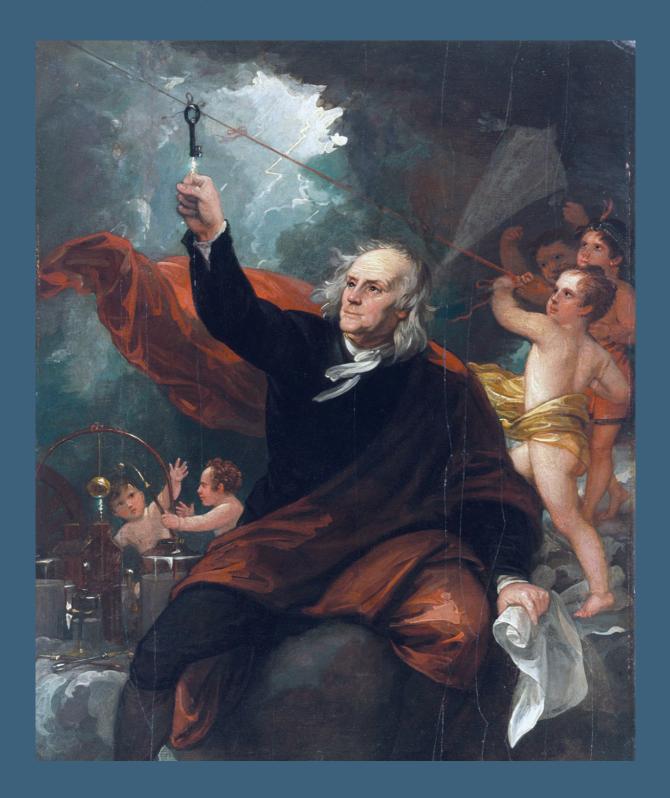


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Man Creates **His Own Future**

LaRouche PAC Releases a Mass-Circulation Petition for the Moon-Mars Mission

July 25—Today, the LaRouche Political Action Committee in the United States issued a petition, "We Commit To the Moon-Mars Mission," asking signers to pledge their commitment to the following program "and call on President Donald Trump and the U.S. Congress to commit to it as well." The petition is being issued at a time of renewed international optimism, seen in the outpouring of excitement and pride

on the 50th anniversary of the July 20, 1969 Apollo 11 Moon landing. With the unraveling of the British intelligence-run Russiagate hoax against President Trump, now is the time to mobilize to bring the United States into the New Paradigm and guarantee a future of unlimited potential for future generations. The text of the petition outlines the following science driver economic program:

• Successfully realize the Artemis mission to bring mankind—including the first woman—to the Moon to stay in 2024, as President Trump and his NASA Administrator Jim Bridenstine have called for.

• Make Artemis the first step towards the industrialization of the Moon, as the economic platform enabling human colonization of Mars and human exploration of the Solar System—as first thoroughly defined by the late space visionary Krafft Ehricke.

• Develop advanced fusion propulsion spacecraft, fueled by the helium-3 resources on the Moon—enabling safe and rapid human travel to Mars and other

regions in the Solar System, with the goal of achieving constant one-gravity acceleration/deceleration as the standard for human interplanetary missions.

• Achieve this Moon-Mars program through an international 50-year crash program, as outlined by the late economist Lyndon LaRouche—ensuring the high rates of economic payback on Earth which can only be reached by developing new space and fusion technolo-



NASA astronaut, Commander Peggy Whitson, aboard the International Space Station.

gies, and sharing those technologies internationally as the basis for durable peace on this planet.

• Reform or eliminate the speculative and predatory aspects of the international financial system, as a necessary step to ensure sovereign nations can generate the long-term credit agreements needed to facilitate this mission.

• Remove barriers to international collaboration in

space—especially impediments to U.S. cooperation with China and Russia (as typified by the so-called Wolf Amendment, barring NASA from working with China).

This program coheres with remarks made by Lyndon LaRouche to a December 2009 international conference in Russia:

In order to realize the objectives which stand before us now, we have to give mankind a new mission—mankind as a whole. The mission is typified by the idea of the Mars colonization. This requires us to make the kinds of changes, in terms of scientific progress, which are needed for mankind's future existence.

We have many problems on this planet. And we can not solve those problems, extensively, without going into a development of the Solar System as a habitat of mankind. We're on the edge of doing that, scientifically. There are many scientific discoveries, yet to be made, which will make it possible to act for man's colonization of Mars. That will be in some time to come. But what we need now is the intention of accomplishing the Mars colonization program. We need to educate and develop generations of young people, who will be oriented to that kind of mission. In the coming period, we will have the birth of young people who will be part of the colonization of

Mars, in one way or the other, before this century is out.

We need to give mankind a sense of purpose, developmental purpose, not only throughout the planet, but through the influence of Earth on the adjoining regions of the Solar System, and beyond.

Those objectives are feasible. There are, admittedly, many problems to be solved, scientific problems, which are not yet resolved. We have many questions. But, essentially, we know this is feasible. We know this should be feasible within two or three generations. What we have to do, is give to people, who will be the grandchildren, born now, to give them something to realize. When we're dead and gone, they will be there, three generations from now, four generations from now. They will be the people who actually colonize areas beyond Earth itself. We need to give them the opportunity to do so. We need to give society, in the meantime, the mission-orientation of achieving that colonization. for our descendants, three generations or so down the line

Ben Deniston of the LaRouche PAC science team addressed the principles of the program, in great detail, in a webcast on Saturday, July 27, available here. The <u>petition</u> is available on the LaRouche PAC website.

August 2, 2019 EIR Man Creates His Own Future 3

Contents www.larouchepub.com Volume 46, Number 30, August 2, 2019

Cover This Week

Benjamin Franklin, Prometheus of the 18th Century.



Painting (detail) by Benjamin West

MAN CREATES HIS OWN FUTURE

- 2 LaRouche PAC Releases a Mass-Circulation Petition for the Moon-Mars Mission
- I. From Apollo to Artemis to Mars
- **5** ZEPP-LAROUCHE WEBCAST **Ignorance of Our Beautiful Options** Is the Biggest Problem We Face
- 12 Houston Meeting Mobilizes for Artemis and **Beyond**

by Kesha Rogers and Brian Lantz

17 Calls for LaRouche's Exoneration: Three **Prominent Figures--Italy, U.S., France**

Nino Galloni, Italy

James Jatras, United States

Jacques Cheminade, France

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

Watch The LaRouche Case video

Watch the LaRouche Memorial video

Sign the Petition to Exonerate LaRouche at lpac.co/exonerate

II. The Threat to Civilization

21 AN APPEAL TO ALL THINKING PEOPLE Defend Germany as an **Industrial Nation!** by Helga Zepp-LaRouche

25 Ebola: World Health **Emergency**

by Dr. Debra Hanania-Freeman

- III. The LaRouche Plan for Mars
- 28 Big Payback from Mars **Colony Mission**

Part 2 of 2 by Lyndon H. LaRouche, Jr. October 21, 1988

39 EDITORIAL **Democrats and Mueller in Historic Failure**

by Barbara Boyd

42 EDITORIAL **Senate Intelligence Committee Promotes Russiagate Fraud**

by Stanley Ezrol

I. From Apollo to Artemis to Mars

ZEPP-LAROUCHE WEBCAST

Ignorance of Our Beautiful Options Is the Biggest Problem We Face

This is the edited transcript of the Schiller Institutes' July 28, 2019 New Paradigm interview with the founder and President of the Schiller Institutes, Helga Zepp-La-Rouche, by Harley Schlanger. A <u>video</u> of the webcast is available.

Harley Schlanger: Hello, I'm Harley Schlanger with the Schiller Institute. Welcome to our weekly webcast with our founder and President Helga Zepp-LaRouche. Today is Sunday, July 28, 2019.

We've had a number of very striking developments in this last week, starting with the completely failed effort to use the appearance of former Special Counsel

Robert Mueller before Congress to gin up pressure for impeachment of the President. Helga, you saw some of the video of this. What was your impression of Mueller's testimony?

Mueller's Testimony Helga Zepp-LaRouche:

I only watched for a certain period, because it was getting pretty boring. Mueller's testimony was long expected, and the Democrats had made such a big show about it, but then, here was Mueller basically saying, "I don't know. Look at the report...." He didn't even seem to remember what Fusion GPS was, which is

the central firm in the middle of this Russiagate affair. If you listen to the comments afterwards, from Michael Moore to David Axelrod, and various other people in the United States, they all agreed Mueller was a complete disaster, a catastrophe. I thought the *most* interesting comment, actually, came from the renowned lawyer and constitutional law specialist, Alan Dershowitz, who said to Fox News, "[Mueller] was not familiar with the contents of the report. It's very clear that Mueller did not write the report."

Now, that brings up a whole bunch of questions. I really thought that if Mueller is in such a bad shape that he could not stand in such a hearing, why did they put

him up there? Why did they not just say he had a diplomatic illness, a sudden knee operation or something which would prevent him from being exposed like that? If there is a doubt that he even wrote the report, then who did write it? And that brings us to the nexus of people behind Mueller. And that takes us to the Hillary Clinton campaign, Obama Administration, the intelligence chiefs of the Obama Administration, all the way to British intelligence, with which there was collusion.

I find this very interesting. As the next phase, Attorney General William



Special Counsel Robert Mueller testifying before the House Judiciary Committee on July 24, 2019.

Barr, U.S. Attorney John Durham, and also Department of Justice Inspector General Michael Horowitz will hopefully make public all their investigations. All of these individuals are investigating what was really behind the Russiagate coup attempt, in terms of Christopher Steele's connection to British intelligence.

Trump was very happy with the hearings, as absolutely nothing came out. In an interview with Sean Hannity on Fox News, he said,

Hopefully, we are going to be able to find out how a thing like this started. This was treason. This was high crimes. This was everything as bad a definition as you want to come up with. This should never be allowed to happen to our country again.

He said this was three years of wasted time, wasted money.

So I think this is a complete defeat of those people who tried to use that as an entry point for impeachment against Trump, and the Russiagate, which has been dominating the news for almost three years now, has all been absolutely nothing. And the question now on the table is, who did it, and what was the intention? And the real culprits will hopefully all be exposed.

Schlanger: I think one of the more important points that Mueller made, even though he was very evasive, he kept saying "It's not in my purview" when talking about, for example, as you mentioned, Fusion GPS, which was really the starting point of the so-called "official investigation." But he said that they found no crime, and so that's why they made no specific indictments, and it had nothing to do, really, with Russia—except that, at the end, Mueller made a big pitch, saying that it's "still" Russia, that the Russians are still intervening in our electoral process.

We've now arrived at a point where *there is no basis for impeachment*. What does this mean in terms of the direction that Trump could go now, if he wanted to?

Zepp-LaRouche: If Trump wants to, he could now make good on his election promise, and what he said carefully a couple of times since, namely, improve the relationship with Russia, especially, which is very urgent; but, by the same token, he also could respond to the many Chinese offers for cooperation, for a winwin collaboration on the Belt and Road Initiative, on

space exploration and research, and manned space flight down the road. So it's really up to Trump right now.

LaRouche PAC Moon-Mars Petition

Our colleagues in the United States are not looking at this complacently, because the obstacles are still many, the neo-cons are still there, the Democrats are still in their crazy mood. So our colleagues from La-Rouche PAC in the United States have written a very, very good petition, committing the signers and calling upon Trump and the Congress to successfully carry out the Artemis mission, thus making good on Trump's promise to bring an American man and woman to the Moon by 2024.

This petition is very concrete and shows exactly what steps have to be taken, to not have another situation where programs are cancelled, like the Apollo program; or fusion research which has been underfunded for decades; but the steps required for a Moon-Mars program, as formulated and outlined especially in the 1980s by my late husband, Lyndon LaRouche.

I really urge all of you to look at this petition, titled "We Commit to the Moon-Mars Mission," sign it, and distribute it as widely as possible, because I think we need a general education of the population of what is needed to actually fulfill these very ambitious programs.

Schlanger: One of the most important positive changes for the United States to make is to accept China's repeated offers for cooperation in space. The Chinese, again, extended an offer to the United States, and there have been a number of papers written, including a White Paper from China. What is it that they're asking the United States to do?

Zepp-LaRouche: Many nations right now are conducting very ambitious space programs. China has its *Chang'e-4* (lander) and *Yutu-2* (rover) vehicles active on the far side of the Moon, which is eventually supposed to bring helium-3 to Earth as fuel for thermonuclear fusion. On July 27, India successfully launched its *Chandrayaan-2* mission to investigate water on the South Pole of the Moon. Next year, China will send a vehicle to Mars to investigate terraforming. And in the United States, NASA is now mobilizing under Trump's Artemis program to bring human beings to the Moon by 2024.



Artist's conception of the Chandrayaan-2 lander and rover on the Moon.

There is already very far-reaching cooperation among the European Space Agency (ESA), Russia's Roscosmos, the China National Space Administration (CNSA), and the Japan Aerospace Exploration Agency (JAXA), all of whom have just participated in the big 4th International Conference on Lunar and Deep Space

Exploration in Zhuhai, China, all agreeing to cooperate on lunar missions.

Now, the best thing the United States could do would be to reverse its policy, imposed in 2011 by the Wolf Amendment, prohibiting NASA from cooperating with the Chinese on space research, because this is really an obstacle. China is about to become the leader in space technology, and it may already be there in certain aspects. And if you think about it, as my late husband always said, it's not

about carving up the Moon or other parts of space, it's getting humans there, it's making this incredible step beyond that accomplished with the Apollo 8, in which for the first time, humans escaped from Earth's gravitational pull and orbited the Moon, and beyond man's first steps on the Moon with Apollo 11.

Cooperative Crash Program a Necessity

With the Artemis project, we are now engaged in a mission that will lead to our constructing a permanent settlement on the Moon, and it makes much more sense if all the international efforts are put together, rather than having each Earth-based spacefaring nation attempting it alone. The steps to be taken are many, and the project would move along much better if everyone was involved in each step along the way.

Of course, adequate funding is absolutely crucial. At the same time, international space cooperation *is* the absolute necessary basis for what Xi Jinping always calls "the shared community for the future of mankind," a situation where geopolitics is overcome, and we create the basis for a durable peace for the entire human species.

So the purpose of this petition is, among other things, first of all, to discuss exactly what needs to be put into the mode of a crash program, and in what ways international cooperation should take place.

Schlanger: Helga, speaking of international cooperation, there was a very interesting meeting on July 26 of the foreign ministers of the BRICS countries—Brazil, Russia, India, China, and South Africa—in

Brasilia, where Russia's Sergey Lavrov made a very strong statement about the cooperation that's developing. During the discussions, Lavrov said that while there's opposition coming from some networks in America, it's not coming from Trump. And Jair Bolsonaro, the President of Brazil, will going to China.

So it seems there is potential for the Four Power arrangement or for the great powers working together, and now with Russiagate potentially lifted as a prob-

lem, there's nothing standing in the way.

JOINT CHIEFS OF STAFF NOMINATION
GEN. MARK MILLEY
Army Chief of Staff

C-SPAN3

Gen. Mark Milley at a Senate Armed Services Committee hearing July 11, 2019 to confirm his nomination as Chairman of the Joint Chiefs of Staff.

Zepp-LaRouche: Well, the only thing standing in the way is that there are still hard-core neo-con forces in the United States. For example, the National Defense Strategy of 2017 seems to be the guideline for the next

chairman of the Joint Chiefs of Staff, Gen. Mark Milley, who repeated all of these lines in his testimony before the Senate Armed Services Committee: that China and Russia are the strategic adversary; that the Belt and Road Initiative is a way of China attempting hegemony. The barriers are, unfortunately, still there.

China's State Council Information Office has just issued a white paper titled, "China's National Defense in the New Era," describing China's military efforts. China is absolutely increasing its military power, in response to this anti-China campaign—I want to say that emphatically. But in this White Paper, they also say, basically, that they do not intend to ever accomplish hege-

mony, that they absolutely are working on and promoting the shared future for mankind, and that it is not their intention to challenge either the United States or anybody else.

But one has to see that this kind of paradigm shift—which can only come from international cooperation in the space—is a very urgent question: So, let's discuss the content of this petition a little bit.

Schlanger: Why don't you go ahead? People can read it, but it's really important for them to get a sense of where this is coming from.

A Fusion Energy Based Economic Platform

Zepp-LaRouche: It defines the steps which have to be taken, one of them being that we need a crash program for thermonuclear fusion power. Now, this was the Fourth Law in my late husband's program for what must be done to avoid the danger of a new financial collapse. For almost half a century now, the standard line was always "Fusion is 30 years away." Looking at the funding required for a serious crash program, you would need about \$50-60 billion. Now, look at how much the war against Iraq cost the United States: \$1.4 trillion! If you look at the amount spent in 2018 on "renewables," it was almost \$300 billion.

So, to reach thermonuclear fusion, which replicates the kinds of processes occurring in the Sun, and which would create, in a second-generation iteration, using



NASA

Artist's conception of a lunar inflatable habitat, a construction shack, a solar power system, and other elements.

helium-3 as a fuel, an entirely new basis for generating energy, making the energy-flux of energy production several orders of magnitude higher.

And it would not just be a new, practically limitless energy source for the human species, but would also make realistic, for the first time, interstellar space travel: Because it should be obvious that we cannot go to Mars by conventional means, that is, using chemical fuels for propulsion, because the trip would extend for six months one way, and that is not suitable for the human body. You need actually power sufficient to produce 1-gravity acceleration all the time, which means you go to full acceleration half the way, and then decelerate in the same way, so that space travel to get to Mars would be reduced to a few days, maybe two, three, or maybe four days. That is a completely different conception, so that needs to be done.

At the same time that we settle on the Moon and explore Mars, our fusion-based economy will raise civilization onto a completely different industrial platform because the spillover effect of new technologies would probably be an order of magnitude greater than it was for the Apollo project, which was the science-driver for the economy on Earth for many years. Indeed, the world urgently needs such a massive jump in the increase of productivity, and it would benefit all of humanity for a very long time to come.

In just this one area, using the Moon as the stepping stone has also incredible advantages. First, because the

mass of the Moon is only about 1/5 that of Earth, its gravitational pull is only about 1/5 that of Earth, therefore it is much easier—5/6ths easier—to lift payloads off the surface of the Moon than Earth. Second, the Moon has a wealth of resources that can eventually be mined and used by manned Moon-based industries producing vehicles, equipment, and supplies destined for Mars and beyond.

Moon-Mars Is Answer to Green Hoax

So all of these are absolutely crucial steps. I find this extremely exciting, the idea of having permanent settlements on the Moon. That is not to say that one person goes and stays on the Moon forever, but that we set up well-defined

cities, that—as Krista Ehricke was explaining last weekend at the July 20 Schiller Institute conference will be complete with changing seasons, parks, woods, all kinds of things for people to have recreation, a very good life, and at the same time be pioneers for that which makes us human, namely, to conquer the unknown, to go to ever-changing boundaries in the uni-

verse, and establish the identity of humanity as a spacefaring species. And in that way, clearly distinguishing ourselves from all other living beings. I think this is very exciting.

This is all now being discussed. We see a new "Moon fever." People have the idea that we are not confined to a closed, Earthbound system, but we can not only launch a vehicle into Earth orbit, but we can reach other heavenly bodies, and set up colonies. I think this is absolutely exciting. As I see it, the only way to get out of our present economic crisis in the United States and Europe, is by

orienting ourselves with a science-driver approach. We need a tremendous boost in productivity to develop the less developed countries. This moon fever, this optimism, is the pathway to a sane and successful policy for all of mankind.

Schlanger: And that's why people should look at



Extinction Rebellion internet home page.

the petition, read it, discuss it, sign it, get others to sign it. Because in it is a coalescence of ideas of strategic cooperation, economic effect, and then, most important—from what you've been talking about recently the psychological effect, that we create a new mission for a young generation, which is otherwise being herded into terrorism against culture. We just saw this in

> Leipzig, Germany in the last couple of days, with this Extinction Rebellion. That was a pretty stark reminder of the danger that we face from this Green movement.

> Zepp-LaRouche: I think it's definitely clear that the Green movement, in its entirety, is economically completely, absolutely out of it. They have no idea. They're talking about the Green New Deal as being the big boost for the economy. Now the reason the Apollo project was such an incredible benefit for the real economy-where every penny in-

vested was returning 14 cents in terms of spinoff effects, everything from computer chips, to Teflon, and a whole array of industrial processes, materials, and products was that it led to a breakthroughs in science and technology, and it made production on the Earth less expensive.

But if civilization is duped into going exclusively



Etienne Ansotte

Ursula von der Leyen, newly elected President of the European Commission.



CC/CatalpaSpirit

Terminal 1 at Germany's Stuttgart Airport.

with so-called "alternative energies," the social cost to produce energy will skyrocket, with horrible consequences. Already in Germany the energy price is double that of France, and with the explicit aim of the "climate cabinet" in Berlin. The new President of the European Commission, Ursula von der Leyen, with her First 100 Days program has said similar things. If you increase the energy prices, to the point where people supposedly are forced to change their behavior, this can only lead to a complete collapse.

An Appeal to Germany

I wrote an appeal [See the Appeal elsewhere in this issue of *EIR*] to German industry, trade unions, parents and teachers, and thinking people, to defend Germany as an industrial nation, because it's very clear, that if this policy is carried out, then young people who want to have a future will leave Germany. They will go to Asia, to China, to other countries; that means the demographic curve in Germany will be even more devastating than it already is. Germany will be reduced to a lot of old people, with nobody to take care of them, and who will be left with nothing to pay for their existence, because the bottom of the German economy has just fallen out.

Now, I don't that this Extinction Rebellion and the Fighting4Future organizations have given any thought

to this. I don't think they're a spontaneous movement at all. There are string-pullers in the background; we have started to publish some things about that already. But to desecrate the statues of Bach and Goethe and so forth, that just shows you that these people really have absolutely no idea what is important in life and are just tools. I think they're being used by some other forces, attached to the City of London and Wall Street, who want to have this boost in renewable energies in order to make big bucks in the short term on such non-functioning technologies, just at the very moment that the financial system is collapsing.

This is, unfortunately, happening. They're being supported by, or at least they're getting a lot of support from the media. In Stuttgart, Germany where they demonstrated against people flying in airplanes, even the authorities from the Stuttgart airport said they support that! I mean, that's just crazy. And I'm afraid we're in for some more trouble in the coming period, and people will have to reassess their views and change their mind on these matters, because what is at stake is really the future of Germany as an industrial nation, and not only Germany.

Schlanger: As we've reported, the same people who are financing this Green movement, which is becoming much more aggressive, are behind the attacks on Russia and China, and were big supporters of Russiagate.

On the other side, as you referenced last week, 90 Italian scientists signed a <u>petition</u> rejecting the claim that there is anthropogenic global warming. Their statement is beginning to get some coverage.

Zepp-LaRouche: Yes. This is now picking up steam in other countries. For example, in Sweden, where a little while ago, 1,500 Swedish scientists signed a similar appeal, and they're republishing now the Italian petition, and also announced that they're preparing something on the European level, and want to present such a motion to the European Union (EU). Their basic argument is that since there is no connection between world temperature and man-generated CO₂ emissions, all the measures being proposed to reduce man-generated CO₂ emissions constitute an unnecessary and extremely expensive and inefficient cost to society. There is no question that climate change is taking place, but if you look for the wrong cause, for that which is responsible for the change,

then you cannot remedy the effects.

So, I think this is a very important debate, and we have demanded for a very long time that this must be taken out of the area of ideology, and that we need to go back to a scientific approach.

Schlanger: Just to go back to Germany for a moment: you referenced in an earlier webcast the growing poverty gap in Germany. You also brought up the utility crisis. A recent poll shows that a majority of Germans would like to have better relations with Russia. Such popular sentiment seems to run counter to the push to keep Germany in the old paradigm, of deploying a military force to the Persian Gulf, which was rejected by the German government.

Drop the Sanctions Against Russia!

Zepp-LaRouche: I think it's a very promising sign. A recent survey conducted by the German paper, *Der Tagesspiegel*, found that 72% of Germans living in the East are for dropping the sanctions and having a rapprochement with Russia; and even 54% of people asked in the West of Germany had the same view.

So I think that, from the standpoint of the people, there is actually an overwhelming desire to end this whole imposed regime of sanctions and divisions, so I think that that is a very good sign. I think we are in a time where these decisions have to be made. So maybe if Russiagate stops in the United States, and Trump will resume a positive effort to continue his good relationship with Russian President Vladimir Putin, which he initially attempted at the G20 Summit in Hamburg, Germany in 2017, and then again in Helsinki, Finland and most recently this year in Osaka, Japan. Then, maybe the opposition to better relations with Russia will go away. But I absolutely think that these are just tiny, baby steps; we really need to think in completely different terms.

We need to think in terms of a new epoch. We have to go away from geopolitics and the idea that you have to have blocs like the EU, building up an army in Europe, which is what Macron and von der Leyen are pushing, and that European policy should go against the United States, against Russia and China—I mean, this road can only lead to disaster, apart from the fact that I don't think the idea of building up a European army in the present condition of the EU is any realistic perspective. It's just a pipe dream of some warmongers.

But we need to really think: Where should civilization be in a hundred years from now, and how should we form an alliance of countries in the mutual interest? We don't have to start from scratch on this: Already 130 countries are walking in this direction and forming a New Paradigm. People in the West don't know about this, because the Western media are so completely—really only an extension—of the military-industrial complex and the geopolitical British Empire faction.

I think there is a tremendous lack of knowledge of the incredibly beautiful options that exist, and this is why I would appeal to you, to support and join the Schiller Institute, and amplify our efforts. People become pessimistic because they don't know that other options exist. You may encounter the almost absurd situation, where you hear someone, "Oh, there is no problem," and they're completely complacent, saying, "The powers that be would never start World War III; they couldn't do that"—which is not true. There is always still the danger that things could really go completely wrong. And then there are those who say, "Oh, there's absolutely nothing you can do, it's all over, it's hopeless." So, between these two positions, people are not acting!

The only thing that will decide humanity's fate, is becoming active *with us*, to shape the next fifty, hundred years, because we are at an absolutely epochal change, which has been understood by the Asians much better than the Europeans and the Americans. There is an absolutely optimistic way to go. So join us and support our efforts: And that's the best thing you can do, for yourself, and the future of mankind.

Schlanger: There's nothing I can add to that, except to join with you, Helga, in urging our viewers and readers to join the Schiller Institute, if you have not already done so, and organize your friends, family, relatives, coworkers. Sign the petition and circulate it, so we can get the United States into the New Paradigm.

Anything else, Helga?

Zepp-LaRouche: No, just that you should become active. I think that is really important.

Schlanger: Absolutely. OK, thanks! We'll see you again next week.

Zepp-LaRouche: I think so. Bye-bye.

"Houston. Shackleton Base here: Artemis 3 has landed!"

Houston Community Meeting Mobilizes for Artemis and Beyond

by Kesha Rogers and Brian Lantz

July 29—"Houston, Shackleton Base here: Artemis 3 has landed!" You may be saying, "What? What is Shackleton Base? Isn't it Tranquility? Artemis 3 has landed? I thought it was the Eagle." Yes, it was the Eagle, and this year marks the 50th anniversary of astronauts Neil Armstrong and Buzz Aldrin becoming the first men to walk on the Moon. Armstrong declared, "Houston, Tranquility Base here: The Eagle has landed."

That extraordinary accomplishment of American astronauts landing on the surface of the Moon for the first time—"in peace for all mankind"-was followed by twelve more astronauts, participating in another six missions. The last mission was in 1972. That was the Apollo program, a program to go to the Moon and explore the lunar surface. The Apollo 17 astronauts would be the

last to walk on the surface of the Moon. Following that last mission, despite several additional planned missions, the program was unceremoniously ended and funding for the future Apollo missions was cut. However, the cutbacks didn't start abruptly in 1972; the mission was being chipped away at even as the Apollo program was getting started—the peak in funding was in 1966.

"Have you heard? We are going, not back, but forward to the Moon again! This time to stay!" The Shackleton Crater is the proposed landing site for the next Moon mission. Shackleton is an impact crater that lies at the lunar South Pole.

In December 2017, President Trump signed Space Policy Directive 1, calling for the return of American astronauts to the surface of the Moon before the end of the next decade. In March of this year the plan and the timeline were accelerated, and it was announced by Vice President Pence, on behalf of the President, that



Kesha Rogers addressing a Schiller Institute community meeting on the Moon-Mars mission in Houston, Texas on July 25, 2019.

NASA and its administrator, Jim Bridenstine, would be charged with a new mission to launch American astronauts to the surface of the Moon—they will be the first woman and the next man to walk on the lunar surface since 1972. This time, they will build a sustainable presence, and will develop the platform, technologies, and resources required to prepare the way for American astronauts to the land on the surface of Mars.

The bold and exciting new mission to return American astronauts to the surface of the Moon is Artemis, named for Apollo's twin sister Artemis, the goddess of the Moon. Well, you may ask, this all sounds very exciting and optimistic, but how will it be done? We haven't been back in nearly 50 years. What will be different now? How will we guarantee that we not only achieve the goal of returning to the Moon and go to Mars, but build a commitment and a policy with lasting impact for several generations to come?



EIRNS/Bryan Barajas

An audience of upwards of 100 heard presentations on NASA's Artemis mission, and were treated to exhibits on additive (3D) printing, models of a scramjet and a Space Shuttle, and a working robotic Moon/Mars rover.

Houston Meeting, Shooting for the Moon

The Schiller Institute is hosting conferences and seminars around the world, not only to educate people on the requirements for returning Americans to the lunar surface in 2024 and building a lunar base by 2028, but going beyond—setting forth a vision for the next two to three generations of space exploration.

In Houston, Texas on July 25, just one day after the 50th anniversary of the splash down of the Apollo 11, the Schiller Institute had its most recent such event. The theme of the community meeting was, "50 Years After Apollo: NASA's Artemis, A New Generation of Space Explorers Emerges." The meeting, held at the Bayland Community Center, was a major outreach effort with

broad attendance and participation, drawing close to 100 people. The audience included blue collar families from the Houston neighborhood, university students, a high school science club, friends of the Fabrication and Innovation Laboratory at a local college, robotics club members, families with NASA ties, members of several local AARP chapters who had previously invited the Houston Schiller Institute Chorus to their meetings, and long-time Schiller Institute activists. There was great excitement following the presentations.

The environment was electric from the start! Attendees were greeted with a fascinating "Fabrication Lab" exhibit on 3D printing, overseen by the lab's supervisor. 3D printing in its indus-

trial applications is known as additive manufacturing and will be a crucial feature of building cities on the Moon and Mars.

There were also NASA memorabilia and models of a scramjet and a Space Shuttle. Also on display was an exhibit from the Houston Robotic Club, which brought a working robotic Moon/Mars Rover, built to NASA/Jet Propulsion Laboratory (JPL) specifications. Discussion was continuous around the tables, including the Schiller Institute's table and a display of *Fusion* and 21st Century Science and Technology magazines. Attendees got a direct idea of breakthrough work in 3D printing and robotics applications that are relevant for use here on Earth and in space travel and exploration. A



EIRNS/Bryan Barajas

A Fabrication Lab exhibit demonstrating a working 3D printer.



EIRNS/Bryan Barajas

Members of a high school robotics club get a briefing on a structure built by the exhibited 3D printer.



A Robotic Rover, built to NASA/JPL specs, by members of the Houston Chapter of Robotics Clubs USA.

group of high school students, all members of a robotics club, had a great time at both exhibits. Many people saw a 3D printer and a robot, up close, for the first time, and were able to talk to experts about the technologies involved.

Attendees also gained greater insight into international cooperation in space by seeing material from a

project called "United in Space." The project's mission is to promote space cooperation between the United States and Russia. It is involved in creating and placing a statue of Neil Armstrong in Russia. The United in Space display included a scale model of the statue of Armstrong and announced that ground had been broken in Russia for the placement of a life-size statue. The Russian-American founder of United in Space has already placed a statue of Russian Cosmonaut Yuri Gagarin, the first human to fly in space, in Houston, Texas.

Artemis and International Cooperation

The program was opened by Kesha Rogers, Lyndon LaRouche's representative in Houston, speaking for the Schiller Institute. She presented a dramatic overview of Artemis, opening with a 3-minute NASA film titled, "We Are Going," which drew applause and shouts from the entire room. Rogers outlined Artemis with detailed slides drawn from NASA and NASA contractors, including the project's phased development, emphasizing NASA Administrator Jim Bridenstine and President Trump's declarations that international cooperation would be

> required for Artemis to succeed. We need cooperation with Russia, Europe, India, Japan and China, and the more so because Trump has committed the United States to use the Moon as a jumping off place to go to Mars, Rogers explained. She made clear that this perspective had been laid out by economist and statesman Lyndon La-Rouche, inspired by his collaboration with German-American rocket engineer Krafft Ehricke and many other scientists who worked with the Fusion Energy Foundation in the 1970s and

> 1980s A video except from a 2009 speech by LaRouche was



EIRNS/Bryan Barajas

A United in Space display included a scale model of the life-sized statue of Neil Armstrong to be placed in Ethnomir. Russia.



EIRNS/Bryan Barajas

Dr. Viacheslav Levchik, Vice Consul, Consulate General of the Russian Federation in Houston.

shown, in which LaRouche outlined a future Mars mission as a "science driver" project for the United States, which would simultaneously require cooperation with Russia, China, and other nations, and thereby contribute to securing peace on Earth. Rogers then introduced a special

guest, the Vice Consul of the Consulate General of the Russian Federation in Houston, Dr. Viacheslav Levchick, PhD, who received a warm greeting from the audience.

The View From Russia

Vice-Consul Levchick outlined some of his country's work in space, stressing that he thought that cooperation between Russia and the U.S. had "a solid basis," based on his visits to Johnson Space Center and the cooperative work on the International Space Station. He talked about some of Russia's recent contributions, including the "Single Pass" delivery of astronauts to the Moon, which shortens the trip from six hours to two hours, saving astronauts and cosmonauts from exhausting trips as well as saving on costs and equipment. This drew audible agreement from the audience.

He also underscored the important breakthroughs in astronomy that are expected from the Specter RG telescope satellite, launched in July. Russia has its own lunar program, but the Vice-Consul wanted to stress the importance of ongoing cooperation, saying, "In 1998 when the first models of the ISS were launched, it was the U.S. and Russia who did it."

Now there is a rapidly growing private space sector in many countries. "This is like the dreams of our fathers—or my grandfathers," the youthful Vice Consul added, drawing chuckles. "It is important that we can



EIRNS/Brvan Baraias

Don Cooper, retired NASA and TRW physicist and mathematician, takes the audience to the Moon and back, with a model Saturn V rocket, astronaut voice recordings, graphics, and whiteboard sketches.

talk casually about such huge projects," he said. All nations are going to the Moon's South Pole, adding that helium-3, along with ice water, are the major resources being sought. Russia, he reported, plans a manned landing on the Moon by 2030 and a permanent presence by 2040, adding that India and China have similar plans. Vice Consul Levchik's relaxed and humorous remarks were warmly received by the audience and elicited numerous questions.

The Last Time We Went to the Moon

The next speaker was retired NASA and TRW scientist F. Don Cooper, who began working at the George C. Marshall Space Flight Center, Huntsville, Alabama in 1962. Cooper, an Oklahoma native, was soon assigned, as a young physicist and mathematician, to develop the targeting equations for Trans-Lunar Injection (TLI), which guided the Apollo projects to the Moon. Then from Houston, Cooper worked on eight Apollo missions, including Apollo 11 and Apollo 13. He also worked on the Atlas Centaur, the Air Force Dyna-Soar space plane, and the early planned Mars mission NOVA rocket. Cooper gave a very exciting presentation, which took his audience to the Moon, landed on the Moon, and back to Earth with Apollo 11, with a model Saturn V rocket, astronaut voice recordings, graphics, and whiteboard sketches, all making it come alive.



Brian Lantz, Schiller Institute spokesperson in Texas, explains the need for a science-driver perspective to realize the full potential of a Moon-Mars mission over the next 50 years.

Since his retirement, Don Cooper has found a new calling—that of encouraging a new generation of students to pursue a future in the physical sciences. He enjoys speaking to youth groups, among others, hoping to inspire the technology leaders of the future with his first-hand account of the events as they actually happened. "Of the seven primary people who did this, I am the last one alive," said Cooper recently. "Students do not know much about Apollo since it all happened before they were born. My objective is to show them how it happened, emphasize that education is essential, and show how math and physics solve real-world problems." Cooper makes the point that "Apollo 13 was saved by thousands of nerds."

Mars and Beyond

Brian Lantz, Schiller Institute spokesperson in Texas, addressed the audience on the need for a science driver perspective to realize the full potential of a Moon-Mars colonization over the next 50 years, as developed by the great visionaries, Krafft Ehricke and Lyndon LaRouche. He made clear that a Moon-Mars program is needed for transforming human civilization. A program to fully colonize the Moon and Mars will require major breakthroughs in science and technology, including a crash program for the development of thermonuclear power and fusion propulsion systems for space travel. The ability to sustain a long-term human presence requires the building of major infrastructure

and the building of functional and beautiful cities on the Moon and Mars. This will require construction from the Moon's regolith.

Cutting-edge technologies will have to be further developed, including robotic machines for mining and the production and assembly of habitats on the Moon and Mars. More powerful lasers and other electromagnetic plasma beam systems will be required for communications, for additive construction and manufacturing, and the mining of helium-3. Lantz presented LaRouche's idea, made famous in the 1988 "Woman on Mars" television broadcast, that we require a telescope with the aperture of the Mars orbit, a concept

that drew surprised gasps from the audience. As Lyndon LaRouche outlined in 1986, we will build a civilization on Mars, with cities of hundreds of thousands of productive human beings, because that is what will be required.

What will such an investment cost us? A Moon-Mars project, over two or three generations, will cost us nothing, Lantz emphatically stated. The importance of the American System of economics and the re-creation of a credit system and National Bank, as was understood and developed by our nation's first Treasury Secretary, Alexander Hamilton, and used effectively by Presidents Abraham Lincoln and Franklin Roosevelt will be necessary. We know this from the Apollo program, which returned 10 cents back for every penny we spent. How is that possible? The source of wealth is human creativity. We must unleash human creativity and reorganize the financial side of things accordingly. After all, we have done it before.

President John F. Kennedy launched one of the greatest economic recovery and national credit programs the nation has ever seen, through the unleashing of the creativity of the population through the Apollo program. Indeed, a Moon-Mars colonization program—advancing through the long-term success of the Artemis program and the advancement of mankind in the Solar system—will multiply the productivity of our civilization while it uplifts mankind, as every human being's capacities will be required.

Calls for LaRouche's Exoneration: Three Prominent Figures— Italy, U.S., France

The following are three statements from senior political figures who are very publicly demanding a broad international spotlight on the unjust criminal conviction and slander campaign run for many, many years against the creative genius, economist, and statesman, Lyndon H. LaRouche, Jr.

Jacques Cheminade's statement, an edited transcript of a video interview, is available here. That of James Jatras, also a video, is available here. Mr. Galloni's statement has been translated from Italian. The full documentary on the LaRouche case is available here.

Nino Galloni

Nino Galloni is an Italian economist, former government official, and an attorney. He is President of the Centro Studi Monetari (Center for Monetary Studies) in Milan, Italy. The following statement by Mr. Galloni was published on July 25 under the headline, "Call for the Exoneration of the Great Economist Lyndon

LaRouche," in Scenarieconomici.it, a sovereignist blog founded by Prof. Antonio Maria Rinaldi.

Lyndon LaRouche was a great philosopher, politician and economist, who passed away last February. At the beginning of the 1980s, after having exposed the early decisive steps by British intelligence to back and promote Islamic fundamentalism, LaRouche was put on trial in his country, the U.S.A., accused of "conspiracy." The trial turned out to be a farce, raising indig-



Nino Galloni

nation among jurors and public opinion. Although at the end, the accusations were dropped [in mistrial], another trial was started soon after in a different venue,

> where the judges and jurors were known to be more manipulable. Virtually the same accusations. Everything has been documented.

With the proceedings conducted in an irregular way, La-Rouche ended up in prison for five years, until President Bill Clinton personally acted to have him freed. During his prison years, and continuing after, LaRouche studied, wrote and published fundamental works that were translated into many languages, and created a political movement with solid roots, including in Europe.



"Appeal for the Rehabilitation of the Great Economist Lyndon LaRouche," by Nino Galloni.

August 2, 2019 EIR Man Creates His Own Future 17

James Jatras

James Jatras is a former U.S. diplomat and foreign service officer who served from the late 1970s to the mid-1980s. After that, for over 17 years, he was the senior foreign policy analyst for the U.S. Senate Republican leadership, retiring from public service to work in media and government relations in the private sector. He is a political analyst, primarily in foreign policy issues.

I've been aware of Mr. LaRouche and his ideas for well over 30 years. I can't say I was necessarily all that focussed on them, but I first learned of them back in the 1980s. But I have to confess that at that time, when he was—I think the right word is "persecuted"—he and his associates were targetted and persecuted by elements of the U.S. government. At the time, I really didn't take as much notice as I probably should have.

Since that time, however, I think it's become quite clear, especially when you look at the way Donald Trump has been targetted by the very same, deep state mechanism—when I say deep state, this means, organs of both the U.S. government and the British government, particularly MI6, and also other foreign governments as well, that we saw in the whole Russiagate scam. Retrospectively, it became apparent to me how much similarity there is in these two cases.

Here is somebody, Lyndon LaRouche, who was challenging this deep state entity, this oligarchy that controls our country, and was proposing real solutions to the problems that afflict ordinary Americans, like better use of credit and things that made our country great in the 19th century. He was challenging and opposing what amounts to really an anti-constitutional conspiracy.

For that, Mr. LaRouche and his associates were targetted, persecuted, and sent to prison in what amounted to kangaroo trials in federal and state courts. The lead figure in doing all that, by the way, was Robert Mueller, a name that should sound very familiar to most Americans today, particularly to Trump supporters—the same Robert Mueller who has been behind, this so-far-unsuccessful effort to bring down President Trump. We'll have to see what happens now that the matter has gone to the House of Representatives.

That's why I signed a petition for the President to exonerate Lyndon LaRouche. I hope he focusses on the fact that the same gang that tried to get him, is the one that sent Mr. LaRouche and a number of his associates to prison. I hope he is willing to use all of his legal authority to bring about Lyndon LaRouche's exoneration.



LaRouchePAC

James Jatras

I'll add to that. I can say that the people whom I have come to know, who went to prison with Mr. LaRouche, are all very fine people. It just shocks the conscience that some of these people were sent to prison for much longer terms than—let's face it—than Jeffrey Epstein will ever see, inside a jail cell.

So, I do hope that the President focusses on La-Rouche's exoneration. I hope that his supporters will do whatever they can to bring this to his attention. I know that Roger Stone, for example, is aware of Mr. La-Rouche's case. Stone has been friendly with Mr. Trump in the past. Obviously, he's being targetted by this same criminal conspiracy apparatus.

I think the exoneration of Mr. LaRouche is important to the peace of the world. Take a look, for example, at the kind of Eurasian integration that's going on with the Belt and Road Initiative—building, really, on ideas Mr. LaRouche put forward over 30 years ago!

And when I think about American foreign policy that's based on—if you're one of our satellites, we give you a bag of cash and a box of condoms; but if you're one of the countries that doesn't want to be one of our satellites, you get bombs and sanctions—that's the kind of foreign policy that we've had the last few decades, especially since the end of the first Cold War. That policy is threatening the world with utter devastation, with a new world war, that could end life on this planet.

I don't think that's what Mr. Trump wants. I don't know why he has people in his administration who want to go down the same old dangerous path to what could only be a devastating end. During his campaign in 2016, he ran *against* all of that. Every once in a while, he hypes up. Sometimes you've got to think there's a

little, tiny candidate Trump 2016 inside President Donald Trump, who's fighting to get back out and do the kind of things he's talked about.

It's absolutely imperative that we stop these futile confrontations, as we have seen recently with Venezuela, Iran, Russia, and China. We need to think about the kind of things happening in Eurasia, with integration, with building infrastructure, which could be extended, as Mr. LaRouche proposed decades ago, through the Bering Strait. Why aren't we building that kind infrastructure and integration, here, within our own hemisphere, instead of trying to challenge the Russians and the Chinese and Iranians, or whoever, back on their home turf?

There are all sorts of things that, I think in his heart of hearts, the President wants to do, that are not only the right thing and the essential thing for our country and for the world, but actually, upon examination, reflect ideas that have been connected to Mr. LaRouche for many, many years. I hope he does focus on the political persecution that took place, the culprits behind it, starting with Robert Mueller, and will come to the conclusion that this injustice needs to be corrected for Mr. LaRouche and for his associates.

There's a saying that existed in the Soviet Union back in Stalin's time, from the NKVD, the secret police: "You give us the man, we'll give you the case." It's the exact inversion of what real law enforcement is, where you have a crime, then you try to find out who committed the crime. Instead, you say, we want to get this guy, what can we get on him? What can we find on him? And if we can't find anything he actually did, we'll make it up. And that's unfortunately what has been exposed in the political attack on Donald Trump: They targetted him, they want to bring him down by any means possible, by fair means or foul.

I think the past two and more years of this attack has been a real eye-opener for a lot of Americans, who formerly took for granted the idea that we're a country with the rule of law—a free country, with a free media, and all that sort of thing. Many Americans have been shocked and dismayed, but also inspired to action by the fact that they now realize that that's not really true. What's being perpetrated against President Trump is not the rule of law, it's the perversion of the rule of law.

This again brings us back to the case of Lyndon La-Rouche and his associates who were persecuted by the establishment, by the deep state, back in the 1980s. In those days—Ronald Reagan was in the White House, and people, especially people on the conservative side of the

spectrum, thought, well, gee, America's back, it's morning in America, again; everything is right in the world, and we can trust our law enforcement authorities, we can trust our media to cover the news and cover the facts of criminal allegations in a trial against somebody fairly.

I think it's now occurred to many people, only very recently—belatedly, much later than it should have,—that none of that is true. My hope is that having come to that realization, people will now understand that there is a struggle going on for the very soul of our country, for the future of our country, and really, for the world; that we urgently require a much more realistic view of the way too many law enforcement officials behave, in many cases, and how these media people, who have been spoon-feeding us lies all the time, are at the very heart of what was done to Mr. LaRouche and his associates back in the 1980s.

That's another reason why President Trump really needs to act on this, because doing so will shatter some of the illusions that some people may still have about the kind of country we're living in. When they tell us, "Pay no attention to the man behind the curtain," we have to pull that curtain back, and see what was really done, and say "No!" and then begin to set things right.



LaRouchePAC

Jacques Cheminade

Jacques Cheminade

Jacques Cheminade is Chairman of the Solidarité et Progrès political party in France. He has been a candidate for President of France three times: first in 1995, then in 2012, and finally in 2017.

I know better than almost anyone else what happened to Lyndon LaRouche in the United States, and

what it means for the world. He was unjustly condemned and sentenced to prison in 1988-1989, where he spent five years of a 15-year sentence. This was an immense injustice, done to somebody who was innocent. But much more than that, was the purposeful result, the alienation from his ideas, which would otherwise have become generally accepted, greatly improving the fate of the entire world, a world much happier today, had his ideas prevailed.

He was so unjustly condemned, unjustly sentenced. I was personally present, just after my first Presidential election campaign, in hearings on the LaRouche case: The Independent Hearings to Investigate Misconduct by the U.S. Department of Justice, Aug. 31-Sept. 1, 1995.

Presiding over these august hearings were J.L. Chestnut, a renowned civil rights lawyer; and former Congressman James Mann. Witnesses included La-Rouche's attorney Odin Anderson, and Ramsey Clark, the former U.S. Attorney General in the 1960s, the father of the Voting Rights Act in the United States. Ramsey Clark, who represented LaRouche on appeal, explained why the Lyndon LaRouche case was the most abominable in the whole American political history that he knew of in his lifetime.

I listened very carefully—I had already known Lyndon LaRouche since 1974. As I listened very carefully to all the arguments, I became deeply convinced, first, that this was a deep shame for the American Department of Justice, for American civil rights, and as a whole, for the American system. Second, that had LaRouche's policies prevailed, which he had discussed with such people such as Mexico's President José López Portillo and Prime Minister Indira Gandhi, and other world leaders, the world would be so different and so much better today.

Why? Because LaRouche was always fighting for human creativity, for the advantage of the other. He was always fighting for a world where a community of development would prevail—common objectives, common aims, the common goals of all of humanity. This is what LaRouche all his life stood for, and he paid for it because his enemies were always after him from very early on.

I myself know it, because in 1983, the FBI and other American agencies asked representatives in Paris to go after me, being a friend of Lyndon LaRouche. They expected to get some dirt on me that could be used against Lyndon LaRouche in the United States. It did not work, but it continued all the time, and all my political career in France has been under constant pressure of disinformation and harassment by American media and American authorities trying to prevent a friend of Lyndon LaRouche, me, from inspiring power, if not assuming power, in France. So, this is the story of my life; it is the purpose of all my life.

When LaRouche was in prison, a few prominent people in France who represent the history of my country, stood in solidarity with me: the famous oncologist Georges Mathé; Marie-Madeleine Fourcade, the hero of the Resistance; and General Jean-Gabriel Revault d'Allonnes, who was close to Charles de Gaulle and to Marie-Charles Leclerc, the French heroes of World War II. All of these people, and many more, asked the United States government and the United States justice system to behave. They have not behaved. Today, it's time that they do behave.

And it's time that President Trump exonerate Lyndon LaRouche. It will be good for him, it will help him to be independent from all the people from the FBI and other sectors, for example Robert Mueller, who had earlier organized the case against Lyndon LaRouche and now has organized Russiagate against Trump. All these people would be put aside, and a policy of peace could be led in the spirit of Lyndon LaRouche.

For that, President Trump, in his small step going into North Korean territory, did something which is very symbolic and good. But much, much more is required: This means what Lyndon LaRouche called his "Four Laws," and it means that the world moves to a credit system and not under the foot of a monetary system.

We must break with the Anglo-Dutch monetary system, we must break with Wall Street and all related financial interests, and go ahead with the common aims of humanity: This means a space policy with *all* the nations of world cooperating, not just a few; it means lifting all of Africa into a condition of an industrially and culturally advanced continent; and it means a future of community of common development in which humanity becomes a one.

That was the dream of Lyndon LaRouche: He fought for it, and I must say, during all his life, he had the courage to fight. So, I think if we have the same courage today, we shall overcome.

II. The Threat to Civilization

AN APPEAL TO ALL THINKING PEOPLE

Defend Germany as an Industrial Nation!

by Helga Zepp-LaRouche

This article was first published in the German-language newspaper Neue Solidarität as an "Appeal to Representatives of the German Middle Class, Trade Unions, Scientists, Parents, Teachers and All Thinking People."

July 19—We are currently witnessing an unprecedented attack on Germany as an industrial nation which, if successful, will lead to eco-fascism, demographic collapse, impoverishment of large sections of the population, and

possibly war. What is now being orchestrated at many levels-from the new president of the European Commission, to the mainstream media, to a movement of hysteriadriven children—and openly admitted, is a systemic change that is intended to reduce our lifestyle and living standards to a pre-industrial level, and adapt them to the "carrying capacity" of the Earth of allegedly only one billion people (per Hans-Joachim Schellnhuber, CBE) or even only half a billion (per Kevin Anderson, top consultant to 16-year-old star activist Greta Thunberg).

that it is now supposed to be only 18 months. Meanwhile, the Internet platform, "We Don't Have Time," ensures that new "climate leaders" are being trained at conferences and through actions. But behind that platform, one finds those interests of Wall Street and the City of London, which benefit from the "great transformation of the global economy," i.e., investing in everything that supposedly contributes to climate protection.

The international apparatus that controls this mass



CC/Gastian Greshake

A "Fridays for the Future" demonstration in Hamburg, Germany on March 1, 2019.

The apocalyptic predictions are coming hot and heavy: The Intergovernmental Panel on Climate Change (IPCC) and the prophets of a "Green New Deal" spurred an entire phalanx of child movements and potentially violent organizations into action last year, by claiming that the world has only twelve years to prevent a climate catastrophe which threatens the human species. But wait—Prince Charles just claimed at a meeting of the Commonwealth's Foreign Ministers

manipulation has been the same for almost half a century, from Dennis Meadows with his bogus Club of Rome computer models, who proclaimed the "Limits to Growth" in 1972, to Jeffrey Sachs who, with his murderous "shock therapy," caused a collapse of the demographic curve by one million people a year in Russia alone. What is new is the perfidious exploitation of children and adolescents, who are driven by the theories of an early end of the world into desperate activism and a

highly dangerous antagonism toward the older generations.

The climate establishment relies on the naiveté of the population to accept as gospel the apparently politically correct line, or at least not to dare to publicly articulate their private thoughts if they contradict the narrative. What most people do not even begin to consider, is the fact that there is such a thing as a "nudge theory" (after the book of the same name by Cass Sunstein), i.e., that about 70 percent of the media is no longer comprised of journalists who are there to inform and analyze, but instead is influenced by PR firms whose job it is to systematically manipulate the accepted axioms of the population on behalf of political and financial interests.



EIRNS/Rachel Douglas Street vendors in St. Petersburg, Russia in 1999, driven into misery by economic shock therapy.

by the State with money and equipment.

This subject will make great strides when it is taken up by scientists under a scientific dictatorship.... The social psychologists of the future will have a number of classes of school children on whom they will try different methods of producing an unshakable conviction that snow is black. Various results will soon be arrived at. First, that the influence of home is obstructive. Second. that not much can be done unless indoctrination begins before the age of ten. Third, that verses set to music and repeatedly intoned are very effective. Fourth, that the opinion that snow is white

must be held to show a morbid taste for eccentricity. But I anticipate. It is for future scientists to make these maxims precise and discover exactly how much it costs per head to make chil-

dren believe that snow is black, and how much less it would cost to make them believe it is dark gray.

Although this science will be diligently studied, it will be rigidly confined to the governing class. The populace will not be allowed to know how its convictions were generated. When the technique has been perfected, every government that has been in charge of education for a generation will be able to control its subjects securely without the need of armies or policemen.

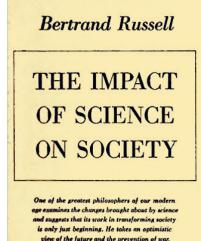
The method has not changed in principle; it is being applied practically today with the exploitation of Greta Thunberg, for whom a well-

Vile Manipulation

The vile idea that the manipulation of the paradigm

of an entire society must begin with the indoctrination of children, was already articulated by Lord Bertrand Russell in his 1951 <u>book</u>, *The Impact of Science on Society:*

I think the subject which will be of most importance politically is mass psychology.... Its importance has been enormously increased by the growth of modern methods of propaganda. Of these the most influential is what is "education." Religion called plays a part, though a diminishing one; the press, the cinema, and the radio play an increasing part.... It may be hoped that in time anybody will be able to persuade anybody of anything if he can catch the patient young and is provided



Russell inverts science: People will not know how their beliefs were created, he says. oiled management was able to arrange, within a few months, her appearances at the UN Climate Conference in Katowice, Poland; the World Economic Forum in Davos. Switzerland: the European Parliament in Strasbourg, France; the European Economic and Social Committee in Brussels, Belgium; the House of Commons in London, England: and an audience with the Pope at the Vatican in Rome, Italy. The accompanying media hype and encouraging words from German Chancellor Merkel and Federal President Frank-Walter Steinmeier ensured that the "Fridays for Future" movement would be able to persuade children and teenagers to skip school.



UN/Nikoleta Haffar

UN Secretary General Antonio Guterres promotes climate activist Greta Thunberg in Vienna in May 2019.

Danish physicists Hendrik Svensmark and Egil Friis-Christensen) of the book, *The Manic Sun*, which examines the influence of solar activity upon climate, predicted prophetically:

All parties of industrialized nations, whether right or left, are adopting the theory of carbon-induced global warming. It is the unique opportunity to tax the very air we breathe, as politicians are even being applauded for supposedly preventing the world from suffocating from excess heat. No party can possibly resist this temptation.

In the various climate organizations, top experts in mass psychology work in many leading positions. Norwegian psychologist Per-Espen Stoknes, who is on the board of directors of the Internet platform, "We Don't Have Time," specializes in turning "apocalypsefatigue" into action against global warming. Another example is Alex Evans, head of the Extinction Rebellion in Leeds, who has worked for about a dozen intelligence-based think tanks on both sides of the Atlantic, organizing a "Collective Psychology Project."

'Climate Investors' Make Out Like Bandits

The lie that the thesis of anthropogenic climate change is generally accepted among scientists, does not become any truer simply because it is repeated over and over again. Tens of thousands of scientists in the United States have signed joint statements, e.g., in the Global Warming Project. In May, 90 leading Italian scientists published a Petition to their President, Government, and Parliament, asking them not to burden the population with the senseless and destructive costs of so-called protection of the climate, when climate changes are due to completely different causes.

As early as 1998, Nigel Calder, publisher of the journal, *New Scientist*, and author (together with the

Meanwhile, hordes of clever investment advisers are trying to lure investors into investing in the climate industry, with the argument that while the risk is not smaller, at least you can do something moral for climate protection.

The rationale for such expropriations of the population is provided by, among others, Ottmar Edenhofer, Director at the Potsdam Institute for Climate Impact Research and successor to CBE Schellnhuber: "A climate policy without CO₂ pricing is like medicine without penicillin." In other words, prices for energy and transport will be raised until people change their behaviors.

Ursula von der Leyen, the new President of the European Commission, toed the line of the scare tactics of this entire lobby in her maiden speech to the European Parliament, in which she announced a radically green program for the EU: The current goal of reducing greenhouse gases by 40 percent by 2030, she said, is not enough; we must "go further," to "50 percent, if not 55 percent." She plans to present a law in her "first hundred days in office," which will set the goal of achieving climate neutrality for Europe by the year 2050. After significant swipes against Russia and China, she defined the future role of Europe as "surpassing itself at home" and thus assuming a "leadership role in the world."

However, how this is to jibe with the defense of the "European lifestyle" demanded by von der Leyen is a mystery. In addition, if you look at the package of climate taxes and regulations, which was announced by Germany's "Climate Cabinet" of Environment Minister Svenja Schulze, it should be clear to everyone that nothing of our current lifestyle will be left. The prices



Etienne Ansotte

Ursula von der Leyen, newly-elected President of the European Commission.

for energy and transport and, as a result, for everything else, will be driven up so high that the less privileged will use bicycles instead of cars and airplanes, and will wear thicker pullovers in winter instead of turning on the heat.

Deindustrialization Is Social Destruction

In reality, this climate hysteria marks the final attempt to belatedly enforce the Morgenthau Plan, de-industrialize Germany, and maximize the profits of the climate speculators. As a result, young forward-thinking people will emigrate to Asia in large numbers, and the proportion of older people will increase dramatically, but it won't be possible to finance the healthcare personnel or a nationwide healthcare system for them. In a recent study, the Bertelsmann Foundation, for example, has recommended closing more than half of all German hospitals. If this policy is not stopped, Germany is threatened by economic devastation which will make the consequences of the Thirty Years' War look like a picnic.

It is high time that all thinking people in this country immediately begin to oppose this attack on the existence of Germany as an industrial nation. Germany is a highly developed economy, whose industry must be able to rely on high energy-flux densities in the production process, which are already in danger. If, in the near future, "climate laws" and even more investment restrictions stifle all credit flows to the productive real economy, then medium-sized companies, which produce about 85 percent of all social wealth, will be eliminated, and with them the basis for social contributions, education, and culture.

The fact that the industrialized country of Germany is the target of the attack is further underscored by the fact that the IMF, according to the *Handelsblatt*, blames family enterprises for the growing gap between rich and poor. It claims that their export successes in China since 2000 have enhanced that gap. In view of the preferential treatment that the banks and speculators have been given by politicians and the leading institutions, as opposed to the real economy, this is such an outrageous hoax that one must assume it is not a mistake, but rather a conscious attempt to change economic course.

The green and neo-liberal establishment may not yet have grasped the fact that not only China, but all of Asia is rising, and is tremendously optimistic about its more than 5,000-year-old cultures as well as its future. It must be clear to everyone that when Asia rises, while Europe and perhaps the whole West itself destroys itself in its green climate hysteria, that poses the danger of a new great war.

In contrast, the potential for the German *Mittelstand* (small and medium-sized businesses) lies precisely in its cooperation with China in the development of the New Silk Road throughout the world—but this has been blocked by Brussels and Berlin for geopolitical reasons. Cooperation with the 126 nations that have already joined this initiative, be it in the industrialization of Africa or of the Moon, means an optimistic outlook for the industrialized nation of Germany.

The backroom policy that we have just seen in the distribution of EU posts has always been the practice when it comes to choosing whether to set a course in favor of banks, or in favor of the real economy. That is why, after the 2007-08 crash, nothing was done to address the root causes that led to this systemic crisis, and why we are now on the verge of a much more dramatic collapse. The internationally staged hype surrounding investments in the "Green New Deal" is supposed to be just the last dance on the Titanic, to bring the "investors" one last big haul. But the result will be a collapse into a Dark Age. There is still time to resist this.

zepp-larouche@eir.de

If you wish to support this Appeal, <u>contact info@bueso.de</u> or the nearest office of the Bürgerrechtsbewegung Solidarität.

Ebola: World Health Emergency

by Dr. Debra Hanania-Freeman

July 26—The second worst Ebola outbreak in history, which has been raging in the Democratic Republic of the Congo (DRC) since last August, was finally (on July 17, 2019) declared "a public health emergency of international concern" by the World Health Organization (WHO).

The recent outbreak was first reported on August 1, 2018 when the DRC health ministry confirmed four cases of Ebola in the town of Mangina, in northeastern Congo's North Kivu province, 100 kilometers west of the Uganda border. Since then, according to the WHO, more than 2,700 people have been infected, and two-thirds of them have died. But, ac-

cording to aid groups in the region, those numbers represent a significant undercount since health workers are repeatedly turned away from homes in which someone has died, leaving them unable to test for further Ebola infection.

The rate of infection continues to escalate, jumping from 1,000 to 2,000 cases in a bit more than two months.

It took 224 days for the number of cases to reach 1,000, but just 71 more days to reach 2,000. By early October, the daily rate of new cases had more than doubled. According to the latest information, between 12 and 15 new confirmed cases are being reported every day.

At a Capitol Hill briefing last November 5, hosted by the Johns Hopkins Center for Health Security, Robert Redfield, the Centers for Disease Control and Prevention (CDC) Director, warned that the outbreak had already become so serious that the failure to contain its spread could lead to it becoming entrenched. Were that to occur, he said, it would be the first time since the virus was initially identified in 1976 that an



Pixabay/bhossfeld Health workers attend an Ebola patient in the Democratic Republic of the Congo.

outbreak would lead

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**Ebola virus disease

WHO applauds Rwanda's Ebola preparedness efforts
24 July 2019 - WHO Director-General Dr. Tedros
Adhanom Chebreyseus today commended
Rwanda on its ongoing Ebola preparedness efforts
and confirmed that no cases of Ebola have been reported from the country to date.

Rwanda has a detailed National Preparedness Plan in place and its training health workers in bairydetection and response, educating communities about Ebola, vaccinating health workers in birtyrisk areas, equipping health facilities, and conducting simulation exercises to maintain a high level of readiness.

to the persistent presence of the disease. All previous outbreaks, including the 2014-2016 West Africa outbreak that

caused over 11,000 deaths, took place in relatively remote areas.

Tom Inglesby, Director of Johns Hopkins Center for Health Security, speaking at the Capitol Hill briefing, urged more aggressive international action to contain the current outbreak. If Ebola is allowed to become endemic in substantial areas of North Kivu province, "this will mean that we've lost the ability to trace contacts, stop transmission chains, and contain the outbreak."

In that scenario, he said, there would be a sustained and unpredictable spread of the virus, with major implications for travel and trade, emphasizing the fact that there are 6 million people in North Kivu. By compari-

August 2, 2019 EIR Man Creates His Own Future 25

son, the entire population of Liberia, one of the hardest hit countries during the epidemic of 2014-2016, is about 4.8 million.

Armed Militias Hobble Relief Efforts

North Kivu is also an active war zone. Dozens of armed militias operate in the area, attacking government outposts and civilians, severely hampering the work of the response teams and putting their personal security at risk. Efforts to combat the epidemic have been hobbled by frequent attacks on treatment centers and health workers.

Escalating violence has resulted in various relief organizations, including Physicians Without Borders, withdrawing personnel. The continuing increase in the rate of infection is, at least in part, attributed to the disruption in health workers' efforts as well as the fact that there is community resistance and deep distrust of the government.

Violent confrontations continue to occur when

Ebola responders try to remove the highly contagious bodies of the dead, taking the highly infectious corpses away from grieving family members in order to take charge of the burials to ensure public health. The public health threat is significant. The corpse of an Ebola victim is most contagious at the time of death. Families that clean the bodies of their deceased relatives as part of customary burial rites are all spreading the contagion and almost certainly condemning themselves to death. Accusations that the responders are stealing the organs of the victims are widespread and the problem is compounded by some local politicians who have publicly suggested that the national government—or some other hidden hand—had imported the disease.

These are among the factors that have indeed complicated the situation. However, it doesn't excuse the WHO for taking so long to respond. In fact, the WHO has repeatedly declined requests by medical and public health experts to declare an emergency. On June 11, Uganda announced that it had confirmed the first two

The Deadly Ebola Virus

Ebola Virus Disease (EVD) causes a deadly hemorrhagic fever, in people, and can affect primates—monkeys, gorillas, and chimpanzees. The infection has severe symptoms, with a fatality rate of around 50%, which can vary, case by case, depending on treatment and circumstances, from 25% to 90%.

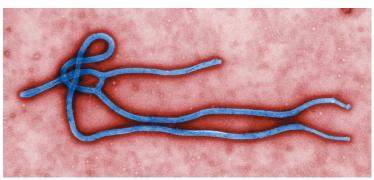
EVD is very transmissible. It spreads from person to person through direct contact with bodily fluids, or objects contaminated with the fluids, including those of someone who has died. The virus can enter the body's system through broken skin or mucous mem-

branes in the nose, mouth, or eyes. It is also transmitted through sexual contact. The virus can infect humans through contact with the secretions, blood, or tissue of infected fruit bats or primates.

The incubation period—that is, the length of time from infection by the virus, to the onset of symptoms—is from 2 to 21 days. EVD cannot be spread by a person infected with the virus, until he or she develops symptoms, but the onset of symp-

toms can be quite sudden. Symptoms include fever, fatigue, muscle pain, headache, or sore throat. This progresses to vomiting, diarrhea, rash, impaired kidney and liver function, and, possibly, internal and external bleeding.

Of the viruses within the genus *Ebolavirus*, most of them are known to cause disease in people. The Ebola virus (species *Zaire ebolavirus*) was first identified in 1976, near the Ebola River in Zaire, now the Democratic Republic of Congo (DRC). There have been outbreaks since then in several African countries in the region, extending to West Africa. The virus causing the current outbreak in the DRC and the major 2014-2016 West African outbreak, belongs to the *Zaire ebolavirus* species.



CDC/Cynthia Goldsmith

Ebola deaths in this outbreak. On June 14, the third emergency meeting since the outbreak began, was held. WHO insisted that the outbreak still was not a global emergency. Finally, on July 14, when the DRC's Ministry of Public Health confirmed the first Ebola case in Goma, a port city on Lake Kivu of more than 2 million people on the Rwandan border, the WHO's hand was forced. On July 17, at the fourth meeting of international experts, the WHO finally declared an international emergency. The declaration was long overdue.

Pandemic Bonds

In welcoming the move by the WHO, the International Federation of Red Cross and Red Crescent Societies issued a statement saying that, "While it does not change the reality on the ground for victims or partners engaged in the response, we hope it will bring the international attention that this crisis deserves." It was explained that they were specifically referring to the fact that since 2017, the World Bank has been issuing "pandemic bonds," which use private investment to help developing nations tackle outbreaks of infectious diseases.

The particular bond that covers Ebola, among other diseases, pays investors a coupon of 11.1 percent over the Libor (London Inter-Bank Offered Rate), funded by donor nations Japan and Germany. Since last August, over 1,700 people have died in eastern Congo, a region with rich mineral deposits but part of one of the poorest countries in the world, according to the UN. But that doesn't mean they get the aid money.

In fact, despite the deaths in Congo, the *Financial Times* reports that the pandemic bonds will only benefit affected nations once the virus jumps international borders and a "positive rate of growth of the outbreak is confirmed, according to a person familiar with the bonds." Then and only then would the Washingtonheadquartered World Bank disburse \$90 million to help both governments and international aid responders tackle the crisis. Additionally, since their introduction, pandemic bonds have yet to pay out to affected nations.

The *Financial Times*, on June 13, 2019, further reported that their source told the newspaper, "The criteria for the Pandemic Emergency Financing insurance window to activate is, among others, that the outbreak is affecting at least two countries, with each country having surpassed a specific threshold of severity." Specifically, the bonds would not pay out until at least 20 people are confirmed to have died in Uganda.

In February, the World Bank disbursed \$80 million

to the DRC in grants through its International Development Association contingency mechanisms to help finance responses for the Ebola outbreak. But the bank's readiness to allow the death toll to rise, before paying out fully on the insurance element of the facility, to the degree that it is understood, is fueling growing criticism over the deal's structure.

If the bonds mature without paying out, investors get their money back, plus the chunky coupons.

Bodo Ellmers, senior policy and advocacy officer at the European Network on Debt and Development, told the *Financial Times* in February that "the financialization of risks is a new avenue for the privatization of profits and the socialization of losses."

Such bonds are an example of a wider growing trend where private finance replaces traditional funding methods such as disaster relief aid. In fact, catastrophe bonds attracted record levels of investment last year.

Russia Offers a Revolutionary Vaccine

Despite all of this, some progress has been made since the West Africa epidemic of 2014-2016, in that vaccines do now exist. But, accelerating vaccine production is an urgent necessity. The one licensed Ebola vaccine, produced by Merck & Co., which has been used, is proven to be 97.6% effective. But it is in such short supply that it is currently being administered in half-doses, with no conclusive data on its effectiveness. The WHO has proposed to the DRC that another vaccine, produced by Johnson & Johnson, be introduced for use.

Last week, TASS reported that Russia's Novosibirsk-based Virology and Biotechnology State Research Center (VECTOR) has offered to supply the DRC with an Ebola vaccine, which is approved for use in Russia. Apparently, according to the TASS report, the Russian peptide vaccine operates on a different principle than the other vaccines, and is "highly safe, effective, lacking any side effects, and is easily storable and transportable."

While these developments are encouraging, stopping this latest outbreak and others like it requires more than vaccines and short-term measures. As *EIR* outlined repeatedly during the 2014 Ebola emergency, eradicating the threat of this most deadly of viruses, and others that may emerge in Africa, requires nothing less than an international crash-program mobilization to provide adequate economic conditions (sanitation, water, power, housing) along with the development and implementation of a first-class public health system.

III. The LaRouche Plan for Mars

First published in *EIR* on October 21, 1988

Big Payback From Mars Colony Mission

PART 2

by Lyndon H. LaRouche, Jr.

What follows is the second and final part of this 1988 article. EIR republished Part 1 in its July 26, 2019 issue.

Technologies Required for Space

There are three basic categories of scientific-technological progress required for the success of a Mars Colonization program:

1) Controlled electromagnetic plasmas of very high energy-flux densities. The use of controlled thermonuclear fusion as mankind's primary source of power, during the course of the next century, is the usual ex-

ample of this. Our reference to the "boiling" of tungsten into a plasma-state, illustrates the most obvious sorts of industrial-process designs derived from this line of progress.

- 2) Controlled pulses of electromagnetic radiation, including lasers as the simplest model, and continuing through very complex electromagnetic nonlinear pulses. This will emerge as the basis of machinetool design during the coming years. It also affords man the means to control the electromagnetic environment in a general way.
- 3) The superseding of ordinary molecular biology by new developments in optical biophysics.

All three are aspects of the same, revolutionary development of mathematical physics. All three are currently in progress, being developed, although not rapidly enough. All three are susceptible of measurement in terms of a causal correlation among *technology*, *power*, and *productivity*.

In the space program as such, the devel-

opment of these technologies has the following, most prominent objectives:

- 1) When we arrive at Mars, the amount of power required to maintain a synthetic environment (under "domes") suited to permanent human habitation, is more than a decimal order of magnitude greater than in industrialized urban life on Earth today.
- 2) When we arrive on Mars, and, before that, as we "industrialize the Moon," to supply most of the weight carried from Earth orbit to Mars orbit, we shall require new kinds of industrial extractive and other applications. These are akin to the example we identified, turn-

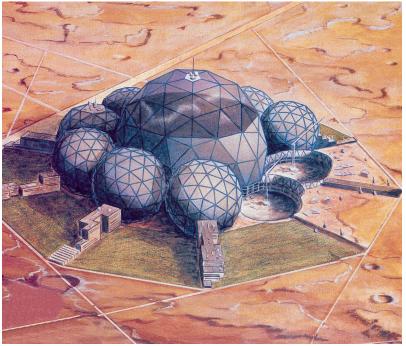


Illustration by Christopher Sloar

An artist's depiction of an industrialized city on Mars under "domes." The power requirements of such a synthetic environment are far greater than for industrialized urban life on Earth.

ing tungsten into a plasma-state. To accomplish this requires very high power-flux densities built into tools used.

- 3) On Mars, and in extended space-flight, we are confronted with new challenges in biology. We must create artificial environments suited to protect the health of space voyagers and Mars colonists. We must cope with the problems of maintaining plant-life and so forth, in space, and in colonies. Of special importance is the potential for development of new kinds of infectious and other diseases in space and on foreign planets. These problems require advances in optical biophysics.
- 4) We require new kinds of materials, such as ceramic materials with the kind of "aperiodic" paracrystalline structures first described by Kepler. We have presently a foot in the door respecting the methods of producing these; this is the replacement for the old metallurgical industries, such as steel, in reach during the early future.

For example: As we approach atmospheric and supra-atmospheric speeds of Mach 8 and beyond, ablative and other tricks for combating heat-accumulation in the outer hulls of vessels become of marginal value, and worse. Initially, in the vicinity of the presently technologically feasible Mach 8, this becomes an important factor of cost; at higher speeds, it becomes a physical constraint beyond mere cost considerations. Rather than trying to resist heating effects, we must absorb them in a convenient way. New qualities of materials are part of the key to these solutions.

5) There is a partly known, and also partly incalculable risk, in carrying crew and passengers in extended space flight at micro-gravities for periods of many months. The optimum solution for this, is to base human space travel on trajectories defined by a constant acceleration-deceleration equivalent to one Earth-gravity, or near that. This would reduce lapsed time from Earth orbit to Mars orbit to approximately an average of 48 hours.

See the summary calculations which researcher Heinz Horeis and others pulled together in **Tables 2** and **3**. There is not enough matter available to us to complete such one gravity trajectories by chemical rockets' impulses. The only solution is what we may

TABLE 2

Calculation of Velocity and Time of Flight

Distance		Time
	Acceleration 1 g	
30 x 10 ⁹ m	$v_e = 7.7 \times 10^5 \text{m/sec}$	t _e = 77,460 sec= 21 h
200 x 10 ⁹ m	$v_e = 2.0 \times 10^6 \text{m/sec}$	t _e = 200,000 sec= 55 h
	Acceleration 1/6 g	-
30 x 10 ⁹ m	$v_e = 3.16 \times 10^5 \text{m/sec}$	t _e = 189,700 sec= 53 h
200 x 10 ⁹ m	v _e = 8.16 x 10 ⁵ m/sec	t _e = 489,900 sec=136 h

Source: EIR Quarterly Economic Report

We assume that the Mars ship accelerates for half the distance, s, with constant acceleration a=1 g, or a=1/6 g, and then decelerates with 1 g, or 1/6 g for the remaining half. With $v=(2as)^{1/2}$, and $t=(2s/a)^{1/2}$, we get for the respective half-distances the values of v_e and t_e shown above. Note the short flight times: less than 2 days for the shortest distance and 11 days for the longest, compared to 260 days for chemical rockets.

TABLE 3
Energy-Density of Fusion Fuels Compared to Other Rocket Fuels

Mass (1kg)	Kilowatt-hours	Energy (joules)
Chemical (H ₂ /O ₂)	3.72 x 10 ¹	1.34 x 10 ⁷
Fission	10 x 10 ⁶	6.5 x 10 ¹³
Fusion (D-D)	25 x 10 ⁶	9.0 x 10 ¹³
Fusion (D-T)	92.5 x 10 ⁶	3.3 x 10 ¹⁴
Fusion (D-3He)	97.5 x 10 ⁶	3.7 x 10 ¹⁴

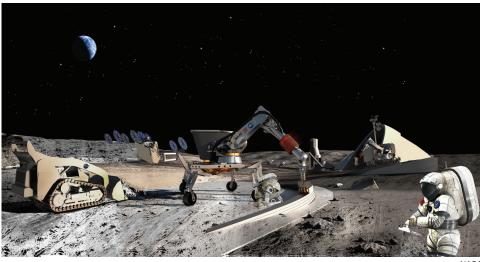
Source: EIR Quarterly Economic Report.

identify conveniently as a "second-generation" fusionenergy system. This, as Horeis indicates, suggests a propulsive power-unit of one terawatt output, readily feasible in a "second generation" fusion system. This would permit manned space travel in one-gravity trajectories, and the movement of gigantic, unmanned "freighters," using the same propulsion system, at lower trajectories.

6) We must, more immediately, decrease the cost of putting a ton of weight into Earth's geocentric orbit. Our objective should be a cost less than 10% the present ones.

Until we develop this new system, we should continue to use present systems of elevating persons (shuttles) and objects into lower and higher orbits. There is

work which must be done, which must not wait until the new systems are completed during the 1990s. However, we can not proceed economically, to build the Earth orbit based interplanetary systems, until we have the new systems, modeled upon the space-scientist work of Sänger, which not only reduce the cost by about 10%, but also make possible frequent travel between the Earth's surface and the geocentric orbit in which interplanetary space-stations must be located.



NASA

Artist's concept for a lunar base built through in-situ resource utilization (ISRU) and a form of 3D printing known as contour-crafting.

As this reporter indicated, in his 1986 proposal, and in the March 1988 half-hour *The Woman on Mars* national TV broadcast, the key to achieving such economies and convenience is a two-stage system, involving a rocket, somewhat like the shuttle, piggybacked onto a scramjet aircraft with a top speed of Mach 8. The piggybacked shuttle will reach low Earth orbit; "space tugs" assembled in low Earth orbit, will carry persons and freight to (Earth-point-stationary) geocentric orbit.

7) Although we should resume the sending of unmanned instrument packages to Mars, we should postpone manned landings on Mars until we have the right systems to do so intelligently and with reasonable safety for space voyagers' health during the round trip. We should adopt as early goals, the placing of permanent instrument packages into Mars orbit, and on the surface of Mars. The use of obvious improvements in present reconnaissance satellite technologies will provide us most of the chemical and meteorological information we require for a preliminary Mars survey.

Regular manned flight to Mars requires the preliminary stage of "automated industrialization" of the Moon. This industrialization of the Moon requires rather early development of fusion power and of some of the new kinds of tools indicated. Most of the bulk and weight of space vehicles used for transporting freight and, persons to Mars orbit, must be constructed through the performance of the stages of extraction, refinement, and components fabrication on the Moon, using raw materials available on the Moon.

The entire, 40-year project is organized in a way not unlike the construction of a modern skyscraper. The construction proceeds in planned phases. We develop technologies to meet scheduled times when products based on those technologies must be delivered to begin each next phase of the construction. The research and development, and the industries based on this, are being developed in parallel to the completion of other phases currently in progress of completion.

In other words, we start all phases of the construction now, giving each element of the entire project a time schedule for completion of its development. The early phases must come on line earlier; the later phases have, variously, 10, 20, 30, or 40 years, approximately, to complete their part of the task. This also means, that we begin training high-school and college students now, for the kind of work required of each element and phase of the project. It also means, we begin to assemble the scientific and management teams required for the project as a whole, and each phase and element of the project.

In this sense, the project uses the principles of management proven earlier in development of transportation infrastructure, skyscrapers, and so forth. It means going back to the sound principles of industrial management, in which we used to be among the world's leading nations, and applying those lessons of past experience to the kinds of technologies this project introduces.

The Purposes of the Colony Itself

The Horeis calculations shown here, point to our need for a scientific revolution which carries mankind beyond the limits of fusion power. Putting the point crudely: How much power can we extract from a ton of fusion fuel? For reasons implicit in the calculations, manned space travel along one-gravity trajectories would limit round trips based on the fuel carried out by the vessel, to the vicinity of the Asteroid Belt! How do we break through this barrier?

(One obvious solution, is to send low-trajectory space tankers out ahead of the manned craft. The manned craft can then be refueled at such space-based "filling stations." A useful trick for manned exploration of the outer Solar System, but not really a solution to the problem we have posed.)

To any astrophysicist, the nature of this limit is most fascinating. In Kepler's system, as checked by modern physics calculations, the Solar System is divided into two principal regions (excepting Pluto). There are the inner planets, composed largely of heavier elements, and the outer gaseous giants. The division between the two zones, is the Asteroid Belt. If we correct Kepler's calculations of the harmonic values associated with the orbits of the Sun and planets, if we set the Sun at C below Middle C, the band which is the asteroid belt has two rims, of which the innermost rim is at F above Middle C, and the outermost rim at F-sharp: This is the normal bel canto voice register shift for the soprano voice.¹

There is nothing occult in this. If we correct Kepler's calculations from the standpoint of the nineteenth-century work of Gauss, Riemann, et al., we understand the necessary reasons for this limit of fusion-powered manned space travel within the Solar System. Our understanding of this is greatly improved by recent experimental confirmation of this reporter's longstanding hypothesis, that subatomic space is harmonically ordered in the way indicated by a Gauss-Riemann correction of Kepler's construction of the har-

Lyndon LaRouche

From a nationwide half-hour television broadcast titled The Woman on Mars March 3, 1988.

Thirty-nine years from now, we shall hear the broadcast 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 the colony.

Already, the woman who will speak to you 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.

monic ordering of the Solar System. Our insight is improved still more, by current work in progress, reconstructing the periodic table of chemical elements and their characteristic properties, on the basis of this experimentally confirmed hypothesis on the organization of subatomic physical space-time.².

31

^{1.} Kepler showed that his system required the former existence of a planet in what we identify as the orbit of the Asteroid Belt, today. This was approximately 200 years before the existence of any asteroid was discovered. Kepler showed why, according to his construction of the entire Solar System, any planet in that orbit must have been tom apart. He supplied what later proved to be the correct harmonic values of the orbits for the asteroids. This later proof has the effect of being a conclusive proof of the correctness of Kepler's astrophysics, and a crucial experimental disproof of the approach represented by Galileo, Descartes, Newton, et a1.

^{2.} On the basis of the experimental confirmation of this reporter's cited hypothesis, Prof. Robert Moon directed an investigation of the way in which the possible elements and isotopes of the periodic table must necessarily be determined. This determination depends upon defining the allowable number and theoretical positions of protons and neutrons in the atomic nucleus; this, in tum, determines the electron structure. The conventional ideas of "gravitational" and analogous "packing" of the atomic nucleus, are discarded. Possibly, a Beltrami space of negative physical space-time curvature is helpful in unraveling this a bit more.

The relevant point in the text is, that the indications of a conformal harmonic ordering of the physics of the periodic table with the composition of the Solar System, argue that the fusion reaction reflects the harmonic characteristics of Earth's spectrum of periodic table at one gravity on the Earth's average surface. The coincidence of fusion power's theoretical limits with the "voice register" phase-shift in the composition of the Solar System, is a stunning fact, but not properly a surprising one.

The question is so posed: Is there not another kind of energy-reaction, which has a much higher energymass relationship sufficient to permit a round-trip beyond the Solar System, perhaps?

Experimentally, we know of one such reaction, the socalled "matter, antimatter" reaction.

There are some problems. The standard view of this reaction is based on relevant, but effectively contested dogmas advanced by Dirac—the so-called "Dirac Sea" hypothesis. No matter, we know that the reaction is constructible experimentally; it exists. Therefore, if there is an urgent reason for mastering this reaction, as a controlled reaction employed as an "energy source" by mankind, we must proceed to settle the unresolved theoretical and related questions.

This is one, if only a leading example of the key missions for which we require the assistance of the permanent Mars colony.

Although Earth has no urgent industrial or related need for controlled "matter, antimatter" reactions today, during the second half of the next century, this will begin to appear as a practical problem. This will occur during the lifetime of the grandchildren of the children of this reporter's nieces and nephews. This will begin to be seen as an upcoming problem for Earth at about the same time the scheduled Mars colony has settled in. So, this will be a leading research mission for that colony from the beginning of its existence.

During the second half of the next century, mankind will look at second-generation fusion energy with not only satisfaction, but also frustration. The increase of our planet's population-density will require that we become able to use the available land-areas with vastly greater efficiency than today. To develop the technologies, which make mankind's average lives not only wealthier, but more pleasant aesthetically, we must pay attention to the causal relationship among technology, power, and productivity. The fact that even second-generation fusion energy is a form of power with an upper limit, will be of concern to us on Earth, increasingly, during the second half of the coming century, and will become urgent during the course of the century following that.

If we look back, to the process of technology over the recent five centuries, even the past hundred years, we realize that our population-density of today could not be mastered successfully but for fundamental scientific discoveries of more than a hundred years ago, and, thus on the scientific discoveries established up to more than a hundred years before that.

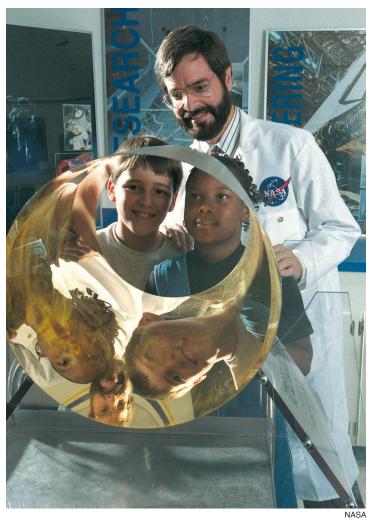
To develop what we call the "matter, antimatter" reaction, as a controlled primary source of energy for mankind, by the end of the coming century, if not earlier, we must start the work of fundamental scientific discovery today, lest our great-grandchildren, and great-great-grandchildren curse our memory for our failure to do so. Fundamental scientific revolutions, such as this one, take a great deal of time; progress in fundamental scientific discoveries is measured in generations of the adult working-lives of entire generations of scientists.

We may not solve the problem during the lifetime of any working scientists living today. However, by about the time the Mars colony is settled in, that generation of scientists must be equipped to attack the problem with a solution in sight during the lifetime of the generation of scientists following them.

"Pie in the sky"? No. As we have already indicated, our present generations, even during the 1990s, will begin to enjoy immediate benefits, as technology spillover into higher productivities and so forth, the which they would lack otherwise, unless we proceeded along these lines. Perhaps more important: Is it not a very good thing, to close one's eyes on the last moment of one's mortal life, knowing that one's great-great-grandchildren will have good reasons to smile on the memory of one's own mortal life? Is it not a very good thing, to be able to live one's life, during the decades before one's death, even during adolescent preparations for adult life, knowing that the work which one is assisting is leading to a happy thought about one's entire life, at the moment of one's death?

For what other purpose do we bring children and grandchildren into this world, and nurture the development of their moral character and intellectual powers? If we are wise about the living of this mortal life, do we not reflect upon the debt we owe to generations before us, many generations? Do we not reflect upon the fact, that after our life is ended, those who come after us will benefit from what we have contributed to the development of the moral character and intellectual powers of our children and grandchildren?

In the existence of mortal mankind, over hundreds of generations before us, and hundreds perhaps to come, what gives meaning to this tiny speck which is our own mortal existence? What mission might we per-



To solve the problems that lie ahead for mankind, we must start the work of fundamental scientific discovery today, lest future generations curse our memory for our failure to do so. For what other purpose do we bring children and grandchildren into this world, and nurture the development of their moral character and intellectual powers? Shown, children fascinated by an X-ray mirror cylinder.

form, with this so tiny thing, our mortal existence, that we might look upwards to the heavens, and say to an unseen presence there: "I am happy, because I know that what I am working to accomplish makes my mortal existence a necessary life in the whole space of hundreds of generations before mine, and hundreds of generations still to come"? Can there be greater happiness than to live in such a way as to know, that one's existence is efficiently justified by the mission to which one's mortal existence is contributing?

Security and happiness in our immediate life are necessary conditions for the citizen, to which our Constitution's Preamble dedicates the functions of our federal government. Yet, where could there be true individual happiness, if all the meaning of our having lived were buried with our corpse? Do we not owe ourselves, our children, and humanity, something better than individualistic "materialist" gratifications? Is trudging to and from the securing of one's income, enough, even if the material standard of life secured so is better than adequate? To what higher purpose do we trudge so? Must we not be contributing, in some way, to building something which is good for the future?

We speak of the high value our culture places upon the sacredness of individual life, and respect for the freedom of that individuality. What do we mean by such words? What ought we mean, if we reflect upon the meaning of our mortal lives with a bit more wisdom? Hopes of an after-life may be happy ones, but the conditions in that after-life as such, are matters of faith, not something intelligible to mortals. Is it not the case, that what we do with this mortal life we have defines the measurement of merit placed upon our identity by the Creator? If we do the Creator's Will in relevant matters which are intelligible to mortal minds, can we doubt that the loving eye turned upward to the Creator in that moment, knows what practical thing on Earth such love commands us to do? Is not what we do respecting matters which are intelligible, the which is the expression of our conscience, that good conscience which is the state of true, deeper personal happiness?

The same reflections assume a somewhat different, practical form, as we shift the locus of such questions to the matters of policies of government.

Society, especially as defined by the sovereign republic our Declaration of Independence and federal Constitution, combined, founded us to become, is, as the Preamble of that Constitution avows, an included commitment to care for the well-being of our posterity, at the same time that the existence of the republic serves the current obligations of this federal Union. The nation so defined, is much more than the whims of capricious contemporary majority opinion might imply. It is our debt to preceding generations and to our posterity over indefinite numbers of generations to

come. The nation is properly defined as not less than that total population which has been, which is, and which might come to be if we today do not ruin this nation with foolish, capricious whims of momentary popular opinion.

That view of the nation—our republic, is the state of mind of the true statesman. Whoever lacks that standpoint, is no true statesman, however foolishly we might honor as statesman one who lacks that controlling element of conscience. The future we are building with our policies and efforts of today, is the central concern of the true statesman, and of all others worthy of being regarded as "natural leaders" among the rank and file of our citizens.

To the citizen who grasps this moral point, we say we are addressing their deepest concerns, their rightful pursuit of true happiness. To the mere pragmatists, we say the simpler thing: "This will make your lives more meaningful, as well as more secure and prosperous than under any different sort of policy in sight."

We know already, how this challenge of controlled "matter, antimatter" reaction can be mastered during the span of time we have indicated it must. This reporter's principal contributions to economic science were based on solving that kind of problem. The exposition of this is profound, but simple; it is the basis for any correct approach to national science policy. Therefore, we summarize it at this point.

In mathematics, we say, that to the degree mathematical-physical knowledge is deductively consistent, all theorems of current scientific knowledge can be represented by a deductive theorem-lattice derived from an underlying set of Euclidean-like axioms and postulates. Mathematical physics is never fully consistent in that way, but all using deductive method center their work around the attempt to render it consistent in the sense of a deductive theorem-lattice. So, most disputes in science, especially those bearing upon correcting popularized errors of scientific education, or fundamental scientific discoveries, approach scientific matters with the idea that mathematical physics ought to become consistent.

Assuming either that mathematical physics is consistent, or is working to become so, what happens to a mathematical physics developed as a deductive theorem-lattice, when some crucial experiment demonstrates that one or more of the accepted theorems of that lattice are false? A short examination of this is

key to defining properly the mission of the Mars colony.

The well-known characteristic of any deductive theorem-lattice, is what is called the "hereditary property." This signifies, that no theorem of such a lattice contains anything which was not implicit in the underlying set of axioms and postulates upon which the lattice as an entirety is based, and from which each and every theorem is directly, or implicitly derived. Therefore, a crucial experimental proof, that one or more of those theorems is false, proves that at least some part of the set of axioms and postulates is also false.

In a rigorous scientific practice, the immediate result of such a series of crucial experiments is, that the set of axioms and postulates must be corrected in ways which are in agreement with the results of these experiments. This leads us to the following procedure.

For easier reading, let us designate the theorem-lattice so refuted by a crucial experiment, as Lattice A. Once we change the axioms and postulates of Lattice A, in such a way as to correct for the error discovered, we have created an entirely new set of axioms and postulates. Every theorem in Lattice A must now be rewritten in such a way as to be fully consistent with the new set of axioms and postulates. The result we may designate as Lattice B.

In practice, it is not quite that easy. There may be a variety of changes in axioms and postulates of Lattice A, each differing from one another, but all apparently in agreement with the results of the crucial experiment. Each of these choices imply the construction of a corresponding Lattice. That means that we have a series of new Lattices from which to choose: B, C, D, and so on. What we must do, obviously enough, is to see which of these, either B, or C, or D, and so on, fits all the scientific evidence, not only the evidence of the particular crucial experiment which set this process of reexamination into motion.

The successful choice of either B, C, or D, for example, as the best new, experimentally consistent theorem-lattice of formal mathematical physics, is what we commonly identify as a "scientific revolution." Those kinds of crucial experimental discoveries are called "fundamental discoveries," and the reconciliation of this fundamental discovery with the larger body of mathematical physics is termed a "scientific revolution."

This is what we confront when we set out to accom-

Ronald Reagan

Excerpts from the speech by President Reagan at the Johnson Space Center in Houston, September 22, 1988

In the next century, leadership on Earth will come to the nation that shows the greatest leadership in space. It is mankind's manifest destiny to bring our humanity into space, to colonize this galaxy.

In the limitless reaches of space, we will find liberation



from tyranny, from scarcity, from ignorance, and from war. I say that America must lead. The nation that has achieved the greatest human freedom on Earth must be the nation to create a humane future for mankind in space, and it can be none other.

Soon the world will be watching as five brave Americans lift off from Earth on the Space Shuttle *Discovery*. America is going to space again and we are going to stay. When *Discovery* takes off, seven precious souls will soar beside it, the seven heroes of the *Challenger*. With their lives, they moved a nation, they summoned America to reach higher still, and they wrote man's destiny into the stars.

Ill fortune can slow us down, but it cannot stop us. You can delay our long trek to greatness, but you cannot halt it. How better can we pay tribute to those who came before us than by continuing their quest for knowledge, their struggle against limits, by continuing to push to the far frontier?

We are a nation born of pioneers and we will always create our future on the frontier. Americans can live no other way. Our early settlers knew great risks and made great sacrifices, and moved the frontier forward to build a great nation. Neither can we stand still, nor be content, and we are not afraid.

Somewhere in America, there is alive, today, a small child, who, one day, may be the first man or woman ever to set foot on the planet Mars, or to inhabit a permanent base on the Moon.

Let every child dream that he or she will be that person, that he or she may one day plant the Stars and Stripes on a distant planet. You and I know that we are the nation that must do it.

plish a scientific revolution over the generation or so ahead, as we are doing in proposing a mastery of controlled "matter, anti-matter" reactions. We continue with the discussion of such "fundamental discoveries" effects on scientific work.

Suppose the hypothetical crucial experiment led us to adopt Lattice B as our improved formal representation of mathematical physics. The result would be, that no theorem of Lattice B would be deductively consistent with any theorem of Lattice A, and vice versa, of course. Thus, there would exist a kind of "logical gap" between the two lattices. Another word for such a gap is "a mathematical discontinuity." The closer examination of this kind of "logical gap," or "mathematical discontinuity," has been the center of the issues of method in physical science, and the theory of knowledge in general, since the seventeenth-century attack on Descartes by Leibniz. The roots that dispute even go back about 2,500 years, to the ancient classical

Greek discussions of a problem termed "the Parmenides Paradox."

Study of this issue is key to understanding scientific revolutions of the past, and is also key to preparing to effect one of the greatest scientific revolutions in history, during the course of the generations just ahead of us.

One of the most famous among the relatively modern statements of this problem is the central feature of Immanuel Kant's *Critiques*. The central feature of Kant's false reasoning, is his assertion that we can not construct an intelligible picture of the kinds of mental processes by which a valid fundamental scientific discovery is accomplished. Kant said such things were "unknowable."

This reporter's original contributions to a science of physical economy were prompted as a reaction to some absurd ideas about "information theory" popularized by Professor Norbert Wiener and John von Neumann, but Wiener's and von Neumann's blunders were merely imitations of the false reasoning of Kant. A refutation of Kant's blunder suffices to disprove modern "information theory" conclusively. It was also the starting-point for this reporter's original discoveries in physical economy.

Kant's cited dogma was based on a false interpretation of the problem of theorem-lattices which we have just described above. He argued along the following lines. Let us assume the case, that the amount of change in the set of axioms and postulates of Lattice A, to generate Lattice B, is of the smallest possible degree. From Kant's vantage-point, in this case, the logical gap between the two lattices exists, undeniably, but no intelligible picture of the gap itself is possible.

The opposite approach, by Leibniz, by such founders of modern science as Nicholaus of Cusa, Leonardo da Vinci, and Kepler earlier, and by such as Bernhard Riemann later, was based on the method of the Socratic dialogue, as typified by Plato's dialogues. In those dialogues, a proposition is adopted for examination. The approach taken is, first, to identify the underlying assumptions on which that choice of proposition is based, and then, in tum, to examine the assumptions underlying the first set of assumptions. The second set of assumptions has the character of a set of axioms and postulates. Change of a false assumption in the second set, is then the basis for supplying a corrected, alternative form of the proposition.

This was the method used explicitly by Leibniz to effect some of his fundamental discoveries. Obviously, contrary to Kant, the processes of creative discovery are intelligible.

Later, during the nineteenth century, the work of Gauss, Dirichlet, Riemann, and Weierstrass showed us how to deal with this kind of lattice-work discontinuity among deductive systems of thought, in a systematic mathematical way. This was key to this reporter's proving that the organizational process associated with Leibniz's definition of *technology* could be represented in the manner referenced above.

On the basis of those principles of technology, we are able to predetermine certain of the most crucial features of a next set of fundamental scientific discoveries. We do not have those discoveries in hand; far from it. What we do have is nonetheless of great practical value to us. We know the general form of the dis-

covery, and we also know the general nature of the experimental investigations which lead us in the right direction.

Happily, much of the preparatory work toward our next major scientific revolution was already completed more than a hundred years ago, by such scientific workers as the already cited Gauss, Dirichlet, Riemann, Weierstrass, and Cantor, and also an Italian collaborator of Riemann's, Eugenio Beltrami. The experimental confirmation of the correctness of their approach, in work done over the recent hundred-odd years, leaves no reasonable doubt, but that this is the correct approach to our next major scientific revolution, and that this can be a successful undertaking within the time-frame we have suggested here.

What we must do, obviously, includes intensive study of important physical phenomena which contradict all generally prevailing ideas of physics today. There are three areas on which we must concentrate: astrophysics, microphysics, and optical biophysics. These are, so to speak, always the outer limits of experimental knowledge; it is by proving that newly discovered laws are consistently applied to the areas of these three experimental limits, more or less equally well, that truly fundamental scientific discoveries have been accomplished in the past centuries, and will be by the future generations of scientific workers. In these areas, the kinds of impudent phenomena we referenced, are termed "physical anomalies." They are phenomena which exist, without doubt, and yet their existence defies generally accepted scientific thinking.

Therefore, in effecting the scientific revolution which a controllable "matter, antimatter" reaction implies, we must concentrate, on the astrophysics side, on extremely anomalous astrophysical objects. To do this, we must examine intensively the entire electromagnetic spectrum of the universe, while concentrating special attention on these anomalous astrophysical objects.

This requires putting very large radiotelescopes, up to kilometers or more in effective electromagnetic-optical aperture, into space, as far distant from our noisy Sun as possible. So, the urgency of having a permanent science-city colony on Mars fully operating by the middle of the next century.

This task requires many radiotelescopes, not on Mars itself, but within convenient traveling distance

from Mars. Since this will involve thousands of scientists and other specialists to construct and maintain the systems in nearby space, we need a logistical base to support these thousands of specialists. To establish a logistical base adequate to provide the indispensable sort of local logistical support to some thousands of specialists, requires a total population the size of a medium-sized city on Earth. Therefore, that must be a planet suited for building such cities, with synthetic environments, under domes. It must be such a planet as far out from the Sun as practicable for us up through the first half of the next century.

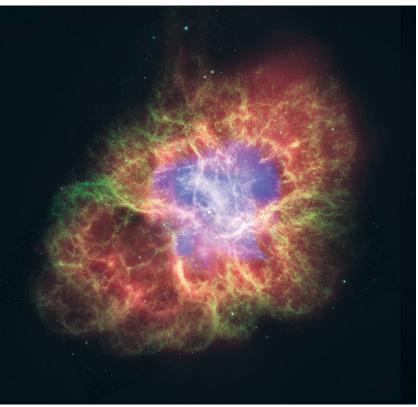
We know already the names and locations of some of the anomalous astrophysical objects to be included on our list. There is the Crab Nebula, a most curious object which supplies us our most intense cosmic ray showers. There are objects sometimes called "black holes," and better called powerful gravitational lenses. There are fast-rotating binary-star systems. And, so on and so

forth. We also know, for these cases on such a list, that if we could build radiotelescopes with gigantic aperture, and aim these to collect relevant electromagnetic radiation from these objects and their immediate vicinity, the results would begin to revolutionize science in the laboratories, and also the production lines, back here on Earth.

We should also desire such devices as gamma ray lasers, or something of that sort, to explore more finely the structure of the atomic nucleus. And so on, and so forth. Optical biophysics study of the way in which nonlinear spectroscopy of coherent radiation governs the molecular and other features of living processes, is also relevant to this same inquiry. The astrophysical research is but one of three general areas of primary investigation on which the next scientific revolution depends

How Our Economy Is Affected

If this reporter had his "druthers," the goals of U.S. employment to be reached by about A.D. 2000 would look somewhat like this.



NASA/ESA/CXC/JPL-Caltech/STScl/Hester, Loll, Gehrz

Composite image of the Crab Nebula, as imaged by NASA telescopes.

Not less than 40% of the total labor-force would be employed as operatives in agriculture, industry, and basic economic infrastructure. Presently, the total is less than 20%, where it was about 60% at the beginning of the postwar period.

Not less than 10% of the total labor-force would be employed in research and development, as compared with the goal of about 5% generally accepted 20-odd years ago.

The number of teachers would be increased to not more than 16 pupils per teacher. Medical professionals would be increased as a percentage, similarly.

These changes would come from a combination of sources. To be reduced are the percentage of unemployed, to about 2% "frictional" unemployment, down from a current level of combined reported and officially overlooked unemployment of about 10% or more. Another source of labor for expanding the priority categories, would be a great reduction in redundant employment in administration, sales, and low-skilled services.

The feasibility, and desirability of such changes is

indicated by observing the structural changes in composition of employment of the U.S. labor-force during the past 40 years, especially the most recent 20. At the beginning of the period, 40% of total labor-force was employed in "overhead-expense" functions of administration, sales, low-skilled services, and so on. Today, more than 80% is either unemployed, or employed in one of these "overhead expense" categories. Back in the late 1940s, every producing operative carried the cost of eight-tenths of a person on his back, so to speak; today, ignoring purely financial burdens, each productive operative must carry four persons on his back. Little wonder things cost so much, that the real standard of living for a growing majority of our people is falling as it is.

The point is, to reverse the "post-industrial" trends of the past 20-odd years. Government must act to restore incentives for investment in technological progress, and work with the private sector in developing a long-range technological commitment, a commitment which encourages entrepreneurs to invest with assurance of the soundness of that type of investment over the coming 20, 40, or more years ahead.

This means changes in education, obviously.

Look now, at the dynamic of interrelations among research and development, basic economic infrastructure, production of households' goods, and production of capital goods.

The key to injecting technological progress into production in general, is building up the machine-tool sector of employment. This must be matched by strong economic incentives for investment in the new technologies made available through the machine-tool sector.

By rebuilding our machine-tool sector, made up chiefly of small, highly skilled enterprises, we are able to supply the needs to the economy as a whole. The rate at which an expanded machine-tool sector delivers technological progress to investors, is limited by the number of scientists and others engaged in research and development: hence, the build-up of R&D, in all categories of physics and related natural science applications, to about 10% of the total labor-force.

In the industrial sector, there will be an accelerating shift in the composition of employment of operatives. There will be less emphasis on expanding the number of persons employed in production of household goods, and strong emphasis upon upgrading the labor-force into employment in machine-tool and other capital goods sectors. This does not mean a constriction in the supply of household goods per capita; it reflects simply the benefits of increased productivities in the household goods sector.

In infrastructure, apart from educational and health care capacities, the emphasis must be, first, on increasing the supply of power per per-capita unit of population-density. This means a proliferation of construction of modern energy-producing plants. This must be "clean energy," obviously, and must be at relatively high energy-flux densities. The more such installations we construct, and the more rapidly we complete each, the cheaper the costs of construction, and the greater the rate of improvements in quality.

With increased power per per-capita unit of population-density, major improvements in transportation infrastructure are in reach, including the general use of more efficient magnetic levitation rail systems for intercity and inner-city rapid transit. Inter-city speeds, already, are within the range of 300 miles per hour: One can travel between Boston and Washington, D.C., by magnetic levitation quicker, cheaper, and more conveniently, than by air.

Obviously, we must act quickly on long overdue water-management development. This is key to a general, aggressive approach to building up the natural environment generally. As we know from studies of infrastructure investments during the period 1946-70, expansion of improvements in infrastructure has more direct impact, in such effects as increasing average productivity, than any other form of investment.

So, as long as we take this sort of approach to goals of national employment, and also rebuild our decaying national economic infrastructure to the level which satisfies constraints on technology, a 3-5% improvement in the economy of labor embodied in the design of a new machine-tool, transmits that economy of labor, billiard-ball fashion, throughout the chain of production of producers' and households' goods. This becomes a general increase of the productivity of the economy as a whole.

With those goals, with governmental commitments and investment incentives to match, and with one great, long-range "crash program" in the Mars Colonization project, this nation will readily reach the levels indicated at the outset of this report.

Democrats and Mueller in Historic Failure

EDITORIAL

by Barbara Boyd

July 24—On May 29, Robert Mueller stood at the podium at the U.S. Department of Justice, and read—laboriously and in a shaky voice—a ten-minute statement whose bottom line was that he wished to vanish immediately into private life. The Democrats on the House Judiciary and Intelligence Committees should have paid attention. They did not.

On July 24 Mueller testified before two Congressional Committees. Within the first ten minutes of his much-touted

testimony, it became clear that, as with the Russiagate hoax itself, there is "no there, there," when it comes to the Special Counsel himself.

Former Assistant U.S. Attorney Andrew McCarthy tweeted that, based on Mueller's wandering, evasive, and sometimes incoherent answers, "It is inconceiv-

able" that Mueller was involved at all in his own investigation! Former President Barack Obama's political guru, David Axelrod, pronounced the hearings "extremely painful" to watch and sought to couch what everyone plainly observed in the most polite and sensitive terms possible. Constitutional scholar and Obama advisor, Laurence Tribe, declaimed that Mueller, himself, had "sucked the life out of his report" during the morning's hearing. Fox's Chris Wallace, no fan of Donald Trump, pronounced the hearings a disaster for the Democrats and for Mueller's reputation. Former Congressman Trey Gowdy noted, sadly, "The person

who learned the most about the Mueller Report today was Bob Mueller."

The hearings proved what President Trump has repeatedly tweeted. The witch hunt was run entirely by the angry Democrats Mueller hired to go after Trump, with Mueller himself serving as a largely empty suit of "rectitude." Those familiar with Edgar Allan Poe will be reminded of his tale, "The Man Who Was All Used Up."

For those who did not watch, or fled after the first few minutes, here are the salient points.

The Nub of It

1. The morning hearing before the House Judiciary Committee consisted of each House Democrat attempt-

ing a dramatic reading to Mueller of the "five episodes" of possible obstruction of justice cited in Mueller's report, trying to elicit the conclusion that this was clearly

felonious conduct. Mueller responded on most occasions that he would not endorse the conclusion advanced, and, in an obviously rehearsed fashion, proclaimed that he either "supported" his own report, or would not go beyond the report.

Mueller asked to have questions repeated to him, or



Special Counsel Robert Mueller testifying before the House Judiciary Committee on July 24, 2019.

for citations to his own report to be repeated, even though the citations themselves were displayed on a video screen in front of him. Each exchange would end with the Democratic Congress person chanting, in some rehearsed fashion, "No one is above the law."

According to numerous press reports, the Democrats had rehearsed their performances endlessly and detailed their makeup for Prime Time TV.

Of course, Mueller himself concluded that he could



not reach a decision about obstruction of justice despite also concluding that the President was innocent of the underlying crime or crimes he was investigating. He also admitted today, repeatedly, that his investigation was not, in fact, obstructed.

Attorney General Barr and Deputy Attorney General Rosenstein, who said they were stunned by Mueller's punting of his prosecutorial mandate, promptly found that the five episodes cited by Mueller did not amount to obstruction of justice.

The key element to prove in prosecuting obstruction of justice is corrupt intent. If the President honestly believes he is the victim of a witch hunt and prosecutorial abuse, then expressing his anger and frustrations with this process—the episodes described by Mueller's attack dogs—can never constitute corrupt intent.

2. The Republicans focused on the fact that the Mueller Report and investigation completely evaded profound questions about the origins of the Russiagate hoax, the illegal tactics used to concoct that hoax, the bias of Mueller's investigative agents, the illegalities in Mueller's investigation itself, and the fact that the Mueller Report itself did not present exculpatory information, particularly with regard to the "five episodes" of possible obstruction of justice.

Mueller refused to answer any of these questions, including on topics which were covered in his report. Astoundingly, and as if to prove Andy McCarthy's tweet, Mueller announced that he was not familiar with the Clinton Campaign vendor, Fusion GPS, the firm that hired Christopher Steele.

Popular columnist Matt Taibbi, tweeting about the Special Prosecutor's mental acuteness, noted, "Anyone

who lines a parrot cage with newspaper would know that."

3. Rep. Doug Collins hit the nail on the head as to what the whole "obstruction of justice" fraud—presented in the morning Judiciary Committee hearing—was all about. While Mueller said that there was insufficient evidence to link anyone in the Trump Campaign to alleged Russian interference in the election, whoever actually wrote his long fictional novel claimed that the Special Counsel "could not exonerate" the President with respect to obstruction of justice.

Collins asked where, anywhere, in the laws of the United States or Justice Department regulations, is "exoneration" part of a prosecutor's duties.

Mueller admitted that there was no such authority. In fact, for Mueller to undertake this fake duty completely undermines the constitutional presumption of innocence.

- 4. The Democrats had an orgasm over Mueller seeming to respond to Rep. Ted Lieu in the morning session to the effect that, were it not for a Justice Department Office of General Counsel opinion that a sitting President can not be indicted, Trump would have been indicted for obstruction. However, Mueller retracted that testimony and any such inference at the beginning of the House Intelligence hearing in the afternoon.
- 5. The afternoon session featured Rep. Adam Schiff pontificating on the President's alleged disloyalty for not going after the Russians with the McCarthyite fervor presently on display throughout Washington, D.C. Other Democrats pontificated about the President's "greed" and "business motivations."

The only revelation came in the opening statement of Rep. Devin Nunes who noted that this national night-mare—initiated as James Comey's FBI investigation of





a sitting President—resulted not from any intelligence agency product, but rather from a tip from a former foreign politician about Joseph Mifsud. That politician appears to be Australia's former Ambassador in London, the imperial spook, Alexander Downer. Mifsud's role as a Western intelligence plant tasked to entrap George Papadopoulos was extensively reported on July 23 by *The Hill*'s John Solomon.

With impeachment now dead, and the transition to the investigation of the investigators kicking off, we are certain to learn a whole lot more about this. As the President tweeted after Mueller left Capitol Hill, "THE TRUTH IS A FORCE OF NATURE!"

Investigate the Investigators

The nexus behind this monumental fraud is now itself under investigation. Attorney General Barr's appointment of respected U.S. Attorney from Connecticut, John Durham, and the expected imminent release of an investigation conducted by Justice

Department Inspector General Michael Horowitz, into the use of the Steele dossier in the filing for a warrant before the Foreign Intelligence Surveillance Act (FISA) court to "spy on" the Trump campaign, has truly spooked the coup plotters. What Trump has called the "greatest political scandal in U.S. history" will be exposed, and many of the key players are fearful that they now face prison for their crimes.

A key element in this is debunking the final, major lie still standing in the Mueller report, that Russia did intervene in the 2016 election. In his one, un-fumbled (but lying) statement in the hearings this week, Mueller asserted that Russia is continuing to interfere: "They're doing it as we sit here," he said, and this became a major theme for those clinging to the hope of impeachment.

Typical is the editorial of the "Never Trump" *New York Times* on July 25, which wrote that Mueller was "trying, in his halting words, to sound the alarm ... about Russian subversion of American democracy." Describing the "evidence" of Russian hacking as proof of the malign intent of Putin, the *Times* called this the report's

"most unequivocal finding," in exposing the "sweeping and systemic nature" of Russian interference. In asserting this, the editors characterized the questions of some Republican committee members about Fusion GPS, the Steele dossier, and the texts of Peter Strzok and Lisa Page, as "bluster and misdirection."

Such an obvious cover-up merely highlights the hysteria of those behind Russiagate. By sticking to the narrative, they are giving more rope to the hangman.

The challenge to the "Russian hacking" narrative was laid out by former National Security Agency technical director and whistleblower Bill Binney, who has conducted the only serious forensic investigation of this charge. He and his colleagues found that it is impossible that Democratic National Committee (DNC) files were stolen by an internet "hack." Binney will soon present the evidence for this in a courtroom, as he has been called as a defense witness in the last pending Russiagate trial of an American, that of Roger Stone.



August 2, 2019 EIR Man Creates His Own Future 4

EDITORIAL

Senate Intelligence Committee Promotes Russiagate Fraud

by Stanley Ezrol

July 26—Last night, a mere twenty-four hours after former Special Counsel Robert Mueller's failed performance before two congressional committees, fake-news outlets blared out variations on the headline, "Russia Targeted Election Systems in all 50 states." They cited the just-released Volume 1 of the Senate Intelligence Committee report titled, "Russian Active Measures Campaigns and Interference in the 2016 U.S. Election."

Since only a highly redacted version of the report, containing no actual evidence, is available to the public, we cannot judge whether anything it said was true, but it did not say what the leading media outlets claimed. The report does state that be-

cause U.S. elections are administered independently in each state, the committee's actual source of information was reports from state and local institutions and that

they had varying levels of confidence in the raw material on which their assessments were based.

Like the parallel Mueller investigation, the Committee relied heavily on Intelligence Community (IC) sources. One of these is the disgraced ex-FBI assistant director Andrew McCabe. McCabe



worked closely with the corrupt and unsuccessful Mueller team prior to being fired for unprofessional conduct including "lack of candor" under oath. Although not mentioned in his dismissal letter, he worked with a huge, blatant conflict of interest. While investigating both Russiagate and Hillary Clinton's misuse of personal email accounts, and teamed with operatives viciously hostile to Trump and supportive of Clinton, his wife, Jill McCabe, was running for Congress as a Democrat and receiving funds from Clinton.

Was It 50 States?

The committee relied on former Special Assistant to President Barack Obama and Cyber-

security Coordinator Michael Daniel as an expert on, among other things, how widespread the reported Russian activity was. Daniel said, "[W]e become confident

that we're seeing the Russians probe a whole bunch of different state election infrastructure, voter registration databases, and other related infrastructure on a regular basis."

Dr. Samuel Liles, Acting Director of the Cyber Analysis Division of the Department of Homeland Security



Andrew McCabe, former Deputy Director of the FBI.

(DHS), testified, "[W]e determined that internet-connected election-related networks in 21 states were *potentially* targeted by Russian government cyber actors" [emphasis added]. Neither claimed they were certain of anything. Daniel was confident. Liles claimed only that networks in 21 states were "potentially" targeted. In fact, all networks are "potential" targets, so Liles tells us less than we knew before he spoke at all.

Before reporting their conclusion on this issue, the report states that the committee and the IC could not "discern a pattern in the affected states," so they decide to ignore all of the "evidence," vague as it is, and go with Daniel's gut. "Mr. Daniel . . . had already



personally concluded that the Russians had attempted to intrude in all 50 states, based on the extent of the activity and the apparent randomness of the attempts." They then quote Daniel saying, "My professional judgment was, we have to work *under the assumption* that they've tried to go everywhere, because they're thorough, they're competent, they're good." Of course, working "*under the assumption* that they've tried to go everywhere" means being alert and cautious, it does not mean that they actually are acting everywhere.

To sum up, the Fake News followed the "facts" from "a whole bunch" to potentially 21 to "under the assumption," and concluded, "The Russians are coming. The Russians are coming. They're everywhere."

The fact that no one connected with releasing the report has yet protested its treatment in the media, means that this deceit was intentional.

What Did the Russians Do?

According to the report, very little was done. Throughout, they claim, "the Committee found no evidence that vote tallies were altered or that voter registry files were deleted or modified."

They believed that the activity reported involved observation between 2014 and 2017 of election-related data that might, or might not, have been surveillance for the purpose of more intrusive activity in the future.

The most serious event described by the report is that some data was "exfiltrated" [copied] from the data-bases surveilled. This occurred on one named occasion in Illinois in July 2016. The report states that 200,000



voter records were "accessed," and an unknown number extracted. DHS sent out two unclassified warnings listing IP addresses involved in this event.

Was It the Russians?

The title of the report, the page headers reading, "COMMITTEE SENSITIVE—RUSSIA INVESTIGATION ONLY," the language in the report, and the Fake News coverage, all communicate "IT'S THE RUSSIANS!!!" but the report never claims it has conclusive evidence that this is true. On the contrary, it includes a DHS memorandum dated October 11, 2018, that says, "We have not attributed the activity to any foreign adversaries, and we continue to work to identify the actors behind the operations. At this time, all these activities were either prevented or have been mitigated." It also reports that when DHS sent "FLASH" warnings about suspect IP addresses, it "did not attribute the attack to Russia or

any other particular actor," and that the second FLASH "flagged [redacted] suspect IP addresses, many unrelated to Russia."

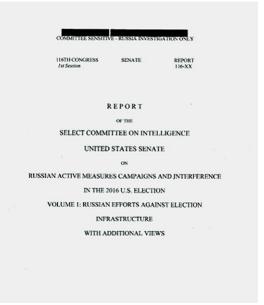
There may be some evidence not available in the public report, but the most we can read about it is, "In a joint FBI/DHS intelligence product published in March, 2018, and coordinated with the Central Intelligence Agency (CIA), the Defense Intelligence Agency (DIA), the Department of State, the National Intelligence Council, the National Security Agency (NSA), and the Department of Treasury, DHS assessed [redacted] that Russian intelligence [balance of paragraph redacted]." Whatever was said, was "assessed," not

determined, and from what is made available, we cannot know what that assessment was nor what it was based on.

The report variously mentions potential actors operating from Russia including the GRU (Russian Military Intelligence), from the Netherlands, or from unspecified other locations. It does not say whether these labels are based on state and local reporting, or judgments made at the national level.

The only information on how these judgments were reached is that DHS determined its "initial assessment by evaluating whether the tactics, techniques, and procedures (TTPs) observed were consistent with previously observed Russian TTPs, whether the actors used known Russian-affiliated malicious infrastructure, and whether a state or local election system was the target." This was only an "initial assessment" but not solid proof. Of course, knowledge of the Russia TTPs would enable a capable agency to imitate Russian operations, and we know that non-Russian actors, including the CIA, have means to spoof an IP address. The report itself mentions what appeared to be a source in the Netherlands manifesting features of Russian actors.

In a table based on state and local sources that could be expected to have less reliable monitoring capabili-



U.S. Senate

Without providing any evidence, without listing any targets, and without naming any foreign actors, the U.S. Senate Intelligence Committee's assessment is that the Russians interfered in the Presidential election of 2016.

ties than the national intelligence agencies, "GRU" attacks are cited on 15 occasions, without explaining why that label is attached or how certain they are of its validity. The report says it has discovered, "some indications the activity might be attributable to the Russian government, particularly the GRU."

The report also indicates that some of the observed sources of attack were apparently monitoring sites having nothing to do with elections in addition to the election-related sites. This implies that some of the reported activity might be part of the general scanning for personal or other information that we know is a constant feature of the internet. If you see a shark in the ocean, it doesn't mean it is there

specifically to eat you.

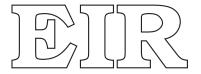
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What Did They Say?

In summary, this report claims, without publicly presenting any supporting evidence, that various entities, possibly including Russian ones and almost certainly including others, have been gaining access to data systems related to the conduct of elections. It is also reported that some data has been extracted from these sites, as has occurred with hundreds or thousands of commercial, governmental, or personal sites. That is the most destructive activity reported. These entities might have the potential to do serious damage to the election process, but they have not done so, nor is there any evidence, after years of observation, that they have attempted to do so. Like the Democratic congressmen questioning Mueller, the report is full of sound bites like "all fifty states," that are totally unsupported by any evidence, that the authors hope will be repeated far and wide.

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