Modernist” culture. See later comment on this here.



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Among the markers for the general sweep of cultural degeneration throughout the trans-Atlantic region, following the overthrow of Bismarck in 1890, was the 1894 assassination of France's President Marie François Sadi Carnot. Portrait of Carnot by Théobald Chartran.

along a persisting general track into what has been an essentially continuing and deepening cultural depravity. The assassination of President William McKinley, like that of Abraham Lincoln earlier, as like the death by exhaustion of President Franklin Roosevelt, and like the successive assassinations of President John F. Kennedy in 1963, and that, on June 6, 1968, of his brother Robert, had been prominent markers of sudden, but also long-ranging periods of declines in the moral and economic-political systems of the United States and certain leading other nations.

The more recent, precipitous, set of national and broader degenerations which has been marked by the cases of such as Presidents George W. Bush, Jr. and Barack Obama, has been expressed in the precipitous fall of the trans-Atlantic, British/Saudi-dominated sector of the planet into its steepest, and still accelerat-

ing collapse into a presently “new dark age” decline of the trans-Atlantic region. Unless President Obama were to be suddenly turned out of office, the darkest of all dark ages of mankind were presently diving into an accelerating descent into a planetary “new dark age,” certainly that of the trans-Atlantic regions, but also beyond.

Once we have taken the matters identified in the immediately preceding paragraphs into consideration, we may then, as now, also take the consideration of the conflicting subjects of sense-perception and metaphor into a relatively sharp focus, now, as follows.

The True Principle of Metaphor

To understand these matters competently, it is indispensable that we now recognize the tradition which prompted Johannes Kepler to discover the functional principle of physical science which he had named **vicarious hypothesis**. It is also indispensable that we recognize the certain quality of equivalence of both Johannes Kepler's notions of **vicarious hypothesis** and **metaphor**. The distinction which those usages share, is to be recognized as implicitly emphasizing the incompetence of the attempt to attribute real existence to the experience of mere sense-perception as such. The argument which Shakespeare places on the lips of his Hamlet in the third act's “to be or not to be,” or, as in the opening “chorus” of **Henry V**, are relevant examples reflecting the function of **metaphor, rather than the inherent fallacy of a merely quantitative measure**.

Stated otherwise, it is sense-perception (more insightfully marked as “sense-deception”) which is the shadowy, relatively defective element in the process of human experience. It is the attempt to impose the notions of sense-perception upon populations as “a self-evident reality,” which is the common source of error in any attempt to discover and establish an actually scientific practice. It is the lessening of the dependency on the apparent evidence of sense-perception as such, which implicitly “measures” an improvement in respect to the need to eliminate the quality of inherent error in the generality of the human experience. A closer examination of the general argument encompassing the content of Bernhard Riemann's habilitation dissertation, actually adopts that outlook which has been the implied point of his approach to the subject of mankind's practical relationship to the experiencing of the

universe through the functions of experimental sense-perception.

It is more than merely useful, to consider those implications from the vantage-point of the work of Johann Sebastian Bach, Arthur Nikisch, and Wilhelm Furtwängler in Classical musical composition, as considered in opposition to the systemic silliness of the fallacy of mathematical “sense certainties.” Add to that, the degrees of irrelevance of quantitative measurements with respect to the principles of Classical drama, thus including the role of the effectively efficient, qualitative meanings, meanings which are intrinsic to the specifically ontological content of drama or Classical poetry as such.

This category of considerations takes us from out of the limits inhering in the use of merely deductive methods, into the matter of foreseeing a future yet to be experienced. Highly notable, as within the context of this present report, is my own leading experience in certain scientific matters of forecasting which pertain to the ability to foresee a future development as expressing a specific kind of forecastable effects. This is, of course, my most notable achievement in matters of that general practice, in contrast to the usual failures inherent in statistical and related modes of an attempted economic forecasting of a systemically original development.

The disturbing aspect of such forecasting abilities, is the fact of the inherent trend of failures inherent in the use of both deductive methods and standards which are, specifically, systemically calculable, retrospectively, but not by deductive, or comparable attempts for discovering the future. All such apparent anomalies share the seemingly nominal characteristics specific to metaphor, and the method of ordering of development within the process of composition represented by Johann Sebastian Bach’s two sets of **Preludes and Fugues**, as represented by Wilhelm Furtwängler later.

II. The Question of the Future

As I have emphasized immediately above, the essential distinction of that competent insight, which separates such insight from that folly which is inherent in deductive methods, is a matter of a reality to be discovered through the means of a qualified approach to a

foreseeing of the future-as-such, as inherently a determinant of the present.³

J.S. Bach’s method, as typified by his work in the two sets of **Preludes and Fugues**, has the “hearable” implications of a system reflecting the evolutionary emergence of the future. Otherwise, the performance of the work produced by a great composer of music might be considered “pretty,” but not, therefore, as really truthful in the effect of its required performance as a **generator of** actually physical-scientific progress in the human condition. In proper Classical composition, we require actually creative solutions designed by the intentions of the relevant Classical composers and performers, intentions which must be experienced as such an ordering by the inventor’s specific experience of what is, for him, or for her, *as the relevant performance of the future*, and that as if instinctively. In brief, it is that perception of the future, or the lack of a real future, which determines the outcome of the present.

That, when stated summarily, is, and remains at the root of my exceptional, registered successes as a forecaster of economic and related processes.

My relatively unique career as a successful forecaster, typifies, in the most crucial respects, the essential distinction of the developed potentialities of the human mind, from the failed human methods which conform to the inherent implications of the commonplace, methodologically deductive commitments. The issue which I impose, inherently, in presenting that statement here, is the matter of the urgently needed appreciation of the quality of intention which generates the coming-into-existence of those fundamental principles themselves, the principles which must shape the development of society for the actual shaping of any successful quality of a presently intentional course of understanding the future of history, and, therefore, also, what will have become, ironically, the new “past history” of mankind.

When these facts are considered from the standpoint of modern American-European experiences, the available “cultural” evidence is, that the stultification of the higher intellectual abilities of what may be considered

3. This is the potentially essential distinction of man, systemically, from higher orders of species of beasts. A person may be more or less capable of reacting to the products of actually creative mentation, but tends to be usually “blocked” against forming independent insights of this specific quality as of a species of “what is yet to become.” Hence, the implicitly sub-human depravity of the British imperialist system, like all preceding empires as such.

the “educated” strata of today, reflects a known characteristic of the existence of “oligarchical society,” rather than that of mankind in our species’ true nature.

Consider the Consequences

The standard “upper class,” often called the “oligarchy,” regards those assigned to the lower class as being merely “practical,” rather than systemically “cognitive.” Ironically, this division of society between “the ruling classes” and “the underlings,” which tends to induce an “upper class” which cultivates its own stupidity as a social class, has the effect of a partition which should remind us of “aristocrat versus serf”—such as the virtual



IV. The Bach Circle (18th c.)
 Edited by Vidas Pinkevicius
 www.organduo.lt

Acht kleine Praeludien und Fugen.
 BWV 553

1. Praeludium.

Manual.

Pedal.

B. W. XXXVIII.

“J.S. Bach’s method, as typified by his work in the two sets of Preludes and Fugues, has the ‘hearable’ implications of a system reflecting the evolutionary emergence of the future.”

serfs of London’s former Wall Street puppet, President Andrew Jackson. On this account, in the social history of the population of our United States, since the assassination of President John F. Kennedy, and, thus, since the assassinations of that President and his brother, Robert, there has been an ever more brutish reign of “Wall Street’s oligarchical pretensions,” a moral and intellectual decadence of the privileged “youth,” a decadence which has steered the deepening intellectually-immoral quality of the academic “Sixty-Eighter.”⁴ Since the puppets of British agent Aaron Burr and an ageing Burr’s puppet Andrew Jackson, that Wall Street trend has generated the consequent moral and related, further degenerations among social classes—as in the case of that which has led the trans-Atlantic nationalities into their present. actually decadent impulse for cultural self-extermination, as exhibited by the so-called “environmentalist” degenerates.

4. During the midday hours following the assassination of Robert Kennedy, I intervened to prevent Mark Rudd and his followers from mobilizing their intended plan to celebrate the assassination of that Presidential candidate. A leading member of that group of my adversaries, acceded to my warning that such an action by Rudd’s crew would have aroused the contempt of the population generally.

Nothing demonstrates the truth of my warning in a better way, than the case of the Boston-New York City-Philadelphia-Chicago-California-*et alia* university types known as “The Sixty-Eighters.” The typification of that particularly depraved “class” and its effects on the society’s culture-in-general, has been the actually rabid, “stomach-turning” quality of the “greenie sub-culture” whose pathological roots are located in the effects of the domination of the United Kingdom on post-Charles de Gaulle Europe, by the spawn of France’s Mitterrand’s monetarist pestilence.

The roots of the degeneration in Europe since the 1763 “Peace of Paris,” are located most readily in the immediate aftermath of the influence of Lord Shelburne since that time, and also well past that time, through his 1782 establishment of the British Foreign Office. Shelburne’s influence over circles associated, as “seriously confused and other” corruptible ranking strata, from among the leadership of the U.S.A.’s victory as a sovereign reigning republic, was a crucial factor in the histories of the periods of disorienting the government of the U.S.A., as presently, in the recent periods of Presidential elections, as now. However, this evidence can not be competently appreciated, until

Riemann's Crucial Insight

*From Bernhard Riemann's habilitation dissertation, **On the Hypotheses Which Lie at the Foundations of Geometry**, translated by Henry S. White, in David Eugene Smith, ed., **A Source Book in Mathematics** (New York: Dover Publications, 1959):*

It is well known that geometry presupposes not only the concept of space but also the first fundamental notions for constructions in space as given in advance. It gives only nominal definitions for them, while the essential means of determining them appear in the form of axioms. The relation of these presuppositions is left in the dark; one sees neither whether and in how far their connection is necessary, nor *a priori* whether it is possible.

From Euclid to Legendre, to name the most renowned of modern writers on geometry, this darkness has been lifted neither by the mathematicians nor by the philosophers who have labored upon it. The reason of this lay perhaps in the fact that the general concept of multiply extended magnitudes, in which spatial magnitudes are comprehended, has not been elaborated at all. Accordingly I have proposed to myself at first the problem of constructing the concept of a multiply extended magnitude out of general notions of quantity. . . .

[In conclusion:] This path leads out into the domain of another science, into the realm of physics, into which the nature of this present occasion forbids us to penetrate.



following considerations are now crucial.

'Just in Time'

The crucial point to be considered here and now, is lodged within the following fact.

Competent insight into crucial developments occurring in the future, depends upon the developed capability of the forecaster to have predetermined the content of the action by means of which foreknowledge of the "tensions" reflecting the future, changes the present course of events. There are, shall we say "obviously," two considerations to be taken into account. First, the ability to define a change in principle from the present, into the future as acting to change the present. In considering this notion, we find that in the method of composition employed in Johann Sebastian Bach's sets of preludes and fugues, we have an explicit expression of the way, as through the means of the composition of the fugues, in which the composer's foreknowledge of newly created sensed precursors of pre-determination of the future state, transforms the principles of action.

That typifies the primary approach to understanding a physical principle's effect in its changing the meaning of the conception of an actual future. This is, in the first instance, also the relevant principle of the actually "Classical" composition, which puts

due consideration has been given to the global factors traced directly from "the New Venetian party" of William of Orange and the success of that heritage in Shelburne's imperialist influence and its consequences in what was to become a British-empire-in-fact, as in the February 1763 Peace of Paris, through his role of leadership during, and beyond the generality of the 1790s and the Napoleonic wars.

Once the individuals have taken into account such matters as those just referenced above, it should become clear, and also clearer to them, that we must subject ourselves to a sense of the need for a profoundly systemic change in modern conventional notions of the passage of what we denote as "time." The

the "Romantic" or "Modernist" into systemic opposition to the actually Classical. In the second instance, this refers to the actuality of the process of the discovery of a new universal physical principle. Restated: this means that all discovery of a future principle of the universe, actually changes the universe, as mankind changes man himself.

In principle, this concept had been restated, implicitly, in what has been, essentially, a most forceful way, in Bernhard Riemann's powerfully inspiring 1854 habilitation dissertation. It is also expressed forcefully in the known history of the evolution of living species generally, but most clearly in the upward evolution of the creative power in the evolution of species—and, the power unique to the characteristic existence of our

human species' intentional power to change the universe which we inhabit, as no other known species has been enabled to do so. However, we are able to demonstrate that nature of what is specifically uniquely human creativity, as by means associated with the work of Nicholas of Cusa, most emphatically in his **De Docta Ignorantia**. We are empowered, thus, to create what is otherwise defined as an extension of creativity itself.

This is the same power associated with Classical modes of human artistic creativity: we demonstrate the principle of creativity through the action of creating a change in what we believe we know concerning the universe. In other words, Classical artistic composition and evolution of the universe to higher states of existence, are comparable abilities.

III. The Actual Science of Economy

Respecting the fundamentals of the progress of mankind stated this far: we, as a uniquely self-evolving, human species, are confronted essentially with two, successively combined, **qualitatively ontological distinctions** of our species: (1) a fact which should have carried our attention far beyond the notions of, first, the mere fact of **an ontological principle of life as such**; and, (2) the uniquely higher quality of existence of the unique class of phenomena represented by **the noëtic potentials specific to what we identify as the human mind**. These two distinctions, taken into account, in turn, and, then, combined, must present us with the evidence of the existence of a distinguishable universal principle, which, once duly considered, represents for us, as human beings, a principled phenomenon of **self-creativity per se**.

What, therefore, is the significance of mankind's development of what had been, previously non-existent capabilities for the present succession of mankind's ability to cultivate a development both on the planet Mars, and respecting the prospect of defeating deadly threats lurking in the space marked out between the range of Mars and Earth? Shift attention from the mere fact of these prospective developments, by rising to the level of the subject of the upward process of ontologically distinct notions of a process of development which, of necessity, had subsumed these developments. Mankind is distinguished as a species, by the option of

transforming itself anti-entropically, as no other known species could do.

We do not merely develop those of our powers which are intrinsically noëtic processes; we transform ourselves, ontologically, into evolved beings which have been made potentially capable, in themselves, of what had not been possible for the existence of our species earlier. We, respecting us, are the first known case of an actually self-creative form of living species; we are not merely qualitatively different as a species; we represent a higher order of self-evolution for our species than any other definition of life known to us heretofore: we are, *inherently*, a willfully creative species which must undergo successive phases of evolution into successively higher qualities of what we may identify as our evolving species. That is our essence, whenever we do not demean the very meaning of our existence, a meaning which is that of expressing our existential need to impel ourselves to rise, again and again, to a quality above and beyond all other living species known to us at any present time.

Were there any reason to suspect that we are less than what I have just described our species to be here, that result were a result of nothing as much as our qualitative self-degradation as members of our species.

What I have, thus, just summarized this far, respecting the uniqueness of human creativity, is to be considered in contrast to the characteristics of all other known species. This brings our conscience into conflict with previously accepted, erroneous notions of the specific nature of our human species, in absolute contrast to all other known instances.

It is the irony of this specific situation, which distinguishes the principled nature of "Classical artistic composition" from that, inherently, virtually sub-human depravity of what passes for "popular opinion." In other words, in the terms of fair approximations, the phenomenon which is to be properly regarded as human Classical-artistic creativity, exists *consciously* only in a willfully higher ordering of existence, ontologically—a *virtual, ontological, probably ever-continuing process of virtual species-jumps*—a higher order than any other known species of *life otherwise defined*. We must recognize ourselves as representative of what should always be (or should have been) a self-creating evolution of our apparently unique species. I.e.: "specifically human self-creativity."

We must cease to rely on the popular foolishness of thinking of man as a species which "might" evolve; we

are properly destined to be fulfilled in the purpose of our existence as a virtual succession of evolutionary transformations, by means of which to rise to relatively higher qualitative states of existence across successive generations: once we were intentionally and eternally oriented to an upward-evolving succession of generations, a series of qualitative ordering of the upward self-evolution of the human mind. The human species' innate intention in existing, is distinguished by its uniquely destined reliance on the discovery of what are, *in effect, intentional successions* of successively higher noëtic states of existence: ever higher energy-flux density of the species' existence. The failure of mankind to evolve to that progressive effect, expresses a willful, or quasi-willful failure in our species' behavior.

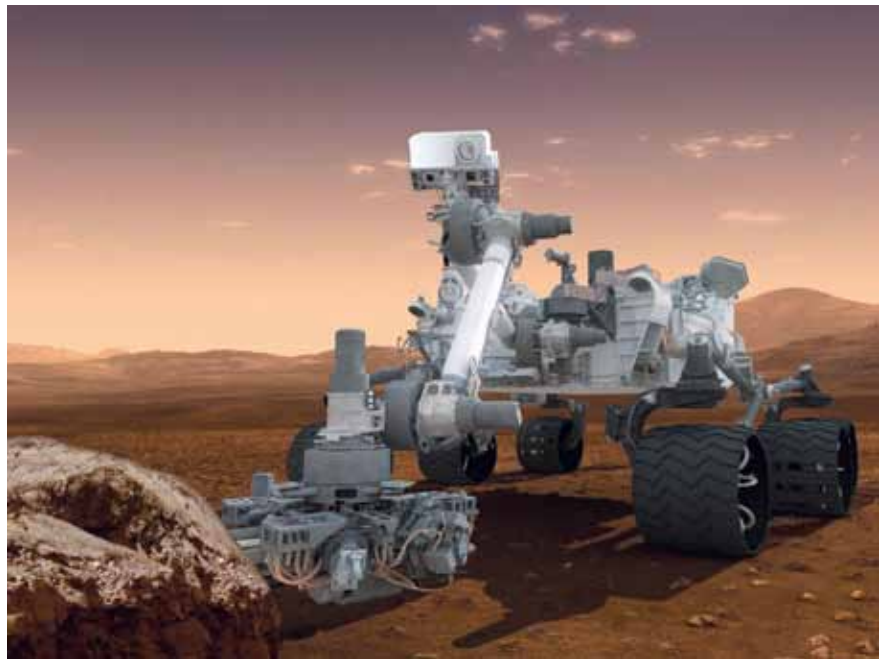
Consider the pending development of our species, thus, against the already existing evidence of mankind's relatively immediate destiny as mankind's necessary mastery of Mars and other places from which we must now muster the defense of Earth against menacing natural satellites and comets.

Let us, therefore, now re-examine what I have written here this far, proceeding from the just-stated, higher order of conceptions.

Beyond a Thermonuclear Defense of Earth

The present standpoint for defining the role of mankind within, and beyond the Solar System, has been expressed by the role of Dr. Edward Teller in respect to both the Strategic Defense Initiative (SDI) and the related subject-matter of defense of life on Earth from collisions with all potentially dangerous debris, such as satellites, "floating" within "space."

Apart from a limited potential for human visits to Mars, mankind's prospective near-term visits are not the leading priority for human activity on that planet. What has been demonstrated, in principle, for man on Mars, so far, is the more immediate potential for the use of higher orders of successor instruments to "Curiosity," such as instruments for the kind of defense of Earth against "natural satellites" adopted as a long-ranging



NASA/JPL

The defense of Earth from asteroids and other space objects will become possible with the extension of man's sensorium, through instruments such as the Mars Science Laboratory Curiosity rover, seen in this artist's concept from NASA.

mission-assignment by the late Dr. Edward Teller. This means the extension of the successful design of a mission-orientation for military strategic defense on Earth, to a higher mission of systemic defense against the vast panoply of both "natural satellites" and the far more menacing comets among known objects within Solar space at large.

The immediately interesting considerations feature a certain prospective benefit for mankind which has been brought into consideration by the success of "Curiosity." The establishment of the placing of operating systems on Mars now, brings our perspective closer to the prospect of placing operating systems more advanced than "Curiosity" typifies, into the means for setting into place on Mars, controllable operating systems, which have an obvious mission assignment for assisting the defense of mankind on Earth in ways not otherwise feasible. The fact that systems on Earth and Mars, respectively, are "in communication" at the speed of light, should be coming to be recognized as useful to mankind on Earth in many, largely obvious ways, including "reciprocal assistance" in "diagnosing and directing" operations needed for discovery of, and actions against threats from roaming satellites threatening Earth. This is of particular importance for defense against comets.

Messages of Condolence

On the Passing of Lyndon LaRouche

The following is a second selection from the large number of memorials and messages of condolence on the passing of Lyndon H. LaRouche, and of tribute to his life's work, which continue to pour in from around the world. (Compiled as of March 3, 2019.)

UNITED STATES

I extend my deepest sympathies to the Schiller Institute and Helga. Please accept my condolences. With a heavy heart, I pray for the eternal repose of one who was a man of distinguished humanity.

Elena Branson
President, Russian Center NY
Chairwoman, Russian Community Council of
the USA
U.S.A.

Institute of World Development
State Council's Development Center
Beijing, China

I am saddened to hear of the passing of Lyndon H. LaRouche, the founder and inspirer of the Schiller Institute. Please accept my sincere condolences.

Li Xin
Counselor, Science and Technology
Embassy of China, Washington, D.C.
China

CHINA

Dear Mrs. LaRouche,

It was with big sorrow that I have learned the sad news about Mr. Lyndon H. LaRouche's passing away. Indeed, he was a brilliant economist, a partisan of global justice and a valiant fighter against predatory behaviors of the global synarchy.

I feel very happy and honored to have met Mr. LaRouche personally, and listened to his insightful explanation of European and global economic history. I was deeply impressed by his enthusiasm and sense of humor. Since then, his predictions about the U.S., the Western and the global economy have always been my favorite references.

Alas, the world has lost a brilliant mind.

Please, accept my sincere condolence, and extend it to members of the Schiller Institute.

I am convinced that you and your colleagues will continue Lyndon LaRouche's great cause and fight against the predatory actions of the global synarchy.

I send you also the sincere condolence of Ambassador Mei Zhaorong, with whom you had friendly conversation in German at my institute.

Sincerely yours,
Ding Yifan

RUSSIA

It was with a feeling of profound grief that we received news of the passing of a truly great American and worldwide philosopher, economist and politician Lyndon LaRouche. We mourn together with you and wish for a continuation of his great ideas in the works of his comrades and disciples. We are prepared, within the scope of our capabilities, to help you in continuing his cause. That will be the best commemoration of this great man.

Oleg Bobrakov
Writer
Russia

Lyndon LaRouche has passed away. He was a partner of the Russian anti-globalists for many years, the author of fundamentally new theories of development of the world economy, and a man who not only criticized the existing economic system, but proposed interesting plans for a way out of the dead end into which Western civilization has fallen. In the Western press, and even in our RT, it is only mentioned that Mr. LaRouche repeatedly ran for President of the USA. Naturally they did not make clear that this was not out of

ambition; all Americans understand quite well that candidates outside the mainstream have no chance in elections. But the economist was trying to draw the attention of society to the pointlessness of continuing to follow the road of the “brave new world” of globalization, something of which the entire world is now becoming convinced.

Taking individual fragments out of the context of their well-reasoned exposition, the mass media accuse Lyndon LaRouche of espousing what they see as “freak” notions about the “world government” and “the British royal family.” Yet there can no longer be any doubt about the existence of agencies of behind-the-scenes coordination of the interests of transnational corporations and of the nations they are tied up with—whether you wish to call it “world government,” deep state, the Trilaterals, or the Bilderberger Club. It is not to be excluded that we’ll learn something about the Windsors in the near future.

But what is the most delightful in the theories and statements of Lyndon LaRouche is less the decisive criticism of the existing world order, but the proposals for overcoming the dead end of globalization. In them are to be found magnificent transportation construction projects, which no longer seem so fantastical, in light of ideas from the PRC. And proposals for financial policy. And there are important initiatives in the realm of cultural development, which have been implemented primarily through the Schiller Institute, headed by Mrs. Zepp-LaRouche.

Mr. LaRouche took part in several of our conferences by Skype [or video], contributing a creative stream to the discussion of economic problems. And it should also be noted that Lyndon LaRouche was a true patriot of America, who fought for his country in the Second World War. Thanks to him and his young associates, many of our anti-globalists who were critical of official U.S. policy were able to see a different face of America, and they understood that they have many co-thinkers and comrades among the American people.

We offer deep sympathy to all the associates of the LaRouche Movement, above all deepest condolences to his widow, Helga Zepp-LaRouche, on the passing of this Leader, Teacher and Thinker.

Prof. Elena Borisova
Anti-Globalist Resistance Press Center
Moscow, Russia

INTERVIEW

Of Historian Andrei Fursov

by Andrei Fefelov, editor-in-chief, *Den-TV*
Director of the website of *Zavtra* newspaper.

Lyndon LaRouche Has Passed Away—A Man Who Foresaw Our Future

Lyndon LaRouche died not long ago. He was a philosopher, politician, a person with great knowledge, encyclopedic knowledge. LaRouche was a friend of Russia. He foresaw many things before they happened. He predicted the Russo-phobic aggression of the American elite and warned of its catastrophic consequences. For many years, right up to the present, LaRouche has forecast the inevitable onset of the global financial crisis, pointing to the growing gap between the volume of real production and that of financial speculation. He told us about the financial bubble, the one that right now is hanging over the world, threatening to bury all humanity under its shards. LaRouche revealed the hidden mechanisms of world politics behind the scenes, including its army of pseudo-progressive figures, who in reality are regressive types, transhumanists, lobbyists for drug legalization, propagandists of perversion, and so on. Today I would like to honor the memory of LaRouche and hear from you, Andrei Ilyich, as someone who knew LaRouche personally, a few words about him.

Andrei Fursov: First of all, we should offer condolences to his widow and his colleagues, for whom this is unquestionably a great loss. . . .

LaRouche ran for U.S. President several times, unsuccessfully, of course, but the most important thing is his contribution to scientific research and his creation of powerful analytical organizations. It is of great importance that LaRouche never feared to “go against the flow”; he was a strong person, and could do this.

In his ideological and scientific views, he was an opponent of globalization and always opposed the so-called post-industrial society. He was an extremely harsh critic of the British Empire, and in the conflicts taking place within the West, he acted as a supporter of industrial capital in its confrontation with finance capi-

tal. It should be noted that the entire history of the capitalist system over at least the past 200 years is a history of confrontation between finance and industrial capital. In the 19th century finance capital took the upper hand; in the first three-quarters of the 20th century industrial capital was able to take revenge; but beginning in the 1970s finance capital abruptly began to strengthen again and, together with the corporatocracy, it crushed industrial capital.

LaRouche always advocated what he called “physical economy,” that is, the real economy. He understood perfectly well that financialized capitalism is parasitical, predatory capitalism.

LaRouche proceeded from the position that there is a need for an alliance between the United States of America, Russia, China and India. I personally think that this idea is fairly utopian because these four countries are too large to form some kind of an alliance in peacetime. But what’s very important is that his standpoint was always one of non-confrontational relations among these countries. . . .

It is very important that LaRouche dealt with the real mechanisms and levels of power in the West. He analyzed the hidden codes of the Western power system. Therefore, he was often accused of promoting a conspiracy theory. But such accusations are a hobby of those who either don’t want to look at things as they really are or, to the contrary, know the reality well, but try to hide it. LaRouche’s organization issued a weekly journal, *Executive Intelligence Review*, which published a lot of material on this topic.

LaRouche and his colleagues were not afraid of releasing the book *Dope, Inc.*, which dealt with how the upper echelons of the British elite, and part of the American, are involved in the drug trade. In 1989, it was for this, and not for tax evasion, as stated in the official charges, that he was sentenced to fifteen years in prison. Although he did not serve this entire term, he did spend five or six years behind bars.

I met LaRouche in person in 2013 at a conference near Frankfurt, where we had very interesting discussions. Then I visited him and his wife, Helga Zepp-LaRouche, at home. He was, of course, a very interesting and well-informed person. . .

In principle, I think that LaRouche was sympathetic, despite making criticisms, towards much of what Trump is doing today, because America’s course towards independence, towards breaking or weakening ties with the

British establishment, and towards making America great again, I think that LaRouche would embrace.

In conclusion, Lyndon LaRouche was certainly a very interesting phenomenon in Western political and intellectual life. He revealed many things to Western readers, at least to those who were ready and willing to think. LaRouche was popular in Russia as well. He was in contact with very interesting people, such as [the late Prof. Grigory] Bondarevsky, with whom he discussed the Silk Road concept and the idea of physical economy.

Many people in Russia were, if not his followers, then allies who sympathized with him. I think therefore that many of LaRouche’s ideas, both physical economy and the railway integration of Eurasia, belong not to the past, but to the present and the future.

Back in the 1990s, LaRouche anticipated and forecast many trends that seemed impossible in those years. And now we see these trends making their way. This prognostic power of LaRouche’s concept and works establishes him as a serious thinker.

I think that the study of LaRouche’s ideas and legacy is a very important task. And finally, I think that we should rejoice that we had as our contemporary a person like Lyndon LaRouche.

Andrei Fursov
Institute of Scientific Information on Social
Sciences (INION)
Russian Academy of Sciences
Moscow, Russia

Unfortunately I learned about the death of Lyndon LaRouche with some tardiness. I mourn together with you. Lyn will go down in history as a unique public figure on a world scale. I consider it an honor that I was able to some extent to assist in the dissemination of LaRouche’s ideas in Russia, as well as to introduce this extraordinary personality to readers in my country through my extensive interview with Lyn and thanks to the unforgettable experience of meeting this outstanding man. I am grateful for that.

Please convey my condolences to Helga and all of LaRouche’s associates whom I know. May he rest in peace, and God rest his soul.

Andrei Kobayakov
Journalist and Economist, Moscow State
University
Moscow, Russia

Lyndon LaRouche, Friend of Russia, Has Passed Away

Published Feb. 16, 2019, on the website *For the Revival of Russian Science*.

This is immeasurably sad news!

Lyndon LaRouche and his colleagues have been known since the 1970s as fearless and consistent fighters for the establishment of a truly just political and economic international order, for building productive national economies and sovereign nation-states, and against the reign of speculative capital on a national and world scale.

L. LaRouche was an irreconcilable enemy of “finance capital,” who mercilessly exposed the subversive activity of the International Monetary Fund, the World Bank, and the international financial speculators and adventurers, for which he and his supporters were politically persecuted and served lengthy prison sentences. The Soviet press, unfortunately, contributed to the slanders.

From the very beginning of the 1990s on, he insistently and repeatedly warned the scientists, public figures, and officials in Russia about the catastrophic consequences of “liberal economic reforms,” and proposed alternative approaches. He repeatedly visited our country during that time. His ideas were blacked out on the official level in Russia, right up into the mid-2000s, but the reception he met with in our academic circles and the patriotic media was better.

He believed in the ability of humanity, united, to solve any and all global problems. He believed that the accord between leading powers of the world, necessary for that, was achievable, and he worked for it tirelessly to the very end.

Lyndon LaRouche was a great and long-standing friend of our country. He highly valued Russia’s aid to the USA in the American people’s struggle for independence from Great Britain, and viewed the USSR’s contribution to victory over fascism as having been decisive and the role of Russia today in maintaining global equilibrium and stability to be irreplaceable.

He was a man with extremely broad intellectual horizons and the greatest nobility, being a visionary and a realist simultaneously.

One of the greatest qualities of L. LaRouche, worthy of being imitated by anybody was his ability to preserve, even in the darkest times, his faith in the inevitability of changes for the better and his preparedness for such changes. His eternal optimism was unfeigned and

infectious.

For the U.S. political elite, the departure of such a person as L. LaRouche is a national tragedy, although the greater part of that elite, because of criminal myopia and obtuseness, is hardly in a condition today even to realize that fact.

It is sad that such people do not live forever. But the cause and the works of L. LaRouche, in one way or another, are destined to live forever, because, as a true patriot of the USA he worked for a better future of his country and for people throughout the world. He worked honestly, with talent, and with joy, and spared no effort.

My sincere condolences to the family, friends, and co-thinkers of Lyndon LaRouche.

Victor Kuzin
Lawyer and former member of the Moscow
City Council
Human rights advocate
Russia

I’m very sorry to hear this...! Our condolences to the family. This is a great loss for us, as Russian economists who supported him. We are mourning.

Maria Sereda
Project Coordinator, Moscow Economic Forum
Russia

ARMENIA

Please convey my deepest condolences to Helga, and tell her that I remain a true friend and a follower of our common cause.

Aik Babookhian
Member of Parliament
Leader of the Constitutional Rights Party
Armenia

DOMINICAN REPUBLIC

Remarks made on the Feb. 23, 2019, “Cara a Cara” TV program

In homage to Lyndon LaRouche, hosted by
Rafael Reyes Jerez
By Ramón Emilio Concepción and Dr. Marino
Elsevyf

Lyndon H. LaRouche has been for me, in politics, in ideas, in humanism, in philosophy, in poetry, in all of that, he was above all a statesman, a precursor, and a man dedicated to the worth of all human beings. People like him become immortal; they ensure their immortality with the works they perform.

Lyndon LaRouche said that human beings are born as little angels, made in the image and likeness of the Creator. He was a man who for some 60 years or more, perhaps for 70 years dedicated his life to the benefit of mankind, and the quality of life of human beings around the world. With him I learned to begin to study the great contribution he made on the New Silk Road, which China is now carrying out. He and his wife Doña Helga were the precursors. We speak, for example, about a New Bretton Woods agreement that they proposed; we speak about the integration of the world through infrastructure, which China is carrying out; in fact all of these ideas were the ideas of Lyndon LaRouche, which we began to know when we were young.

Lyndon, in my view, was a great man for all humanity; he achieved the status of genius, he was of enormous value to us. He helped us students unmask the lies of the neoliberals, especially those of Adam Smith, David Ricardo, Thomas Malthus and Keynes—all of those people who, in different ways, have worked for unbridled globalism—as opposed to the national development school which we learned about through the Schiller Institute, founded by Lyndon’s wife, Doña Helga. We really learned how nations are built. I remember the first time that I had the opportunity to read “Economy and Society,” a book written by Leibniz in 1651, that shows that economics and morality can go hand in hand. Because the neo-liberals say that in economics there is no room for morality. With Leibniz, through LaRouche, we discovered that in 1651 Leibniz was already stating that economics and morality go hand in hand, that they can work for the benefit of mankind. . . .

What is dangerous today, which LaRouche also discussed, is that a war at this time would not be a conventional war, but rather a thermonuclear war which would ensure the annihilation of almost two thirds of humanity. That is why we are opposed to every kind of confrontation that could lead to a world war. We may have differences with another State, but to therefore intervene and provoke what could become a clash among the United States, Russia, China Germany—this could unleash Armageddon, fulfilling the dream of those evil people who would like to reduce the population. Remember that Thomas Malthus, an economist on the payroll of the British East India Company, like Adam Smith and David Ricardo, called for eliminating the

poor. If there are no wars, if there are no plagues, then create them! Foster war! Don’t build houses for the poor, let them live in swamps so that they are bitten by mosquitos and die! . . .

This was not an easy fight [for LaRouche], because the great American power—not the political powers, but the financial powers—sent LaRouche to prison, because at a certain point he became a very important person vis-à-vis the Reagan administration. During the so-called Cold War confrontation—that British invention—he proposed the famous national security shield [Strategic Defense Initiative]. And he became very important in the Ronald Reagan government. They then fabricated a way to send him to prison, and they sent him to prison. He spent five years in prison, but even that didn’t lessen his strength of character, his will to keep working on behalf of humanity.

And today, although it is true that he is no longer in this jurisdiction where we are, he is a man who has left a formidable legacy for the benefit of mankind. And he has left a group of men spread around the world; and we have understood his ideas, we have studied his ideas, and we became convinced of the value of his idea, and we are his continuers.

Ramón Emilio Concepción
Presidential pre-candidate of the Modern
Revolutionary Party
Santo Domingo, Dominican Republic

I met Lyndon LaRouche in 1985 in Boston, at a very interesting conference, and the wisdom of his proposals captivated me. This led me to follow him through the Schiller Institute. What really moved me were his explanations about the causes for the world to be in crisis, what are the structural reasons for it. LaRouche made forecasts of what the financial collapse would be, and those forecasts came about! Not immediately, but they came about. Then in 2008 we saw the collapse of U.S. society and the multinational banks, the trans-Atlantic banks as he called them, where there was a systemic crash. Of course, as people said at the time, the crash was so great that it could not be recognized as such, and the State had to intervene, and the neoliberal postulates that private individuals could carry out business activities according to the free market, were defeated by that 2008 crisis.

Of course, LaRouche had in his ideology and thinking a Platonic concept of how to exercise power, which

was contrary to the Aristotelian view that elite groups run our affairs, our knowledge, and transfer of technology. He understood that a developed world was the only solution for the betterment of humanity. He often referred to the phrase that “development is the new name of peace,” of Paul VI; he employed the concepts of “savage capitalism” of John Paul II; he established clear and precise parameters that only cooperation among States could bring about the true development of mankind. He posed from the outset what today mankind is seeing as the New Silk Road of Marco Polo, which the Chinese today are carrying out with a new route and a new market for humanity; with the idea of “win-win”, as China’s leader Xi Jinping has stated. Only with cooperation among States can there be transfer of technology which encourages development, and which also brings it about. Asia, for example, is developing, linking up Siberia with a connection towards China, and new labor markets are being created and the condition of mankind is being bettered. . . .

LaRouche proposed as an answer to the systemic breakdown the employment of a new law, which is already an old one in the United States, the Glass-Steagall law, which is the basis for creating two kinds of loans: one, for development lending, with low interest rates and which can be repaid; and the other for capital markets with a different kind of regulation which would not be out of control and lead to the bankruptcy of the system, as has occurred in the past, such as in 2008, specifically, with the bankruptcy of what were called sub-prime mortgages in the U.S., which was really a house of cards which collapsed on the U.S. economy. . . .

I was part of the Martin Luther King Tribunal in Washington, D.C. [seeking justice in the case of Lyndon LaRouche], which was set up along with Ramsey Clark, who had been the U.S. Attorney General under Lyndon Johnson. And I had the opportunity, as the only Latin American member who participated in that trial, where it became totally clear that there had been political persecution in the case of Lyndon LaRouche in 1988 in the Alexandria, Virginia court, where they persecuted and then jailed LaRouche over tax matters—which, it should be noted, LaRouche recently denounced as what is going on with the current President, Donald Trump, that it is [the networks involved in] the Alexandria trial that are trying to go after him because of alleged ties to

Russia, on the basis of manipulation of investigations carried out. That’s what happened with Lyndon LaRouche: groups carried out investigations which were used to present false charges, to manipulate the threads of justice, precisely in Alexandria. And he warned recently that President Donald Trump should beware of the same machinery that was used to take him to trial on the basis of such manipulations, using the Alexandria court for political persecution. These are the real powers that be in the United States.

LaRouche provided unequivocal proof to that hearing that his was a case of political persecution. And that the manipulation of alleged interest charges related to taxes was merely a far-fetched invention in order to send him to jail.

After LaRouche was released from prison he ran in the Democratic Party, and I also had the opportunity, along with Amelia Boynton Robinson—that great fighter for civil and political rights, along with John F. Kennedy and Martin Luther King—to observe the primary elections of the Democratic Party. . . .

You know, LaRouche was not only a candidate; he also had a whole worldview, because he was a man of science, he was a scientist, a mathematician, a philosopher, and he had extraordinary knowledge of history and he loved music. For example, I learned from him that human beings have a tuning of their voices that is below A-440, which is now used by nearly all musicians. . . .

LaRouche’s proposal for a New Silk Road has been taken up and is part of international policy. In Latin America, for example, the proposal for a bi-oceanic connection that has been proposed to go through part of Peru, and Brazil, and Bolivia; and what they are trying to do in Panama, to connect all of Latin America—these are all part of the plans going back to the great American Presidents at the end of the 1800s, and which LaRouche has revived as an indicator of development and land communication to make human beings viable in society . . .

Fundamentally, doing politics means to do the Good; doing politics means involving all human beings. Because the fundamental idea of LaRouche is that we are all equal, made in the image and likeness of God.

Dr. Marino Elsevyf

Attorney

Professor, Autonomous University of Santo Domingo

Dominican Republic

GEORGIA

We are deeply saddened at the passing of Lyndon LaRouche. Please convey our condolences to Frau Helga. A great humanist, thinker, and fighter for the rights of the people has departed this life. Mankind has suffered an irreparable loss. I am happy that I was destined to work side by side with such a man. His ideas and his works will remain forever. We mourn his death together with those close to him.

Vladimir and Tatyana Kilasonia

Dr. Vladimir Kilasonia is an economist

Georgian Labor Party

Tbilisi, Georgia

Great loss for all of us who knew him and followed his philosophy. My condolences to everybody.

Dr. Tamara Tsintsadze

President Diplomatic Academy and School

Georgia

ITALY

At the end of the 1980s, Emanuele Levi, a friend of my father and a trade unionist with quite radical ideas in monetary matters, with whom I had already published a book entitled *Currency in the Service of Man*, wanted to introduce me to Father Amos Spiazzi, the spiritual advisor of many political figures.

At the end of a long and intense conversation on the economy, Father Spiazzi put a book into my hands, saying: "Perhaps you are the only one who can tell me whether it is sound or unfounded." It was *The Science of Christian Economy* by Lyndon LaRouche, an author whom I did not know directly. On the cover was Brunelleschi's cupola in Florence.

I started to read it somewhat skeptically, but soon I became convinced that it was a revolutionary work, a convincing and deeply scientific one.

My thought went to my teacher Federico Caffè, whom I had lost shortly before; in his case as well, I had first known him through his writings and then personally.

I reported to Father Spiazzi about the beautiful discovery, enriched by the fact that higher dimensions of mathematics and geometry opened very interesting perspectives for macroeconomics; Father Spiazzi told me that he would act accordingly, but I never heard

about the follow-up.

But a few years later, I had the opportunity to meet Lyndon LaRouche on the occasion of an event in Rome. From then on, an over-two-decades-long collaboration began, with mutual sympathy in shared battles.

During those 25 years, we met many times at events and conferences which I organized in Italy and which he, his wife Helga and other activists organized in various European, North-American and Middle East localities.

We had very amusing and interesting convivial occasions with my father and my mother, during which Helga, Lyn and we shared analyses, evaluations and projects.

On several occasions, our common friend Amelia Robinson was a guest at my house; she got to know my three children, she entertained us with her emotional spirituals, and was able to appreciate our cuisine and sweet red wine, which she preferred the most.

For many young people (and I include myself among them, being 30 years younger than him), Lyn has been a benchmark, first of all in terms of social commitment, and secondly for his teachings that unite science, art, politics, economy and real human sentiments.

Since in the 1990s, I found myself having to deal with the Italian followers of Michael Novak, in what was then the Popular Party—at precisely the time that my father had made the unfortunate decision to leave Italian politics—the friendship with LaRouche and the study of his political and economic ideas were very helpful and comforting for me. I believe that Novak and LaRouche are the perfect representatives of current thinking in the United States. On the one hand Novak, the failure of free market economics; and on the other, Lyndon, the possibility of a planetary revival through new agreements on monetary and financial problems, and the creation of large-scale infrastructure networks which connect Asia and Africa, passing through Europe; the Bering Strait bridge, or tunnel; the magnetically-levitated train along the southern part of Siberia, Eastern Europe and Italy, down to the Messina bridge and the tunnel which will connect Sicily and Tunisia.

The free traders and monetarists limit those perspectives based on the existence of available resources; but we say that such resources exist by transforming the current dangerous short-term speculative financial

flows into long-term, low-interest bonds, to provide the necessary resources for the programs to relaunch the global economy. Lyndon has continued to point the youth in this direction, concerning the feasibility of agreements, such as the New Bretton Woods, which would open economic and social perspectives that are very different than the financial bankruptcy created by inept governments and the so-called Poteri Forti (vested interests) which, starting in the 1970s, have taken hold of almost all the control levers, but who have shown that they are unable to manage industrial systems and civil life.

My thoughts go to Lyndon and to persons who were better than me: Mattei, Moro, Falcone, Borsellino and all the others who have been in the heart and memory of people like Lyndon LaRouche and my parents.

Antonino (Nino) Galloni

Economist

Former Italian government official

Italy

LEBANON

It is unfortunately seven days late that the sad news of the death of your great inspirer and leader Lyndon LaRouche, reached me. Even though it was to be expected seeing his great age, it provoked in me a great sadness and regret. To you, to Jacques [Cheminade], to Mrs. Helga Zepp-LaRouche and to all my friends of the Schiller Institute, I wish you, on this painful occasion, my sincere condolences. But also the expression of my unbreakable certitude that the great man who just disappeared will not stop inspiring in times to come, beyond yourselves, those militants throughout the world, fighting for dignity of men and peoples.

Bassam El Hachem

Professor of Sociology, Lebanese University
Beirut, Lebanon

UKRAINE

Dear Helga Zepp-LaRouche and dear fellow
humanitarians of the Schiller Institute,

Please accept my sincere condolences on the passing of Lyndon LaRouche, a universal, global thinker, progressive and wise internationalist scholar, who dedicated all his noble activity to the triumph of the highest social and political ideals of justice, mutual understanding, and moral and ethical integrity in international and interethnic relations.

May his bold scientific-secular and political-economic ideas and projects serve as a reliable platform for the rebirth of civilized, mutually beneficial, and fair relations among all the countries and peoples of the world!

With best wishes of enthusiasm and the continuity of LaRouche's scientifically progressive legacy, to be passed on to all his progressive humanitarian colleagues.

Valery Babich

Professor, Doctor of Economics

President of the V.I. Vernadsky Universal

Ontological-Noöspheric Society

Ukraine

I am so very sorry! Sincere condolences to all. Continue his work! We shall remember!

Col. (ret.) Alexander Ignatenko

Vernadsky scholar

Author *The Vernadsky Strategy* 2003 book,

inspired by LaRouche

Ukraine

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