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EIR

From the Managing Editor

We reported last week that the LaRouchePAC "Basement Team" was off and running with the first-ever interactive, 3-D, animated map of the proposed North American Water and Power Alliance (NAWAPA). As you read this week's *Feature*, I think you will realize, if you don't already, just why Lyndon LaRouche insists that this initiative will have such a revolutionary impact if the earth-moving equipment starts up immediately.

Two of the map's developers from the Basement Team, Merv Fansler and Michael Kirsch, joined host Harley Schlanger on The LaRouche Show on Aug. 21, to explain why NAWAPA is much, much more than a "jobs program," even if it is inspired by President Franklin Roosevelt's job-creation programs of the 1930s, among other things.

First of all, LaRouche has taken NAWAPA, the plan developed in 1964 by The Ralph M. Parsons Co., to a much higher conceptual level. He has discussed this in recent issues of *EIR*, and Fansler and Kirsch encapsulate his views here. NAWAPA means that mankind takes control of the Biosphere, not only of North America, but worldwide. The impetus it provides will extend to the Eurasian Land-Bridge, the Bering Strait Tunnel, and similar vital projects. It is also a "space program," a launch pad for the colonization of the Moon and Mars. Most important of all, it will revolutionize the way people think—about infrastructure most immediately, but also about their own role in the universe and in universal history. It will give hope to a planet that is finding that in short supply these days. (See our coverage of the Pakistan floods and U.S. real unemployment, for the Dark Age we face if LaRouche's program does not move forward.)

Fansler and Kirsch emphasize that NAWAPA is not, *cannot* be, some "nice" project that gets written up as a legislative bill and then squashed by Congress: "I can tell everybody right now," said Kirsch, "that we will do this, because we are going to *organize* to get it done." Fansler added, "We have got to move.... We have got to get everybody who is listening, to deploy with this immediately, and just fire away. This is a blitz period. We've got to get it done."

That organizing drive is in high gear, as Nancy Spannaus reports (p. 25). Helga Zepp-LaRouche (p. 18) lays out how the plan will affect Europe, and why Europeans should support it.

Susan Welsh

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Cover This Week

Creative Commons/Gregg M. Erickson

The Grand Coulee Dam, on the Columbia River in Washington State, will be part of the NAWAPA route.

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THE LAROUCHE SHOW

On the Edge of a New Era: LaRouche's Big Idea–NAWAPA

Merv Fansler and Michael Kirsch joined host Harley Schlanger Aug. 21, for a discussion of the work of the Basement Team[1] on Lyndon LaRouche's proposal to transform the Biosphere, and with it, create an economic renaissance throughout the planet, with NAWAPA. The LaRouche Show, an Internet radio program, airs every Saturday afternoon at 1 p.m. Eastern time, and is archived at (www.larouchepub.com/radio).

Harley Schlanger: Good afternoon, and welcome to The LaRouche Show.

We are in the midst of the approximate two-month time period identified by Lyndon LaRouche, back in mid-July, as the time during which we must have a decisive break with the imperialist monetary system of the British Empire, or we will be plunged into a 1923 Weimar-style hyperinflation, which will destroy human civilization for the next several generations.

In the last week, we saw two things happen: One, the confirmation of the accuracy of LaRouche's forecast, with the decision made by the Federal Reserve and the Treasury Department, to go with what is now universally acknowledged as a hyperinflationary policy. That is, they are not wiping out the bad debts, they are not reorganizing the banking system, they are not going with a Glass-Steagall; they are creating funny money in *huge* volumes, and pumping it into the banking system at the expense of the physical economy.

But in response to that, and the sense of urgency in LaRouche's forecast, there was a specific means by which this break can be made, which has been under development. And on today's program, we will be discussing the revolution in the self-identity of man, which emerged from the work done in the Basement, as of last night! I am talking about the broad outline of NAWAPA, the North American Water and Power Alliance, that is, NAWAPA in its true form, not simply as an infrastructure program, or a jobs plan, although it is both, but as it was envisioned by LaRouche, as the means by which mankind self-consciously asserts its authority over the Biosphere, at the same time moving into space.

This project was posted last night on the LaRouchePAC website [www.larouchepac.com], and joining me today, to discuss this, will be two members of the Basement Team who were involved in making this revolution, getting it done on time, and have quite a bit to say about how we are going to succeed, in waging this fight.

So, joining me will be Merv Fansler and Michael

1. See http://larouchepac.com/basement

LPAC-TV

The concept of NAWAPA (the North American Water and Power Alliance), which Lyndon LaRouche and his collaborators in the Basement are developing, is not a simple infrastructure/jobs program, although it is that; it is nothing less than the means by which mankind self-consciously asserts its authority over the Biosphere, at the same time that we are moving into space. This image is taken from the LPAC-TV video, "NAWAPA, Water for Life" (http://larouchepac.com/node/15570).

Kirsch, from the Basement.

Michael, why don't we open with you giving us a sense of what Mr. LaRouche had to say this morning?

Michael Kirsch: Well, he said that we have now done a job, which has given us a chance to save civilization. And that, what you do in strategy, is you choose the impossible, and then you carry that out.

That was the long and short of it. That's the summary of what he said this morning. Because, now, in putting this forward as a concept, which is real, it's a concept that can now move and inspire the United States and the rest of the world, to carry out these types of projects.

Schlanger: What I'd like to do, is start by talking about what was posted, and then, what that demonstrates or shows in terms of the idea—and I mean the *idea*—of NAWAPA.

So, Merv, I know you were very much involved, probably into the wee hours of this morning, in making sure this thing was posted. What is it that we now have on the LaRouchePAC website, on NAWAPA?

Thinking on a Continental Level

Merv Fansler: Well, what we wanted to put together, as just a first attempt to get the concept out there, to start teasing people with it, was to take the NAWAPA project, the North American Water and Power Alliance, which was originally proposed by the Ralph M. Parsons Company back in 1964 (**Figure 1**)—and they had been working on it, I guess, since 1962 or so—they faced the fact that there was no way that you could solve the water crisis. It was apparent from the direction, not just of the United States, but of Mexico and Canada, that there were going to be water demands which were impossible to be met if we were just going to continue to focus on regional solutions, local solutions. That there was no way in which you could conceive of a local solution which would actually mean its successful survival. You might be able to ensure momentary survival for your town or city for another five to ten years, for each project, but there was no way that you could get a total vision of the project, there was no way that you could resolve the fundamental issues, until you started thinking on a

FIGURE 1

Ralph M. Parsons Company

continental level. And so they proposed the North American Water and Power Alliance, to bring down water from the Northwest, a huge Pacific runoff area, where Alaska, and the Yukon and British Columbia territories of Canada lie, where this water precipitation occurs.

So, what we did, is, we took their project, and dug through all of their maps, everything they had on it that we could find, and we made a 3-D interactive map [www.larouchepac.com/nawapa]; there are narrated tours, that walk you through some of the principal functionality of the project, and sort of pose some of the fundamental problems that we will probably discuss some more today.

And then, also, it's fully interactive, so people can explore it. I mean, the magnitude of this thing, the reason why you need the 3-D interactive map, is because the NAWAPA project itself is not something you can perceive. If you try to perceive it, you would have to go to space, because that's the only way you could see the entire thing.

Schlanger: Now, Merv, when you say that "We went back to the Parsons plan," I know that in the early '60s, there was a video that they had produced, there were a number of papers, there was even a study commissioned by the Congress. And this was picked back up in the late '70s, early '80s by Lyndon LaRouche. In fact, we had a major conference here in Houston, Texas, I believe in 1981, which included former Sen. Frank Moss [D-Utah], who was one of the sponsors of the Congressional side of it. But what we did, was, we had to go back to these old documents, back to the last century, so to speak. There has not been much done on this in recent years, has there?

Fansler: No, not at all. Essentially what happened was, the LaRouche organization in the 1970s and '80s, was going directly against the no-growth, zero-technology movement, that was saying, "We are going to exhaust all of our resources in 20 years; everybody's going to be wiped out. We have to stop growing technologically." And what happened, immediately, as NAWAPA was getting this motion that you were discussing in the Congress, and studies were being done, was that a lot of the key territories that were supposed to be developed, that were going to be completely transformed, they were going to be the crucial, sort of pivotal points of the project, a lot of funding went into closing all these things off, sort of Teddy Roosevelt-style, and saying, "No, this river—it's illegal for the government now to even do a feasibility study of building a dam there." You can't even bring a motor anywhere near these areas. It's like a zero-technology law, that was put into place in a lot of these areas. And a lot of this was funded through different British networks, like the World Wildlife Fund, and things like that. They were going in to stop the U.S. from developing.

It's striking, that when we went back to the reports, and looked at the projections of where they say the United States should be, in terms of energy consumption, water consumption, the state of technology, and the magnitude of our economy—where it should be, if we would have continued on the same path that that Kennedy-era—that trajectory, where it was headed, going to the Moon, compared to where we should be, *we have collapsed!*

The only reason we exist today, [without even more devastating water shortages] is because we kept destroying all the industries that used water. And there are tremendous water crises all over the place.

So you look at where we were going, and it's sort of striking, because there was a sense that we were going to continue to develop, and you look at where we are today, and it's nowhere near where the projections were.

The Purpose of the Nation

Schlanger: Well, this is the same thing, if you go back to the idea that Lincoln and his allies had, coming out of the Civil War, where they projected the Transcontinental Railroad would allow for massive development of the Western States, that this would be the true realization of a continental nation. And, of course, this was why Teddy Roosevelt was brought in, to destroy the Lincoln revival of the American System, economically and also, in terms of that continent-wide development. So we have seen this kind of thing before.

And now, Michael, I would like your thoughts on the difference that is behind the thinking of the way LaRouche is approaching it, and the otherwise commendable, but still somewhat limited thinking of the people during the Kennedy era, who had an idea of the destiny of going into space, and who definitely thought big—but what is the difference that LaRouche has brought to this?

Kirsch: Well, the difference is that mankind does not objectively observe the wildlife in the different

areas of the country, of the continent; but mankind is part of the whole process of continuing what the Biosphere has done for an estimated 4 billion years, of shaping whole continents, and continuing that process in a way in which now, what you have a sense of, is that you are controlling and regulating a system.

And now, the things that are happening within that system, are happening with an ability to carry out, essentially, experiments, in which the principle of cognition can see what's happening on the Biosphere and the abiotic levels, because you are creating a whole continental management system. Let's say, in this case, we are plugging ourselves into the water cycle; but now, we are creating this regulated environment, in which the things which naturally would objectively be observed, as by a person going out in the woods—well, now, you are creating that system.

U.S. Bureau of Reclamation

As NAWAPA was under discussion in the 1960s, including in the U.S. Congress, the British-spawned "environmentalist" movement geared up to stop it. Many of the key areas that were targetted for development were ruled off-limits; existing infrastructure was demolished. Much of it was funded through British networks, like Prince Philip's World Wildlife Fund: "They were going in to stop the U.S. from developing." Shown: dismantling of the Savage Rapids Dam, Oregon, June 2009.

And so, how that system operates, in terms of the weather, in terms of migration patterns of animals, in terms of the different resources that exist in the northern part of the Earth, in Canada and Russia—we are looking at all of those things now, existing within the bounds of the cognitive organization.

And so, it's a real sense that we are not accidentally having to abide by any one local region. And that is really what the point of the nation is. One of the people who wrote about it, during the time of the TVA, was confronted with the fact that the Supreme Court would find that watersheds are illegal, because watersheds naturally cross state lines. And he was pointing out, that there is nothing in Constitution, that took into account this water basin management. But instead, what he was saying, which comes up in the original TVA, was the realization that this type of regional management is the purpose of the nation; that you are organizing things that cross state lines, for an overall principle, an upshift of the human species.

And this was just referenced by Merv and by you, that we have done these things, and then we get set back. We do these things, we get set back.

Schlanger: What you are bringing up, I think, is a profound point, and this is something that is not just implicit, but absolutely explicit, in what LaRouche is talking about, which is the application of the scientific ideas of Vladimir Vernadsky. And I would like to know, if you think there was any indication, in either the Franklin Roosevelt or the Kennedy era, that people were guided by this. Or, did they just have a certain kind of embedded American instinct? And if that is all they had, we now actually are entering an era, where there is a willful, voluntary decision by man, to transform the Biosphere. Would that be accurate, from the work that you are doing, to say that is a difference?

Thinking of the Earth in Space

Kirsch: I think it definitely is there. There are people that we are looking into now, that were looking at this, in terms of managing the entire continent and its resources, in the TVA, and making the case that, on the log books, yeah, it was a question of navigation canals—making sure they didn't flood—therefore, you've got to realize that you are going to have to have dams; you are going to do all these things that go along with this. And in the log book, all you say is, you are building a navigation canal. But there were people who were realizing what they were doing, as they were setting up the whole system.

But yes, the difference here is, really what Lyndon LaRouche is putting forward: Is that when you are thinking of NAWAPA, you are really thinking of the Earth in space. And, as Merv said, you can't really even sense-perceptually see this thing; there is no way, and so, it is a space program, because we are talking about the kind of scale we are going to have to be thinking about, in managing Mars.

Initially, you are going to be regulating the use of chlorophyll, and you extend that to how you are going to change weather patterns, based on the fact that this water is going to be multiplied in its use, which is something that people had a very good sense of in the TVA, as well. But now, you are having a sense that, we want to start looking at weather, as something that mankind itself is regulating, and controlling all the way out to Mars: taking the Earth's magnetosphere, the Earth's interaction with cosmic radiation.

And what you have down at NOAA [National Oceanic and Atmospheric Administration], looking at space weather: We want to look, not at just us observing space weather, but we want to look at being able to control the effects of the Sun, and the Earth's orbit. Not necessarily changing the Sun or the Earth's orbit, but controlling the effects, from the Earth all the way out to Mars, the magnetic fields involved, and the weather patterns involved, the whole water cycle, and plants, and life—because we want to manage and organize the whole Solar System.

So, we start here, with the continent, and you look at NAWAPA, you go through these tours, look at this interactive map. You can pause them at any time, and you can zoom in, move around, and restart the tour. And just really go step by step through this thing. We will have more material as we add to this, but you start to realize what it means to start thinking about not just this dam and this river, my local industry here, but what it is, this view of how the whole system can be tapped into.

And that is really what you are saying: That is where Vernadsky becomes very important. You start to look at this thing, from the lawful scientific view, versus, local projects, water rights, regional, state, issues.

Schlanger: Now, just to follow up with what Michael was saying, Merv, about three weeks ago, when we started moving more aggressively into this perspective, Cody Jones, who is one of your colleagues, was on this program, and he described this as "an identity shift for mankind." And in a sense, I would assume this identity shift includes the idea of the extraterrestrial imperative, as Michael was just discussing it.

How do you see this, Merv? When you think about why people should be excited about this, what is it we are saying about this time in history: You have a crisis, but you can't just do crisis-management, or try to dig our way out of the crisis, but need something totally new.

Is that a useful way to look at it?

Fansler: Definitely. To step back and to look the question in a sort of a broad way, mankind, we develop ideas about the nature of the universe, not just individually, but as how we, as man, interface and interact with the universe in which we are situated. And we develop conceptions about what our role is in that. And, through the history of mankind, it's a lot like a child: How does a child have a sense of another person, or a principle, or the things that the child needs? The child knows that he or she needs food, or things like this, but when you are a young child, you think of all these things as objects, which you need. But, the larger conception of the process which makes everything possible, and the fact that these things that you need are actually taking you somewhere: When you are a child, and you are going to school, you know, not everybody's experience in school is the greatest—at first you don't really get a sense that you are going somewhere, to do something, that you are here for a purpose and that you are developing yourself, to actually contribute something to future generations.

And it's true, not just on that sort of personal, individualistic level, but it's true on the level of mankind, of humanity as a whole, that when you have these people


LPAC-TV

LPAC-TV

The realization of NAWAPA will both require, and provoke a human "identity-shift," away from the belief in the cult of money, toward a scientific outlook, that takes Earthbound mankind into the Solar System and beyond. Shown: Basement scientists Merv Fansler (left) and Michael Kirsch.

who are discussing NAWAPA, or things like this, they are beginning to have concepts of, "Well, these are important things, that we need them." But it still hasn't approached a level of self-consciousness about the principles which are determining the development of the universe, and the fact that we actually manage them.

And I think that's where the Vernadsky conception comes in: That Vernadsky is saying, "Look, all we know about the universe is that it changes, and it's constantly changing. There might be cycles, like seasonal cycles, or the Earth going around the Sun, or your heart beating. But every time any of those sub-cycles occurs, the universe has developed, it's moving somewhere, it's going somewhere." And Vernadsky's conception was that you could see there were, clearly, three well-defined phase-spaces in the universe, that are interacting, that comprise that creativity, that development of the universe. That it's not just some cyclical process, but it's actually going somewhere.

And I think what the NAWAPA is, in LaRouche's mind, and what we are getting at now, is to begin to communicate to people, that mankind is at a point, where it must begin to have a self-conscious conception of developing the universe. And that's why it's a space program: Because we live in a Solar System, which we know has been developing, and that created the Earth; and a Biosphere evolved on that—it's sort of like our womb. But now it's time for us to begin to expand that development process out into the rest of the Solar System. And there is a lawful principle involved, with us actually becoming conscious of that.

An Identity-Shift for Mankind

Schlanger: Now, this is an important point that I want to get at: Because a lot of our listeners are out there, saying, "Well, I kinda like NAWAPA. It sounds like a good idea. I sort of get what you are saying; but shouldn't we just go out and sell this as a jobs program, because, under Obama, we've seen a collapse of employment"—actually under the last 40 years, we've seen a collapse of productive employment. People who studied to become scientists and engineers are now finding no work: We are shutting down the space program. Many of these construction companies and firms that hire hydraulic engineers, they've had massive cutbacks and bankruptcies and so on; so wouldn't it be best, to just be practical, and sell it as a jobs program, as something that will maybe turn around the collapse?

But that is not the way we are approaching it.

Fansler: No, not at all. That is sort of like the infantile way to think about these effects. That people want to turn jobs into an actual, substantial object, rather than just being an effect in a process. And until we can have this much higher, top-down conception—you know, a job is a singularity in a process, it is not an object. And a lot of people just want to latch on to these things, and say, "We need these objects," or, "I need money," you know, because money represents for people, the means by which they can get all the "things" that they need, to eat, to have a home to live in, etc.

So, money represents an object, and they lose the conception of the actual process that's involved in the creation of an economy in which they can exist.

Schlanger: And I think this is the identity shift, that we are actually talking about. Michael, you and I had a discussion some time ago, about this question of, are some people more oriented toward a scientific outlook than others? Can you really move a population to start thinking more in terms of science and discovery? How do you do that?

Kirsch: Well, this is what the United States was intended to be, because this is what the freedom of self-government, is about: It's never been about this silly, "I just want to have the right to make money," or something. And the United States, if you look at every time we've had anybody who has held to the Constitution, and the people who formed the Constitution, that's what we've been doing. The initial Army Corps of Engineers was to build canals, rivers, manage the territory; John Quincy Adams started the railroad development, started the different mining industries in the 1820s and 1830s.

And then we carried that forward, and we finally got free of a bunch of muck, and we finally carried that out with the Transcontinental Railroad. And this was the fight in Europe, with Leibniz earlier, before that; and even before, in getting technology applied throughout a region.

But without the sovereign nation-state, that wasn't a feasible thing, because this struggle, this fight of mankind, is typified by the Zeus versus Prometheus concept.

But this is the United States: We are not just trying to fix some bridges, we are not just trying repair broken infrastructure or something, and putting people to work. And people who worked in the Franklin Roosevelt Administration had a sense of this, as well. I mean, there is a purpose and intention for why, what the next step is that you want to do, as you are looking at the whole continent.

I think people have been demoralized, and they may want to latch onto anything.

What we are doing here, is slightly, if not entirely, different: What we are doing here, now, is, we want to connect, to bridge the gap that has been created by the Baby-Boomer generation, since 1968 to the present. And we are going to reach back to the skilled and engineering workforce that is laid off, or too old to work, and we are going to tap into that knowledge, with now a reinvigorated sense, and a unique sense of this arc of scientific and artistic development, all the way, which Lyndon LaRouche has built with this political movement, since the late '60s.

And then, then we are going to connect the new generation to the past, with an initial CCC [Civilian Conservation Corps] effort, total transformation of the economy, but, yes, for this much bigger purpose.

But I would just stress to people who are listening: We are going to organize this, a nationwide force, to put this thing as a *real* concept, and I stress that, on every level that we are talking about.

Exploring the NAWAPA Map

Schlanger: I think, Michael, what you are saying, is that everyone who is listening, should not just be *consuming* this, and saying, "Oh, that sounds interesting." But the reason the project was done, to put it up on the website, was to give you the means by which *you*, the listener, can take this revolutionary conception from LaRouche, and organize people in your neighborhood, in your community, in your barbecue club, to get these ideas out.

So, what I would like to do, Merv, if you can take us through a little bit of what people will find when they go to the website: what they need to know when they first log on. What are they going to see, and how do they use it?

Fansler: Well, when you get to the website, I think we have it right now, like the top icon in the center on our website, is a link to the interactive map, and you need certain operating system requirements, if you have Windows or Macintosh; and then, you might need to download the plug-in, to be able to view the map in your browser. But then, once you have done that, and it loads up, then, first, you have a picture of the Earth, and you can use your mouse to turn it around, and zoom in, and see all the development.

Then, below that, you will have a list of four tours that we have put together, and you can just click on one of those. And we recommend just watching the four in succession. If there's a part that's not clear, you can pause it, or you can move back, and listen to it again. And when you pause the tour, you can actually go, and look around, and zoom in on a dam, if it wasn't clear. And you can even click on some of the dams, and it will give you more specific information about what the size of it is going to be; or, if it's a hydroelectric dam, the amount of power it might be producing; or if it's a lift, the amount of power that's going to be required to pump up the water to a certain extent.

But if you follow the tour through, there is first an overview, that gives you a general sense of what the

NAWAPA program is; and then, there are three tours, that will bring you through: first, the collection area, which is Alaska and the western third of Canada, in the Yukon Territory and British Columbia; and then down into what's called "the transfer area," coming out of the Rocky Mountain Trench, which is in the "collection area"—it's in British Columbia; we will have a transfer area along Montana, Idaho, Washington, in the Northwest; they are border states with Canada, the water will be transferred into those states, and then brought down. In Idaho and Montana is the brunt of the energy consumption for the project. Because there, we are going to lift the water: To get it out of this Columbia River basin, you have to lift the water thousands of feet, literally, to bring it over and out of that river basin, and into the southern river basins, and the Pacific river basin; so, that's the transfer section. There is a video that will go through the transfer section and how that's accomplished.

And then a third video goes through the amazing distribution section. It's just phenomenal to think about the level of irrigated land we would have, once the NAWAPA project has reached full capacity. It's a decades-long project to actually get to full capacity. But once you reach that, the amount of irrigated land that you would create out of arid and semi-arid regions, currently, would be comparable to a little more than half the entire size of California. It's huge, it's a phenomenal amount of land that you would create, to the scale that it's going to transform the Biosphere as a whole.

The Effect on the Biosphere

Schlanger: What's the effect on the Biosphere, of this scale of irrigation and expansion of water? What's that going to do to the planet?

Kirsch: Well, it's going to change it into a Noösphere, I think. Because, one reference in the Distribution Tour that one of our associates made, was, "You know, these rivers here are not doing much by themselves. You have large rivers running through the middle of deserts and they don't seem to be very active." But, in a sense, it is going to be turning the whole Biosphere into a Noösphere, because it's all a regulated environment. But this time, it's going to be for a much bigger purpose.

But I think what you are asking is some of the ratios and amounts of water we are bringing into the area. It's 70 million acre-feet—through the distribution section is a total of 110 million acre-feet that's available for distribution as a whole, but 70 million acre-feet go down in there. And as Merv just said, that's half of the area of California that becomes, now, green. And so, people can find in an article, still featured on the LaRouchePAC website, "NAWAPA from the Standpoint of Biospheric Development" (follow this link), what we are doing is, plugging ourselves into this normal water cycle, which happens on both the East and West coasts of the Atlantic and Pacific Ocean. You know, the law of nature, "What goes up, must come down," and it is going to come down in the form of rain, and freshwater. But if you don't have dams and regulation systems for erosion, you are going to get flooding, you are going to have silt in your reservoirs and canals. And so, what we are tapping into, is all of that, now, as basically utilizing that resource, which is otherwise just either flooding through this desert, which gets flooded once in a while, or running off into the ocean.

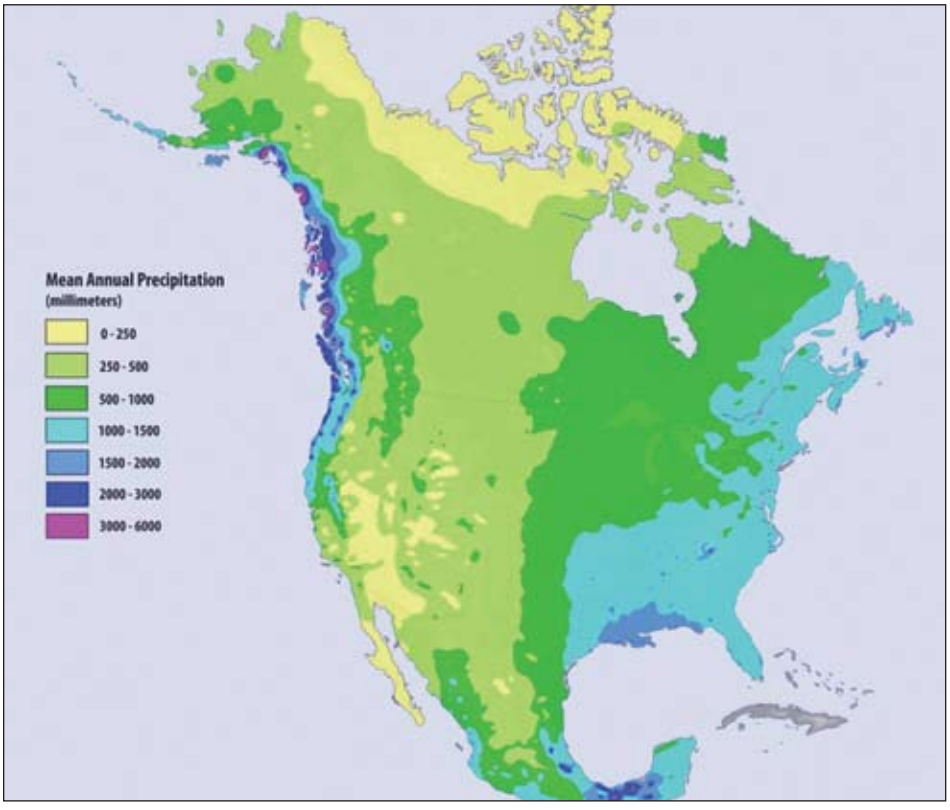
And it's going to have effects, which, really, we are not going to know, until we figure them out. There is some analysis that can be done, and we are going to be creating, as we go here, in discussions with people out there—maybe some of you listening, and other people around the country—exactly what kind of effect this is going to have.

First we have got this map; but what we really want to get into dialogue with people about, across the country, is exactly how this transformation is going to be occurring, in terms of where the rails are going to be laid; where the industries to build this stuff are going to be set up; where the cities to support those industries are going to set up; where we are going to need nuclear power. For all the agriculture, we are going to need lots of power, for all the fertilizer and related things. And exactly how this is going to begin changing the water cycle—we can also map that out.

All of this, and the specifics of the transformation, and then being able to look at it as a system, as we have been studying with the concept of the tensor, and develop a real, more "science of economy-conscious understanding" of what transformation will take place, rather than, it's just sort of "happening" to everybody. That is something we are going to be doing.

Schlanger: I think we can say, from what you just described, that the science of the thing is either relatively predictable, or it will create the opportunity for us to make new hypotheses to solve problems; but it is doable.

FIGURE 2



LPAC-TV

NAWAPA will bring some 70 million acre-feet of water into the parched Western region of the United States, turning large desert areas of California, Nevada, Arizona, etc., green.

The bigger question then comes up, for a lot of Americans, who have been crushed by this cynical Baby-Boomer culture, who say, "It will never happen. We'll never do it. Congress will never vote the funds"—and I think this is, again, where we see something very interesting, from the kind of political strategy outlined by LaRouche: Namely, that to get this, we are going to have to remove President Obama. Because he represents, in a sense, the force of the British Empire, that is doing everything possible to make sure the United States has no way out of this crisis.

Kirsch: You know, what LaRouche said today, is exactly that: that the only way you are going to get Obama out, is by having this alternative, an alternative that is not simply pie-in-the-sky, but is every step of the way. And that is why, in the coming weeks, we want to have a clear, discussion with people of how this is going to work—that we want to have this thing, as such a real and thought-through idea, that people are not going to tolerate this clown being in there. We are forecasting the recovery here.

We have to essentially echo Roosevelt and the Vernadsky Institute—that this is going to be a unified program, and we are orchestrating this unified program. And I can tell everybody right now, that we will do this, because we are going to organize it to be done. We are not just putting a bill in, and hoping it gets passed.

'Creative Destruction'

Schlanger: We have an e-mail from a listener who asks about "creative destruction," i.e., the fact that the fascist economist Joseph Schumpeter[2]—and you can call him a fascist because these were the ideas that were part of the Nazi outlook—the idea that you have to destroy an economy to have innovation—that people like Alan Greenspan, Larry Summers—all the top people who have shaped the current economic climate in the United States, represent "creative destruction."

Now, in a certain sense, someone might argue, if they are were literalist, "Well, don't you have to create new ideas, which means get rid of the old ideas?"

But Merv, I'd like you to comment about what actually is this process. Because we were talking earlier, about how what we are reviving in the idea of a nation are ideas that go back to Cusa, and Kepler, and Leibniz. And in a sense the difference between that development on the backs of those kinds of geniuses, as opposed to this idea of "creative destruction."

Fansler: I think the real difference in thought, is, the only thing we need to destroy is the idea of creative destruction! Because, it's at the heart of the imperialistic mindset, and it's what has driven and created the basis for imperialism to exist and expand and control

2. See Jeffrey Steinberg et al., "Nietzsche, Sombart, Schumpeter, and Fascism: Why Obama Wears the Moustache," *EIR*, Aug. 27, 2010.

the way that people think. And it's done by these conceptions: Force people to not think about what really is the nature of man, and how they should be thinking. It is not in this Apollonian/Dionysian creative destruction, but instead, it's a conception of Prometheus against Zeus: Zeus in the form of the oligarchy, and the Apollo Dionysian cult, that was deployed to destroy the concept that had developed by the most noble Greek thinkers, who had a concept of man as immortal, of man as discovering new principles, and bringing new principles under their control.

LPAC-TV

How do we get Obama out? "Organize for NAWAPA!" Here, LaRouche Democrat Kesha Rogers, the Democratic Congressional candidate in the 22nd C.D. of Texas (Houston area), discusses NAWAPA with constituents.

Schlanger: It's the idea that immortality comes from the creative mind, not from a birthline.

Fansler: Yes, exactly.

Schlanger: And I would also say that Zeus was the first major practitioner of creative destruction.

Kirsch: The other thing, is that, it's just scientifically incompetent. It's just a bunch of schmucks who are incompetent and controlled politically, top-down. But all the arguments that any kind of economy begins with fixed cycles, money, deterministic ideas—it's all frankly, just scientifically refutable and absurd. And all the real scientists in history, their work has refuted the Sarpian/Newtonian model, and everything that is based on it.

Schlanger: Michael, that brings us to this other point, if you look at the two major arguments against NAWAPA. One, of course, we have already exposed as the phony environmentalism; but you were just now talking about the other one, "Well, we can't afford it, we don't have enough money, we can't do it." And of course, this is coming from people who just spent $24 trillion to bail out a bunch of swindlers who ran up the bill against the American people on collateralized debt obligations and things of that sort.

Kirsch: First, let me just say—I will come back to that—but anybody who presents any of this stuff, just tell them to shove it. And tell them, to present a scientifically valid study to show that you can't do this.

But secondly, the fact that we *didn't* do it [NAWAPA] in 1964—if you want to talk about it in this way!—has already cost probably four or five times the initial $100 million, and the problems of the water crisis, agriculture, and everything else. So that is really there; that is all you have to say to that.

But, the other thing is, yes, money is not the measure of anything, nor is there a finite amount of it. It's something that's controlled through the will of governments. So, when you think about this from the standpoint of real, competent science, which starts from the fact that our economy is about human economy, and the humans and their minds that are in sovereign economies, then you just start from there. All this other stuff is politically motivated garbage, and if somebody wants to put it forward, you just tell them to look at LaRouche's record, and ask them to put forward a plan that would say why they are proposing what they are proposing, and I will look it over and get back to them.

Getting Obama Out

Schlanger: We have a couple of e-mails here, asking, "All right, so how do we get Obama out?" I think both of you have addressed this, but you could think one more time about the person who is sitting there saying, "It sounds good. It sounds good; but how do we get Obama out?" What would either of you say?

Fansler: I would say: "Organize for NAWAPA!" It's only when you get a self-conscious conception, in the individuals in society, that you are going to have a society that can actually think and function. And once

you organize for that, then the other things will fall into place. And the political goons, they go along with whatever. There are people who have inclinations to do the right thing, but a lot of these people are just sellouts. And they are going to do whatever is moving the population. And so, the task now, is to create this concept, to invigorate this concept in people's minds.

Schlanger: Let me just add: LaRouche has made the point over and over and over: that Obama is heartily disliked, by the vast majority of the population. They may not always say that publicly, but we see it show up in polls, people thinking the country is going in the wrong direction and so on. So, I think the question is a somewhat false question, "How do we get Obama out?" Because it's largely coming from people sitting on the sidelines, waiting for something to happen.

I'll give you an informal indication, anecdote about this: Obama is now on his 37th vacation of the last 38 days, he's up in Martha's Vineyard. And last year when he was there, they couldn't get enough T-shirts to sell, because everyone wanted T-shirts with pictures of Obama, saying, "I vacationed with Obama." This year, they stocked the stores with them again—and no one is buying them! Do you know what is, by far, the most popular T-shirt being sold in Martha's Vineyard, right now? A T-shirt with a picture of George W. Bush with a characteristic shit-eating grin on his face, that says, "Miss me, yet?"

Fansler: Omigod!

Schlanger: Now, that tells you something!

Fansler: If people don't have the self-dignity yet, to say that Obama has to go, look at this NAWAPA thing, and you realize that you deserve better than a British agent who has done everything to sabotage everything for the national interest since he has been in there.

Schlanger: And I think that's all we have to say on that topic: That people with that kind of self-dignity have to have enough confidence in their ability to think and their ability to communicate ideas, that you are not afraid to go out and to organize people to see this is an alternative.

We just have about two minutes to go. Merv, do you want to say something to summarize the importance of what we have done, and what people should do?

Fansler: I would just encourage people: We have got to move. You know, LaRouche has been really kicking our butts to get this thing moving—and we are operating on a 24 hours a day/7 days a week basis, pretty much right now. And we have got to get everybody that we can, everybody who is listening, to deploy with this immediately, and just fire away. This is a blitz period. We've got to get it done.

Kirsch: And we are declaring World War III with this.

Schlanger: I think it's obvious to anybody who is paying attention, that the decisions made in the last couple of weeks, by the Treasury Department, the Federal Reserve, the European Central Bank—that they are pushing, exactly as LaRouche warned, into a Weimar-style hyperinflation. And it's sort of like, you are sitting in a room filled with gasoline, and you are hoping that no one is going to light a match. And the fact that no one has lit a match yet, you say, "Well, see, there's no hyperinflation. Everything's okay." And I think this is the image people have to have of their future: When you have a situation like that, you have to move aggressively, to get the hell out of that room, and to start creating an alternative.

Bush-Obama 'Decade of Hell' Brings Mass Unemployment

by Paul Gallagher

Aug. 29—The drastic real shrinkage of the American workforce in the past decade, which is obscured by all of the various "unemployment rates" popularly discussed, is the clearest sign that the U.S. economy has gone into terminal collapse, and has to be rebuilt anew, starting immediately, junking 40 years of British-inspired deindustrialization and globalization policies. The constant debates over "What is the real unemployment rate?" and "Is it rising or falling?" miss the clear physical-economic reality which becomes obvious when looking at the changes in the economic activity (inactivity!) of the whole working-age American population.

Creative Commons/Wordpress

In the 1990s, 80% of working age (16-65) Americans were counted in the workforce; under the Bush-Obama disastrous decade, only 30% were; and one in six of that 30% are now officially unemployed, or forced to work part-time. Shown: an unemployment line in California.

After 40 years without investment in the new economic infrastructure of the 20th or 21st centuries, the last ten years' final U.S. employment breakdown is the driver of the mass public anger focussed at Barack Obama's failed Presidency.

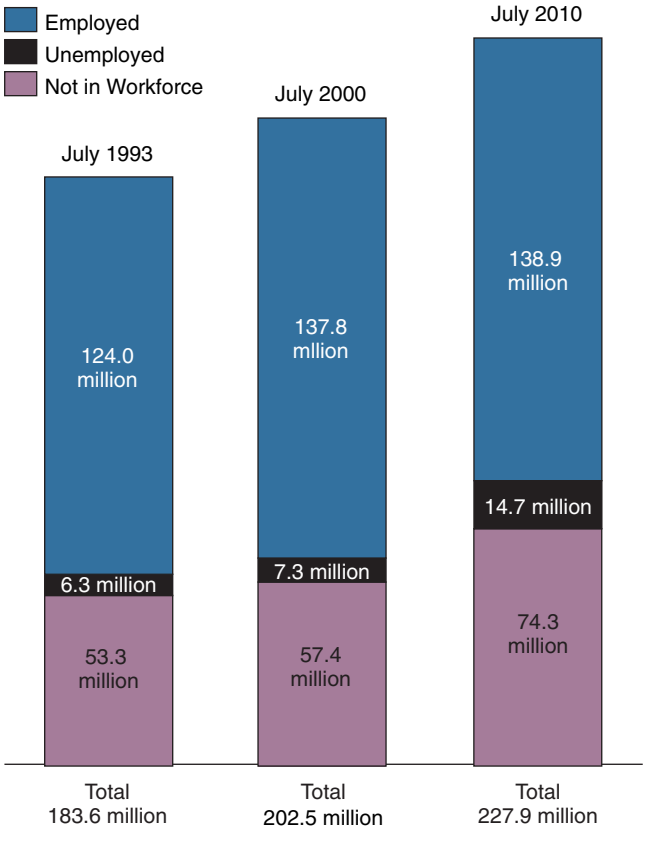
The Obama Administration, in the person of Vice President Joe Biden, was out again on Aug. 24, with the discredited claim to have "created or saved" 1-2 million jobs, while the economy crashed on Obama's watch. Leaving aside the well-known inflation and fraud in these claims: Any Presidency fighting for economic recovery—necessarily a post-Obama Presidency, following his resignation—will have to create infrastructure-building employment on the scale of *tens of millions of jobs*, directly and indirectly, during the next decade. And that has to start immediately.

As late as the decade of the 1990s, about 80% of those U.S. civilian, non-institutionalized residents who entered the working age range of 16-65 years, or immigrated into it, joined and stayed in the workforce. (Being "in the workforce" essentially means that besides being capable of working, a person is employed or immediately seeking work.) But in the Bush-Obama decade now ending, only 30% fit that description, and

FIGURE 1

Change in Work Status of Working-Age Population

(Civilian, Non-Institutionalized Population, Ages 16-65)

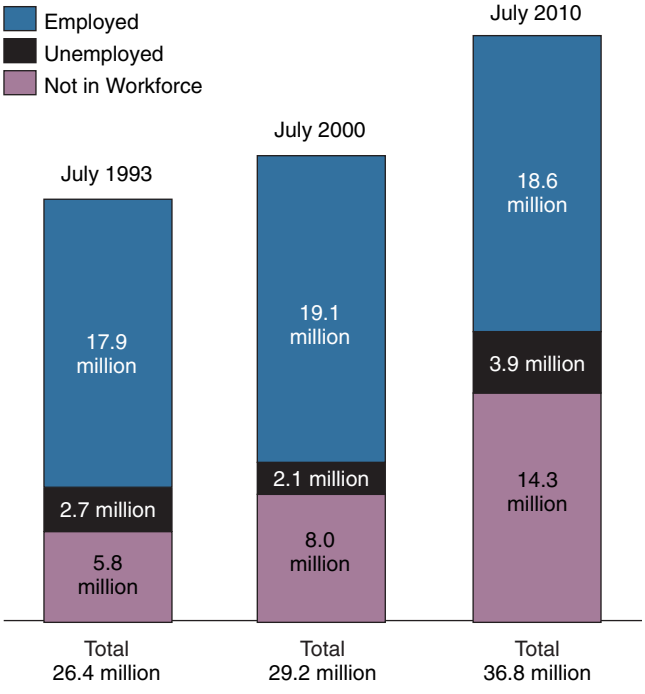


Source: Community Employment Surveys, U.S. Dept. of Labor.

FIGURE 2

Change in Work Status of 16-24-Year-Olds

(Civilian, Non-Institutionalized Population)



Source: Community Employment Surveys, U.S. Dept. of Labor.

one in six of that 30% is now officially unemployed, or forced to work only part-time. Obviously, the great majority of the other 70%, some 17.5 million new working-age Americans, since 2000, did not stay out of the workforce by choice. The thorough economic collapse closed the door to employment against them, or booted them out, usually after six months to two years or more of unemployment and inability to find work. Those 17 million are the underwater part of the iceberg of unemployment, beyond the 23 million or so currently officially unemployed and underemployed.

The situation of the working-age population as a whole, tells us that the real "disappeared employment" in the collapsed U.S. economy, is in the range of 35-40 million and growing, relative to what it must be—and will be, starting with a new President, a Glass-Steagall credit system, and immediately beginning to transform our entire economic infrastructure around the North American Water and Power Alliance (NAWAPA) program. No tinkering with a "manufacturing policy" or "another stimulus" can turn the ship now—the whole physical-economic system of employment, that was the legacy from President Franklin D. Roosevelt's great mobilizations, through President John F. Kennedy's space and industrial policies, has been brought to complete collapse. Given that the size of the American workforce now is only about 153 million, compare it to the 35-40 million missing and disappeared unemployment: What you are looking at is the drastic level of the Great Depression, faced by FDR at his first inauguration.

Speaking on Aug. 28 of the mobilization to get Obama out and start building NAWAPA, Lyndon LaRouche said, "I don't think there's going to be much unemployment in the United States, once this starts. There's plenty of work to be done! And if we get 4 million people back in the labor force—in the *productive* labor force; not just employed, but productive—if we

EIRNS/Stuart Lewis

As older workers stay in the workforce, because their pensions and retirement incomes have evaporated, unemployment among younger workers (16-24 year-olds) has soared. Here, a student job fair in Leesburg, Va., April 2010.

get to that level, we will overcome the margin of failure in the U.S. economy now."

The American people, LaRouche added, "don't want to go back to this system under Obama and George W. Bush, Jr.! Who wants that decade? What a mess that was: Ten years of Hell!"

A Picture of Desolation

During that hellish decade (July 2000-July 2010), the total U.S. civilian, non-institutionalized population between 16 and 65 increased by 24 million, reaching just under 228 million. But the total number *not employed* increased by 23 million! Additionally, the number only marginally employed—in current official statistics, that can mean as little as one hour's work per week—increased by 5 million. So the number not employed in a full-time job *increased by 28 million in that decade*, significantly more than the total growth in the potential workforce.

The ratio of that working-age population which is employed, dropped from 64.5% to 58.4%; and the number not in the labor force increased by 17 million. There are always some millions of people not in the labor force for good reasons: The challenge here is the huge increase in the total number, an increase equal to nearly three-fourths of the whole increase in the working-age, employable population. And the other one-fourth largely became officially unemployed.

In the same hellish decade, the shift away from production, and productive employment, turned drastic: 6.55 million productive jobs disappeared (a 25% loss), and 5.45 million service jobs were added in the economy.

During the past three years, July 2007-July 2010, the collapse of the workforce turned into complete desolation: Against a growth of 5 million in the civilian working-age, non-institutionalized population, employment dropped by 8.5 million and the number of people out of the labor force rose by 10 million; the employment-to-population ratio plunged from 63.2% to the current 58.4% in just three years. Had those 10 million not been driven out of the workforce, even "official" unemployment reported every month would be high in the double digits right now.

Worst for the Youngest

Among the youngest cohort in the working-age population, 16-24, since 2000, their numbers have grown by 6.6 million; and their numbers out of the workforce have grown by 6.5 million: They simply have not entered the labor force. This has accelerated since 2007, and is still accelerating now, as experienced workers in their late 50s and 60s who might have retired, do not retire due to impoverishment, workers 20-24 are preferentially laid off, and teenagers have no chance of finding work.

Among teenagers 16-19, the employment shutdown is more dramatic. Their employment ratio was 53.5% in July 1993; 54.5% in July 2000; as of July 2010 it is 31.3%. Their numbers have increased by 3.5 million and their employment has dropped by 1.8 million. In 2000, about 36% of teenagers were not in the labor force; but in 2010, about 60% are not in the labor force.

This Summer, the share of potential workers 16-24 years of age who were employed went to 48.9% in July; this should always be the highest employment month for the youngest cohort of the working-age population,

but this year it is the lowest on records going back to 1948. The labor force participation rate for all youth—the proportion of the 16-24-year-olds working or looking for work—was 60.5% in July, the lowest July rate on record. It was down 2.5% from a year earlier; but in July 1990, that labor force participation was 77.5%, and in July 2000, it was still 75.6%.

The collapse has forced many older workers into unemployment, and then down into lower-wage and lower-skill jobs, shutting the door more firmly against young workers. From 2007 to 2009, there were 6.9 million Americans who lost jobs they had had for more than five years, because the work disappeared (they were not fired or temporarily laid off, and did not voluntarily leave). As of January 2010, only 2.9 million of these 6.9 million had found new employment. Those 2.9 million had suffered an average wage/salary loss of 20% in the new job. They were preponderantly either skilled auto/machine-tool workers, construction workers and engineers, other engineers, computer or software technicians, or financial sector business administration employees.

Two reports in the week of Aug. 23 anecdotally show the process. A San Juan, Puerto Rico job fair drew several thousand applicants, although the companies represented were all retailers like WalMart, call centers, and fast food chains. The job-loser veterans of employment in factories, and in all branches of government, came looking for low-end retail work. And a Southfield, Mich. job fair for the "over-50" drew 5,000 people looking for "anything."

The main relevant national jobs-training program for younger veterans, "Helmets to Hardhats," involves all of the construction trades unions, and is funded by both the Department of Defense and the "stimulus" act. But it is failing due to massive unemployent: In six years, training more than 200,000 Gulf War-era veterans, the total number of successful job placements may not have been over 15,000. Male veterans 18-24 have an official unemployment rate of 20.8%.

This, like other job training programs, is currently crushed by the collapse; but it can immediately succeed under the approach of LaRouche's NAWAPA, and with the Army Corps of Engineers in charge.

"There is no need to be demoralized about the huge numbers of unemployment. Every time you take a percentile away from unemployment, you expand the economy," LaRouche said today. "That's our approach."

Global Development or Social Explosion?

by Helga Zepp-LaRouche

Aug. 28—There are currently two parallel processes taking place in the world, which are literally deciding the "to be, or not to be" question for most of humanity. On the positive side, the process of organizing for the huge North American Water and Power Alliance (NAWAPA) program, which would cover Canada, the U.S.A., and Mexico, has sparked the imagination of thousands of engineers and technical experts, but also countless unemployed, poor, and homeless people: Suddenly, the United States has a chance for a future again! In many other countries too, interest has been generated in carrying out such projects. Given the rapidly escalating collapse of the global economy, there is increasing readiness to finally fight for the many urgently needed infrastructure projects that have long been shelved.

On the other side, however, the leaders of the financial institutions are like circus performers who have stretched their tightrope over the crater of Mount Vesuvius at Pompeii—a few minutes before the volcano's eruption. For the entire financial elites, led by "Helicopter Ben" Bernanke—with a few exceptions, such as Kansas City Federal Reserve Bank chairman Thomas Hoening and Dallas Fed chief Richard Fisher—are determined to keep dancing atop the volcano until it finally erupts. The U.S. Federal Reserve has long since lost control, and is simply printing more money, just as the Reichsbank did in 1923, leading to the famous Weimar hyperinflation.

At the same time, official admission of state bankruptcy in the case of Great Britain, the U.S.A., Greece, Spain, Portugal, Ireland, Italy, and other countries is only a matter of time. The financial system is at risk of complete disintegration in short order.

First the good news: Since the LaRouchePAC released its interactive computer simulation of the NAWAPA project (http://www.larouchepac.com/node/15557), the situation in the United States has suddenly begun to change, electrifying groups of econo-

mists, engineers, project managers, academics staff of the Army Corps of Engineers, trade unionists, administrators, experts, and students. While people were convinced just moments before, that future prospects were bleak, that revolutionary spirit of change, which is so characteristic of America's history, awoke: There *is* an alternative, for how the depression in the U.S.A. can be overcome: a gigantic infrastructure program in the tradition of Franklin D. Roosevelt's Tennessee Valley Authority (TVA) will dramatically improve water management on the North American continent and transform the desert states along the Rocky Mountains and in Mexico into green forests, fields, and gardens, while creating 3 million new jobs and many new cities.

EIRNS/James Rea

Homeless in Berlin: The draconian budget cuts imposed on Greece are also being extended to all EU member countries, in the vain hope of saving the banks.

"I will now devote all my efforts to the NAWAPA project," "This is how America can be saved; I am fully on board," "My students need this perspective"—such responses are coming now from people in all walks of life, who are being mobilized by LaRouche's Political Action Committee. People can see it quite vividly now: There *is* an alternative to the Obama Administration's brutal pro-Wall Street austerity policies. The computer animation of the program that Lyndon LaRouche and his Basement Team are proposing, and that is becoming increasingly specific, in terms of personnel and material requirements, provides a precise concept of how the reconstruction of the ailing U.S. economy will look: This is the biggest infrastructure project the world has ever seen!

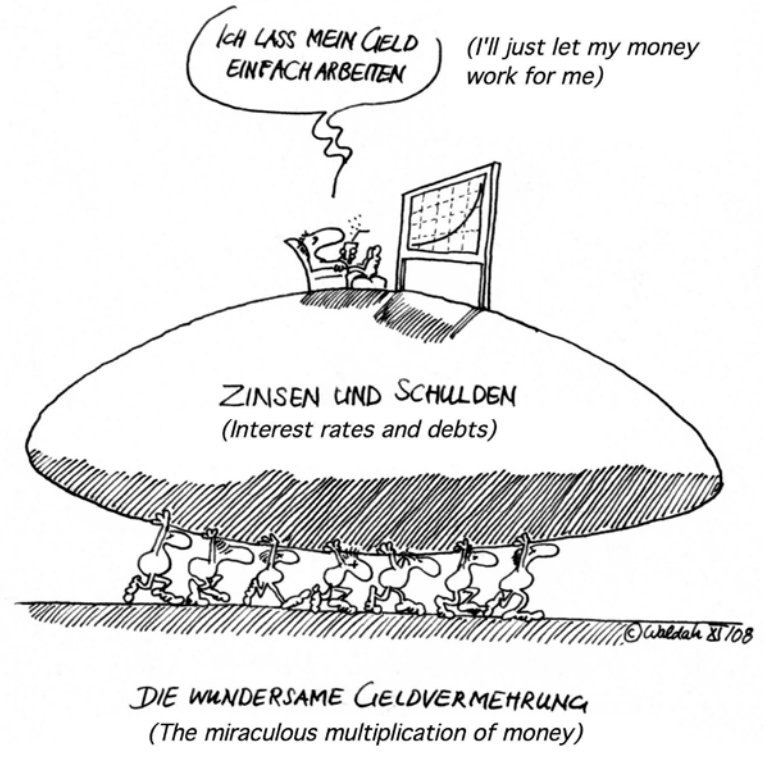
Although Bernanke, at the annual meeting of the world's top bankers in Jackson Hole, Wyo., on Aug. 27, uttered the ominous threat that the Fed still can take "unconventional measures" for more stimulus programs (read: hyperinflationary money-printing), more and more influential circles and patriotic forces understand that the United States has reached the *punctum saliens*.[1] Mortimer B. Zuckerman, publisher of *U.S. News and World Report*, recently described the Obama Administration in an editorial as "the most fiscally irresponsible government in U.S. history." The view is becoming more prevalent that the continued existence of the United States is incompatible with Obama's remaining in office.

International Mobilization

It is precisely the NAWAPA project's stark contrast to the unprecedented decline of the U.S.A., which accounts for its potential history-making impact. Throughout the country, people are protesting against layoffs of firefighters, police (with simultaneous layoffs from prisons, for lack of money), and forced, unpaid leave, among other public workers. And that is precisely why the NAWAPA project, which would create around 3 million new productive jobs, is so attractive.

And this is true not only in the United States: In India, relevant official bodies have reacted enthusiastically and announced that they would place on the agenda similar projects of hydropower and water management for vast irrigation. In Russia, scientists and political parties responded immediately with the idea of reactivating the Davydov Plan, namely the use of a similar pump and canal aystem to divert the powerful Ob and Irtysh rivers, which drain into the Norwegian

1. *Punctum saliens*, a term used by Friedrich Schiller, to indicate the crucial point in a drama, at which everything depends on the leading characters acting as history requires.



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Sea, into the Aral Sea, which is drying up; this would turn tens of thousands of hectares of desert steppe land into lush gardens. European engineering companies that have cooperated for a long time on international projects, were enthusiastic about similar projects for Africa, Asia, and Latin America, such as the Transaqua project, in which water from the Congo River would be diverted, through an integrated river and canal system, to Lake Chad, which has dried up by as much as 10%.

The Alternative Is Collapse

The revolutionary change in the U.S. that the mobilization for NAWAPA is bringing about, may upset all the anglophile or culturally pessimistic prophets of doom, who have already prematurely proclaimed the end of the "American century"—and Europeans have little grounds for *Schadenfreude*, given the impending state bankruptcies of Great Britain, Spain, Greece, Portugal, Ireland, and possibly Italy and some Eastern European countries, and the growing poverty in Germany and France.

How completely wrong the current austerity policy of the EU and the German Finance Ministry is—they want to impose the "debt brake" and draconian budget cuts on all member countries—is nowhere more clearly seen than in Greece, where 176,000 companies are now facing bankruptcy and an estimated 44% of all companies will close, and in some areas, unemployment has reached 70%. How then, one might ask, are the rescue packages that were financed by German taxpayers to be repaid—the bailouts which anyway did not benefit the Greeks, but only the European speculator banks?

Since Bundesbank President Axel Weber has now aligned himself with the gang of miraculous money-multipliers, we should not be surprised that in Germany, the inflation rate of imports in July rose by at least 9.9%, mainly because of commodity speculation. The speculators, whose toxic waste has been rewarded with all the fine rescue packages, are using the taxpayers' cash for rampant speculation in oil, gas, metals, and agricultural commodities.

The fact is that the present policy is a gigantic redistribution from the poor to the rich, and that the policy of the Fed, and also, for some time now, of the European Central Bank, amounts to hyperinflation, and therefore, to brutal looting of the population.

In the coming days and weeks, it will become clear just how untenable this hyperinflationary policy is, if, despite all the money pumping, a new crash occurs—whether on the equity markets, the American residential or commercial real estate markets, whether it is a collapse of one of the major banks that are "too big to fail," or because the Eurozone falls apart—or a combination of all these elements.

Think Big

That is exactly why a global development perspective must immediately be put on the agenda. Given impetus by the NAWAPA project, the development perspective must be extended, through the construction of the Bering Strait tunnel between Alaska and Siberia, which must, in turn, lead to the expansion of the Eurasian Land-Bridge, for which the BüSo[2] and the Schiller Institute have been organizing since the fall of the Berlin Wall, giving countless conferences in many countries around the world. Meanwhile, many aspects

2. The Civil Rights Solidarity Movement (BüSo) is the political party headed by Zepp-LaRouche in Germany.

EIRNS/James Rea

The Civil Rights Solidarity Movement (BüSo) organizing in Berlin on Aug. 7. The sign reads: "Rebuilding the economy in the post-Obama era."

of this program have either been completed or are in various stages of implementation, notably by Russia, China, India, South Korea, and some other, mostly Asian, countries.

If we in Germany also want to have a future, then we have to have a real mobilization of citizens for the reconstruction of the world economy. That is the only way we can avoid the growing poverty of an increasing portion of the population, and shift to productive employment. We need investments in the real economy. The development of the Transrapid maglev throughout Germany, as part of the Eurasian Land-Bridge, for example, would cost a fraction of the sum spent on rescue packages for the banks, which were of no benefit whatsoever.

Join us in this mobilization. It's about Germany and our future. It's about our human dignity!

Desertec: A Malthusian Mirage in the Sahara

by Claudio Celani

Aug. 27—The Malthusian plan to cover North Africa with solar concentrating plants, windmills, and biomass plants, to produce electricity to be shipped to Europe, gained new momentum at the end of July, when the organizers reached an agreement with the King of Morocco to start the first pilot plant.

The project, called Desertec, is a creation of the Club of Rome, the ultra-malthusian organization that launched the famous "limits to growth" campaign in 1972, predicting that mankind would soon exhaust fossil-fuel resources through continued technological development. The plan is so bizarre that it will probably never be built, but it is being used to lure European and North African nations into abandoning plans for nuclear development and desert greening. In fact, Desertec aims at covering part of the Sahara Desert with solar mirrors, and building thousands of kilometers of high-capacity electroducts to ship 100 GW to Europe, an odd enterprise in itself.

Desertec is so insane that it has drawn critics even from environmentalist and solar industry circles. The website EurActiv.de says that "the initiative looks like the world-domination strategy of a James Bond villain." Hermann Scheer, chairman of Eurosolar, appropriately calls it a "mirage" and warns against the costs and the difficulties in managing the international power grid.

Nevertheless, a group of German firms and financial institutions came together under the initiative of the insurance giant Munich Re, and founded the Trans-Mediterranean Renewable Energy Corp. (TREC), to build Desertec. Siemens, RWE, E.ON, Deutsche Bank, HSH Nordbank, MAN Solar, Schott Solar, are among the founders, as well as the Algerian firm Cevital, and the Spanish Albengoa Solar. And to avoid antagonizing France, whose nuclear industry has plans for Africa, French firms were involved as well.

Another industrial consortium has emerged in the meantime, of French inspiration, which will build infrastructure to transport the electricity from Africa to Europe. That project, proposed by the Transgreen com-

DESERTEC/Michael.Straub@DESERTEC.org

The Mediterranean Initiative plan to blanket the Sahara with solar collectors to provide electricity for Europe, was never intended to work; it's a scheme to secure huge subsidies, and reduce population worldwide.

pany, was recently adopted by the 43 members of the Mediterranean Union meeting in Cairo, which integrated it into its "Mediterranean Solar Plan" to provide 20 GW between now and 2020.

Since the project is economically inefficient, it could work only if it is heavily subsidized. In the preliminary phase, subsidies are coming from energy concerns, such as RWE, which are hoping to reap huge profits once the real subsidies kick in, presumably from the European Union and the German government.

Benita Ferrero-Waldner, a former EU Commissioner, who is now on the supervisory board of Munich Re, is lobbying for EU money. EU subsidies would possibly come through the Mediterranean Initiative. Recently, the Foreign Trade and International Affairs Committee of the European Parliament gave the green light to Desertec, in the context of the Mediterranean Initiative policy.

EU Energy Commissioner Günter Öttinger is a big supporter of Desertec, as is former German Environment Minister Klaus Töpfer, who lobbies as an advisor to Desertec. In an interview with the *Frankfurter Rundschau* on March 15, Töpfer said that without subsidies, the project cannot work: "Companies investing in Desertec will do that only if investments are profitable. Electricity from the desert is one of the large projects in the Action Plan of the EU for the Mediterranean. It is evident that subsidy rules must be drafted at European level."

Paul Van Son, CEO of the Dii, a joint venture of Desertec Foundation and various industries, also admitted in a July 9 interview with *Die Zeit* that, without subsidies, Desertec cannot work.

'Nobody Knows' What It Will Cost

The Desertec gang is now aiming at having the first (subsidized) project running in Morocco, to show that the thing "works," and to get the big money to go ahead with the rest. Of course, conditions in their chosen location in Morocco are much better than in the Sahara itself, where 20-30 meter high sand dunes move about. They convinced King Mohammed VI of Morocco to start a 10,000-hectare plant, which is supposed to deliver 2GW in 2020. The Desertec people do not say how much desert they need to produce their target of 100GW by the year 2020. They babble about studies showing that 20 square meters per capita are enough. Desertec also does not reveal the amount of subsidies it will require, nor what the final costs will be. They babble about EU400 billion investments for the total Sahara project, but concede that this is an indicative figure, and "nobody knows" how much it will cost.

In fact, Desertec is based on the fatally flawed assumption that "renewables," like solar and wind, could replace baseline sources of electrical power, like fossil fuel and nuclear, a fraud that would lead to the deaths of billions of people worldwide. To illustrate the point, the solar concentrating plants that the plan uses are intermittent, and have a capacity factor of around 25%—and that is being generous. That means, that the solar power plant will only produce electricity about 25% of the time, as opposed to a nuclear power plant, which produces electricity 95% of the time.

Moreover, solar concentrating plants use four times the water of a natural gas power plant—an insane idea for the North African desert. The other limiting feature of the solar concentrating plant is that it does not produce much in the way of high-temperature process heat. With a solar concentrating plant, you have to choose to use the steam either to produce electricity or to desalinate seawater—you cannot do both. On the other hand, with a fourth-generation high-temperature nuclear reactor, which produces high-temperature process heat, you could both desalinate seawater and produce electricity. This will allow us to green the desert, instead of covering it with mirrors.

Those Deadly, Green Nazi Solar Panels

by Laurence Hecht

Aug. 21—Not only does solar energy cost more to produce than it gives back, but rooftop solar panels are dangerous to your health and hearth. In Germany, Australia, and the U.S.A., fire departments are warning of the deadly threat of fighting blazes associated with solar panels.

In Germany, the issue has recently become a major news item. While city and local governments, swept by the Green mania, are demanding more rooftop panel installations, many fire departments have warned that fires cannot be fought on houses with rooftop solar panel units, and so the property will be completely destroyed.

The Reichstag Fire, 1933. Today, firemen would have to just let it burn, if it had rooftop solar panels

The largest solar panel blaze in history took place in June 2009 in Germany at the warehouse complex of BP Solar (Yes, that is British Petroleum!). Talk about "accident prone." BP's 200-square-meter array, at Bürstadt, near Mannheim, was one of the largest roof-mounted installations in the world. And it was fabricated by BP Solar.

A rooftop solar array produces direct current electricity at a potential of 600 to 800 volts, more than enough to kill—and *it cannot be turned off*. The standard firefighting technique of opening up the roof to vent a blaze is not possible, because putting an axe through the solar panels exposes the firemen to deadly voltages.

Firefighters in the United States also have a policy of letting the solar panel-related fire burn out, rather than fighting it. Reporting on a 2009 meeting of New Jersey fire chiefs, a Florence Township chief wrote: "The final question which was asked really put things in perspective—someone asked that since Califorina is number one when it comes to Solar Panel System installations, 'What do their Firefighters do when a structure fire involves these systems?' Answer was 'they let it burn!'"

And the solar panels themselves are often the cause of the blaze. In Australia, where government subsidies sparked a boom in rooftop panel installations, a survey of 200 systems found 3% were incorrectly wired, leading to serious fire risk. Apart from faulty wiring by installers, poor quality control in manufacturing has led to fractures in the joints between the solar cell modules, which can lead to electrical arcing. The resultant fires burn at quite high temperatures.

Solar electricity generation is ridiculously costly, and has only caught on because of huge government subsidies. Studies in the U.S. show that the true cost for the average home is 35 cents per kilowatt hour, and 25 cents per kWh in the desert. Electricity can be generated from nuclear plants at 1.3 cents/kWh, if plant construction time is reduced to a reasonable five years or less. Uranium fuel is so energy dense, that the main cost of nuclear power is in the plant construction. Knowing this, the Green nazis in the U.S.A. fought for punitive regulations which dragged out construction times to ten years or longer. They thus ran up amortization costs at high compound interest rates to high levels, making it appear cheaper, in the short run, for a utility to build coal or gas-fired plants.

Meanwhile, Green alternative energy is subsidized at huge taxpayer expense. In Germany, *Der Spiegel* reports that a study by the Arrhenius Institute for Energy and Environmental Policy calculated that solar energy receives EU2.7 million *per hour* in subsidies! This figure is obtained simply by multiplying the EU35 cents/kWh which consumers pay as a subsidy on solar energy, by the overall consumption in one hour, as measured on July 8. Today, one of the largest solar panel installations in the world is atop the roof of the Reichstag building in Berlin (see image at this link).

Shall history soon repeat itself in bizarre fashion, with a new Reichstag Fire, this time caused by the solar panel mania of the new Green nazis?

Challenged by Rachel Brown, 'Bailout Barney' Runs Scared

by Nancy Spannaus

Aug. 31—'Bailout Barney' Frank, 15-term Congressman from Massachusetts, chairman of the House Financial Services Committee, and general blowhard, is not a happy man. Despite all his protestations about the wonderful job he has done in ramming through financial reform and other Obama-inations, Barney Frank is running scared in the Democratic primary scheduled for Sept. 14.

One of the chief reasons for Barney's fears is the Obama himself, who has, by kowtowing to British policies up and down the line, succeeded in turning the vast majority of the population, Democrats included, against him. The second reason is his Democratic primary opponent, young LaRouche Democrat Rachel Brown. Brown and her campaign team have saturated the Massachussetts 4th Congressional District with the real alternative to Frank's sellout to Wall Street financial interests: dumping Obama, and the LaRouche program for reintroducing Glass-Steagall banking regulations, re-adopting a fixed-exchange-rate system, and launching a grand-scale infrastructure program in the form of the North American Water and Power Alliance (NAWAPA).

Will Massachusetts voters vote their self-interest, and elect Brown, the way Texas voters did last March in electing LaRouche Democrat Kesha Rogers? That is impossible to say. But what can be said, is that the Brown campaign has had a lasting impact on the state, and the country, by reviving the real republican roots of Massachusetts, and thus creating the basis for a revolutionary turn back to the American System tradition, which the world so desperately needs.

Debate Set

From the time Frank first met Rachel Brown—during a town hall meeting in August 2009, when she confronted him on his support for Obama's Nazi health policy—he has shown her nothing but disdain. His campaign actually sent the video of the confrontation all around the world, in an attempt to raise funds by showing Frank quip that talking to Rachel was like talking to a dining-room table. But now, 12 months later, in a tacit admission that he has badly miscalculated, and his ploy has backfired, Frank's campaign has actually agreed to a debate.

But not without insane conditions. On Frank's insistence, the event is scheduled one week before the election, on Sept. 7, at 7 p.m., at NewTv Studios in Newton, Frank's hometown. No audience is to be allowed, and the Frank campaign explicitly demanded "no Lincoln-Douglas format." That means a moderator will force the back-and-forth into time slots no more than two and a half minutes apiece.

Could it be that the 70-year-old, self-described master debater is afraid of the 29 year-old LaRouche movement activist?

Frank has already had some experience in one-to-one confrontations with Rachel Brown, mostly at Dem-

EIRNS

Rachel Brown, the LaRouche Democrat in the Sept. 14 Massachusetts Democratic primary, is challenging Boston bankers' boy Barney Frank, and leading a Second American Revolution, with her campaign to oust Obama, bring back Glass-Steagall, and make NAWAPA a reality.

ocratic Party clubs which are historically sympathetic to him. But the most recent joint appearance, at the Oak Point Veteran's Association of Middleboro on Aug. 26, undoubtedly delivered quite a shock to him.

More than 200 veterans and their families were gathered to hear the candidates. Frank led off, and tried to pander to the crowd, stressing that he opposes budget cuts for veterans. Rachel led her remarks by exposing that Frank had lied again—since he had voted for the Obama health-care plan that calls for cutting huge sums out of the nation's health budget. Rachel then outlined the LaRouche program to save the nation, concluding with her call to get Obama out of office, in favor of someone who is "not in his own world." The room erupted in applause.

No wonder that Frank, who had been hanging around to listen, decided to skulk out of the room when she finished.

Rachel Speaks

So far, none of the major media in the Boston area has given Rachel Brown a forum to present her ideas, while Frank receives constant news coverage for his activities as a Congressman. *EIR* has thus offered Rachel Brown the chance to answer a series of interview questions, which follow:

EIR: Here we are, just about two weeks before the election. How do you assess the status of your campaign, in terms of the goals you set for it—which we know, were not simply to get the vote?

Rachel: The role of my campaign, along with the campaigns of Summer Shields, candidate against [Rep. Nancy] Pelosi, and Kesha Rogers, the Democratic nominee running in the NASA district in Houston, Texas, was to provide a policy direction for the entire country, a unified, comprehensive platform to lead the nation out of this economic collapse, while also serving to take out the enemy—in these cases, namely, the worst lapdogs in Congress, Barney Frank and Nancy Pelosi, and also President Obama.

I think we are definitely having more fun than Barney Frank, which probably means we're winning, and we have given people hope in the form of an actual movement to get Obama out, which many people didn't think was possible.

EIR: All indications, even from the main sewer media, are that Barney Frank is worried about the outcome of his campaign, including the primary? Is this the first primary challenge he has faced in a long time? Do you see this as related to the fact that he has, as of this moment, at least, agreed to face you in a debate?

Rachel: This is the first time he has faced a Democratic challenger in quite a long time, and it has been reported that Barney had to open a campaign office in Newton for the first time in 10-15 years. I think he is definitely worried about the fact that he's being attacked, and he's afraid of the population. This is evidenced in the fact that he refused my campaign's request to have the debate at a public forum in a central location of the district, so that constituents of all areas could attend, and would instead only allow it to occur in Newton, in a TV studio, with no audience. Maybe he thinks he can intimidate me; I'm not sure.

The Role of Classical Music

EIR: As your website reflects, the performance of Classical music has played a major role in your campaign. Can you give us an understanding of its role in your campaign?

Rachel: Yes. My campaign staff is actually a chorus,

and that has been instrumental, in its ability to demonstrate irony for the population, and also, to uplift them. One thing we did, was to take our music to the subway trains of Brookline and Newton, where we would sing on the trains, then hand out literature and brief people. We also held concerts on street corners on Friday and Saturday evenings.

The population right now is generally in a state of confusion. They can't believe that things could have gotten this bad, many even to a point of despair. So they are in a state of inherent discovery, searching for what it was that went wrong. In this state, the mind responds more clearly to beauty and truth, which is what Classical music is, so people have been responding quite intensely to the choral deployments, stopping for minutes at a time, and reading the literature with great curiosity.

EIR: Another major theme has been the "Two Massachusetts" concept, as reflected in the famous video produced by LaRouchePAC. Can you give us an idea of what impact this historical dimension, defined by Lyndon LaRouche, has had in the campaign?

Rachel: This played a role in helping people recognize the nature of the problem, and identify the enemy as of an anti-American, imperial pedigree. This has been an ongoing fight on the shores of Massachusetts since 1634, when the British King first requested the Massachusetts Bay Colony Charter be revoked. The American patriots fought for a nation dedicated to the general welfare; the Tories sought to protect a system of empire. Once you put Barney Frank and Obama in a British-loyalist historical context, which Massachusetts culture has a distinct sense of, people recognize much more clearly what's going on.

EIR: What response are you getting to the LPAC NAWAPA proposal? How will it impact Massachusetts?

Rachel: At one Meet-and-Greet, in Fall River, everyone came with a campaign NAWAPA statement in their hand, saying, "This is a great idea. What else have you got?" We have had a similar response everywhere, where people are immediately uplifted by the prospect of not just trying to survive for the next year, with highly doubtful prospects of that occurring, but instead, finding someone proposing an idea that would give our generation something to be excited about; not just allow us to get out of this collapse, but do it in a way that makes sense to human reason, with a beautiful goal to achieve.

Flood-Ravaged Nation

Pakistan Needs Vast Water-Management Plan

by Ramtanu Maitra

Aug. 28 (EIRNS)—The floodwaters that began devastating Pakistan at the end of July are continuing to their destructive course. While the provinces of Khyber-Pakhtunkhwa and Balochistan, situated west of the River Indus, the country's lifeline, are waiting for the floodwaters to recede, the Indus is now devastating the southern province of Sindh on its way to the Arabian Sea. Still ahead, are the heavy monsoon rains that lash the Indian subcontinent throughout most of September. In other words, there is no telling how long this devastation could last, or how much worse things will become.

The true nature of the catastrophe, is probably much harsher than what has come out in the media. But even those reports indicate that this has been the worst flooding that Pakistan ever encountered in its 63 years of existence. It has affected at least 20 million people; made some 6.5 million homeless; and endangered the lives of 3.6 million children. Aerial food drops were not possible in most of the flooded areas, and moving people out of harm's way became a painstaking adventure. People were moved in small numbers by boats, while reports indicate many more millions still need to be evacuated. Food is running short, potable water is non-existent, and all that is left in certain areas are the masses of people trying to get their families `to a safe place.

What Pakistan needs to do for its long-term security, is to develop a water-management plan whereby the annual rains can be stored in inter-linked reservoirs, controlled through locks and canals. In addition, the devastation of forests—Pakistan has only 5.2% of its land under forest cover, compared to 25% in 1980—has allowed the water to come downstream too fast. These forests have to be regenerated.

By developing hundreds of reservoirs and small dams to hold water for utilizaton on the water-short plains, Pakistan's biosphere, over a period of time, can

UN/WFP/Amjad Jamal

Pakistan is experiencing the worst flooding in its 63 years of existence. It has affected at least 20 million people; 6.5 million are homeless; and the lives of 3.6 million children are endagered. Shown: Flood victims of the city of Nowshera wade through the water-filled streets, Aug. 3, 2010.

be transformed. A system also needs to be developed to store water in many medium-size reservoirs in Sindh, by harvesting rainfall and river overflows which occur during the monsoon season.

Meanwhile, Islamabad is appealing to the outside world for money. Not much has come through yet. What the exact requirements are to take care of the immediate necessities is not clear to anyone, but what is clear, is that too little has been done so far. Pakistan is now negotiating with the IMF (International Monetary Fund) for a raincheck on this fiscal year's (July 1, 2010 to June 31, 2011) loan payments. Loan payments to the IMF, other financial institutions, and countries that have loaned funds to Pakistan, so far amount to about $7.6 billion. Pakistan has as its reserve a paltry $15 billion, and a huge commitment to the millions of flood victims.

Express News reported on Aug. 27 that the IMF has agreed to issue the next tranche of $1.2 billion of a standby loan to Pakistan, on the assurance that it will enforce the reformed general sales tax starting Oct. 1; however, the IMF Board has yet to take a final decision. The IMF has agreed to relax some conditions regarding economic targets, including a reduction in the tax collection target during fiscal 2010-11.

It is a disgrace that the world communities remain silent while the IMF, officially an adjunct of the United Nations, but actually run by the world's most powerful financial institutions, is imposing conditionalities at a time when millions of lives are endangered. However, Pakistan's Finance Minister Abdul Hafeez Shaikh, a textile mill and hotel owner, former World Bank country head in Saudi Arabia, and a general partner in the growth capital company New Silk Route Partners, which focuses on private equity opportunities across Asia and the Middle East, has expressed satisfaction with the negotiated outcome.

What Caused the Floods?

There is no question that the floods would not have occurred without heavy rains. However, it is a foregone conclusion that the annual visit of the monsoon, which keeps people of Pakistan and all South Asian countries alive, will bring in heavy rains. Some years the rains are extremely heavy, some years they are not. Some years, some areas get disproportionately heavy monsoon showers, while other areas remain rain-famished. That is a historical fact, and while regional leaders in any of the South Asian countries might feign surprise at the time of crisis, the fact remains that the monsoons come every year.

What occurred to cause the calamity in Pakistan does not happen every year: The jet stream, a massive ring of high-speed winds, moved more quickly than usual over the northwest, causing wet monsoon air to be sucked faster and higher into the atmosphere. The stream, which is normally too high to affect everyday weather, but does influence large-scale weather patterns by shifting the atmosphere around, "supercharged" the monsoon, leading to some of the heaviest rainfall in memory.

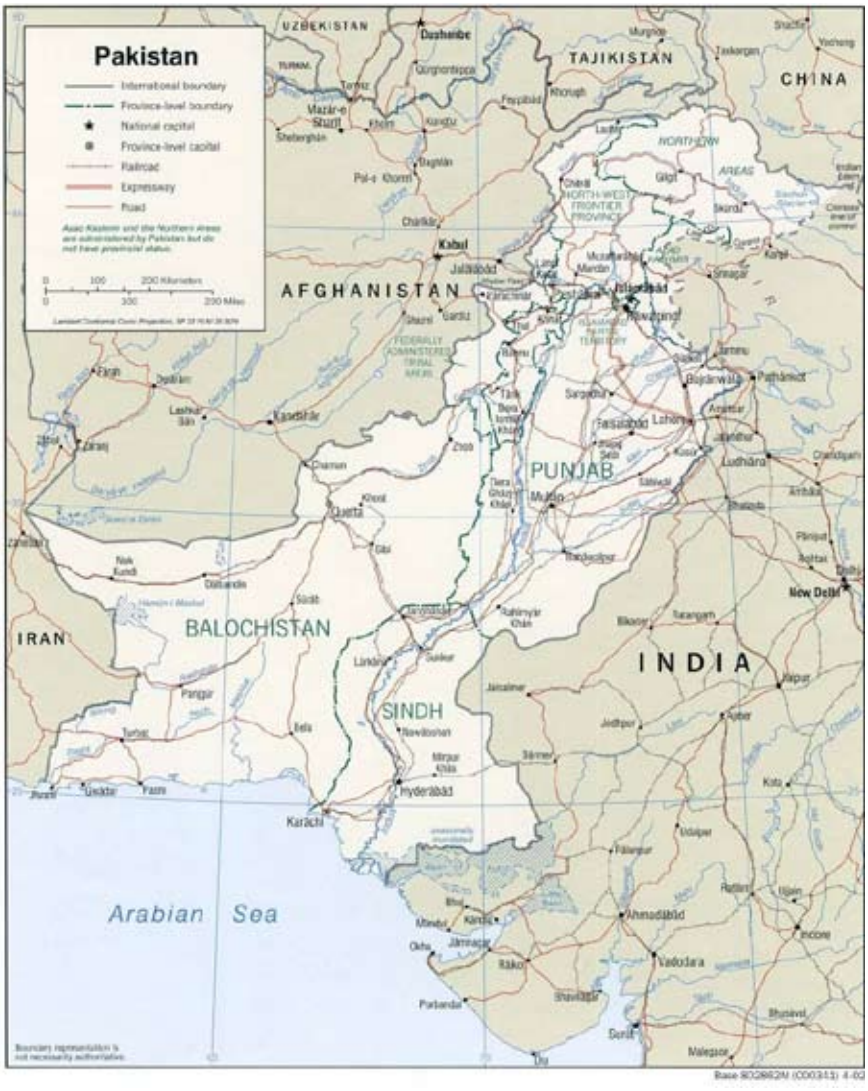
Scientists say the hyperactive jet stream also caused deadly landslides in China and the drought in Russia, triggering the current wildfires. The stream had split in two, one section heading north over Russia, and the

other going south over the Himalayas into Pakistan. Experts say it was very unusual for the stream to head that far south.

As a result of this phenomenon, torrential rains came down on the hills west of Kashmir, flooding the Swat Valley, the first victim in this debacle. The amount of water that came down within a few days would have caused flooding in the Swat Valley, anyway, but what made it into a death trap, was neither the fault of the jet stream nor the monsoon. Instead, one must look to the power of the timber mafia, which has a particularly strong hold on the areas now affected by flooding.

One of the most powerful and ruthless organizations within Pakistan is the timber mafia, which is engaged in illegal logging, estimated to be worth billions of rupees each year. The group's connection to politicians at the local and federal level has been commented on in the media for years. The constant warnings about the timber mafia almost always include mention of the increased susceptibility of de-forested regions to flooding, landslides, and soil erosion. The flooding has been further intensified in areas where the timber mafia has felled trees, and hidden them in ravines prior to smuggling them out of the area. Dislodged by torrents of water, the logged trees, carried down by the mud-heavy, swift-flowing water, have swept away bridges and people and anything else in their path.

FIGURE 1



Although the 2010 floods are unique in their killing power, this was a disaster waiting to happen. The U.S. Congressional Research Service, in its report "Security and Environment in Pakistan" (Aug. 18, 2010), pointed to a World Bank study which stated that there are over 2,500 glacial lakes in the Himalayan region of Pakistan. Although just a small fraction are considered dangerous, these can cause deaths of thousands within a few hours. A burst can discharge millions of cubic meters of water and debris in a few hours into downstream communities. Has Islamabad done anything to protect those impoverished Pakistanis who live in distant parts of the country?

Once the mud-heavy water, now carrying thousands of tons of debris, came hurtling down to meet the River Indus at the junction of Khyber-Pakhtunkhwa province and the Punjab, the floodwaters overfilled the river, which was already running high, flooding the western part of Punjab, inundating the fertile croplands there, and submerging hundreds of villages. Now, the water is flowing southward through the western part of Sindh to fall into the Arabian Sea. However, the river is incapable of carrying the volume of water it is burdened with, and the southwestern Sindh is undergoing large-scale flooding now.

UN/Evan Schneider

While a shift in the jet stream, combined with the annual monsoon rains, and the denuding of forestry by the "timber mafia," created a perfect storm for the century floods now inundating Pakistan, this was a disaster waiting to happen. Only a top-down water-management plan can prevent another such tragedy. Shown: Flooded areas near the city of Multan, in Punjab province, Aug. 15, 2010.

The Damocles Sword

Unless the world community, with the genuine help of the Pakistani authorities, can come up with short- and medium-term solutions to cope with the aftermath of this unprecedented natural disaster, it is a foregone conclusion that much worse will follow.

To begin with, the hapless people with their families will have to deal with the lack of clean drinking water. All kinds of water-borne diseases, such as cholera, dysentery, encephalitis, hepatitis, among many other lethal diseases caused by parasites and viruses, will kill thousands, picking their victims from the millions already debilitated by the hardships they have undergone due to the floods. Children and the old people will be the primary victims.

In the medium term, Pakistan will have to deal with crop damage caused by the floodwaters. According to the FAO/GIEWS [Food and Agriculture/Global Information and Early Warning System] Watch report, the latest estimates are that at least 3.2 million hectares of standing crops, including rice, maize, cotton, sugarcane, fruit, and vegetables, have been damaged or lost. This represents some 14% of the total cropped area (based on 2008 figures).

Preliminary reports point to substantial losses of cotton and sugarcane that, together with rice, account for a large proportion of the country's export earnings and are important cash crops for farmers. As a result, losses may have a bearing on the country's trade balance, as well as impact household incomes. The country produced 64 million tons of sugarcane (from 1.2 million hectares) and 2.2 million tons of cotton (from 3 million hectares) in 2008.

Pakistan's agricultural sector is a major part of its economy, contributing 20-30% of the country's gross domestic product (GDP), with about 70% of the population dependent on agriculture. Roughly 45% of the working population is employed in agriculture, forestry, and fishing.

The Congressional Research Service report pointed out that, in the last decades of the 20th Century, Pakistan's agricultural production grew sharply, increasing by an average of 4% per year, in large part due to the use of high-yield crops, increased government prices for crops, and subsidies for irrigation water, fertilizer, and other inputs. In recent years, however, agricultural production has been declining. Among the many reasons cited for this decline are:

- shortage of irrigation water and deterioration in the irrigation network;
- soil degradation from fertilizers and other chemical inputs, and low efficiency from most farm inputs;
- low technology use, and lack of farmer knowledge of technology;
- lack of crop diversification and focus on wheat production, particularly by some donor organizations.

The UN reports that although Pakistan was a net exporter of wheat and other cereal grains in the 1980s and 1990s, it became a large net importer of food products in the new millennium. It is evident that Pakistan will need to import at least 2 million tons of food grains.

Pakistan's Long-Term Needs

Although Pakistan's catastrophic floods have claimed at least 1,600 lives and made millions homeless, the problem is not that it is inundated with water. Pakistan, in reality, is a water-short nation, and its southern and western provinces are especially water-deficient. However, Pakistan gets plenty of rain during the monsoon months, but does next to nothing to store that water and make it available for domestic, agricultural, industrial, and commercial uses.

While the Punjab is well served by three large rivers—the Indus, Jhelum, and Chenub—the entire western part of Pakistan, including Balochistan, depends on snowmelt and rainfall. Sindh gets very little water, since the bulk of the Indus water is used, or evaporated, by the time it arrives in Sindh.

While Pakistan has dozens of projects in the planning stage, very little money has been allocated for water management. Moreover, the lack of political will has left these projects sitting on the drawing board. In addition, the British-inflicted ethnic rivalry, which dominates socioeconomic discussions in Pakistan, and prevents integrated nationwide projects from taking shape, is also a major impediment. For instance, the Kalabagh Dam, designed in 1984, never saw the light of theis still not built. day. The dam, to be located at the junction of Khyber-Pakhtunkhwa and Punjab on the Indus, would store water inside Punjab. The Sindhis did not allow this project to go through because they claim Sindh will be further starved of water, while the Punjabi agriculturists will benefit from the use of additional stored water.

According to some Pakistani engineers, the Kalabagh Dam, even it had been constructed, would have done little to hold these all-immersing floodwaters, and probably would have caused more misery by flooding the main Khyber-Pakhtunkhwa city, Peshawar, and beyond.

However, Tauseef-ur-Rehman, writing for the daily *The News* on Aug. 23, quoted engineer Fatehullah Khan, who said the country was in dire need of dams, and the government should take up the matter on a priority basis. He said the government should concentrate on Katzarah Dam, 20 miles downstream of Skardu on the River Indus, which has a storage capacity six times more than the Kalabagh Dam. "The current exceptionally high floods that created unprecedented havoc would have been mitigated, had Katzarah Dam, with a storage capacity of 35 million acre feet, been built in time," Fatehullah stressed.

Obituary

Russian Academician Alexander Granberg

Aug. 24—Academician Alexander Granberg died Aug. 22, in his 75th year, the Russian Academy of Sciences and the Ministry of Economic Development announced today. He had remained active as Russia's senior specialist on integrated economic development projects, serving as chairman of the SOPS (Council for the Study of Productive Forces, a joint government-Academy body which is the successor of Academician Vladimir Vernadsky's KEPS organization). Academician Granberg was a member of the Presidium of the Academy of Sciences, headed its Regional Studies Council, and had earlier been chairman of the Russian National Committee on Pacific Ocean Economic Cooperation.

Based in Novosibirsk for many years, Granberg designed and guided many projects for Siberia and the Russian Far East, including the current national plan for the development of those regions, and was working on the Industrial Urals-Polar Urals project design in recent years. Victor Ishayev, Presidential Representative for the Far East Federal District, released his telegram of condolences to the Russian Academy of Sciences and Granberg's family, which he sent from Kamchatka on the Pacific coast, where Ishayev, Prime Minister Vladimir Putin, and others are holding meetings on fisheries-related infrastructure development. Ishayev wrote:

"Academician Alexander Grigoryevich Granberg was a famous scientific economist, an outstanding teacher, and the author of works on regional economic development. . . . We valued his reverent attitude toward Russia's Far East, and his participation in drafting the

'A Long Wave Across The Bering Strait'

From Academician Alexander Granberg's toast at the May 16, 2007 banquet for Prof. Stanislav Menshikov, published in EIR *of June 1, 2007.*

…As for Russia, … we lost out, because Stanislav Mikhailovich's recommendations were not heeded 20 or 30 years ago, or 10 years ago. He saw so much, and so clearly! And it's good that it's being picked up now by politicians, but that is far from the full potential of Stanislav Mikhailovich.

Today, I encountered some surprising and interesting information. It is well known, that Stanislav Menshikov is a major expert on long waves, and he has worked on this together with Larissa [Klimenko-Menshikova]. And one of those long waves has reached me, today.

Here is the story: Three weeks ago, there was a conference in Moscow on one of the megaprojects, namely, the construction of an intercontinental route, from Eurasia to America across the Bering Strait. This is a very old idea, to link the continents, and the entire rail network of the world. Sooner or later, this project is going to be built! Many generations have dreamed about implementing this project, and this conference took place, three weeks ago, with the active participation of our government, and of [regional] governors, and the idea gained support.

One of the speakers at that conference was introduced as a representative of Mr. LaRouche. Three weeks passed, and here is Mr. LaRouche. And there has been an opportunity to discuss what actually needs to be done, to push this project ahead. These are very encouraging views! This railroad will be built!

Thus, you have already taken part in this project. By the year 2027, according to the schedule, it will have been completed. Maybe just a bit of the tunnel will remain to be built, across the Bering Strait. It's only 100 km.

I hope to be able to have some influence on the design of this crossing. And we will try to name the station closest to the Bering Strait tunnel on the Russian side, either "Stanislav" or "Menshikov"! Yesterday, with your forecasts, we were talking about a lot of numbers, but I'm talking about a living, breathing station, of national importance, and named for you.

Larissa Klimenko-Menshikova: And on the American side, there will be a station named after LaRouche!

Federal Comprehensive Socioeconomic Development Program for the Far East and Transbaikal, as well as his work on specific infrastructure projects. Granberg was a frequent and much welcome guest in the East of our country. We will miss him."

In April 2007, Academician Granberg chaired the Moscow conference on "Megaprojects of the Russian East: A Transcontinental Eurasia-America Transport Link via the Bering Strait," a SOPS-sponsored event to which Lyndon LaRouche's invited contribution was the paper, "The World's Political Map Changes: Mendeleyev Would Have Agreed" (*EIR*, May 4, 2007).

The following month, at the 80th birthday celebration of Prof. Stanislav Menshikov, Granberg offered a memorable toast to the completion of the Bering Strait tunnel by the year 2027 (see box). In 2009, Granberg endorsed Helga Zepp-LaRouche's call to put the "LaRouche Plan to Save the World Economy," onto the world's agenda.

His funeral will be held Aug. 26 at the Presidium of the Academy of Sciences.

Sci-Tech Updates

Kepler Spacecraft Finds New Breed of Planets

Aug. 27—The discovery by the *Kepler* spacecraft of multiple planets orbiting a Sun-like star was announced on Aug. 24: two are approximately Saturn-sized, and one, still to be confirmed, may not be much larger than Earth. This is not the first solar system outside our own to be observed, but it is the first with planets that change their orbital period each time they go around the star, apparently in gravitational resonance with each other. It is also the first multiple find using the transit method.

The transit method measures minute periodic fluctuations in the light of a star, as a planet passes ("transits") in front of it, as seen from Earth.

Matthew Holman, principal author of the scientific paper on the find, says the variations are oscillatory, and close to a 2:1 ratio. This kind of orbital resonance is seen in the relationship between Neptune and Pluto. He expects that ratio will be maintained, as the orbits vary.

The first extra-solar planets were discovered 15 years ago, and now more than 400 have been confirmed. The technology has not existed, until now, to find planets as small as Earth. But this week, scientists at the European Southern Observatory announced that they have found what might be a seven-planet system, which may contain a planet just 1.5 times the mass of the Earth.

Vietnam Trains Labor For Nuclear Sector

Aug. 29—Vietnam, which is leading the countries of Southeast Asia in the race for nuclear power, has approved a US$154 million plan to train and develop a skilled workforce for the nuclear power sector over the next ten years.

The country has already decided to build two nuclear power plants in the province of Ninh Thuan, with a capacity of 4,000 megawatts by 2020, and six additional plants will be constructed in by 2030. The initial two plants will be built by Russia, and several other nations, including Japan, are competing to build the subsequent plants.

The government said in a statement released Aug. 21: "Atomic energy can also be used in the health-care sector, industry, agriculture and other economic sectors. Thus, there will be a shortage of human resources to work in the field. The plan is expected to help Vietnam develop human resources in tandem with its atomic capacity."

Vietnam plans to train 2,400 nuclear engineers, and issue 350 PhDs and masters degrees for those operating nuclear power plants, all within Vietnam. Two hundred engineers and 150 of the graduate students will be trained abroad.

South Africa, China Discuss Nuclear Goals

Aug. 24—South African President Jacob Zuma is discussing the possibility of cooperating with China in nuclear energy, during his current trip to Beijing. South Africa, which is suffering a severe shortage of electricity, has 2.5 million households with no electric power at all. South Africa's one nuclear complex, made up of two reactors at Koeberg, provides 5% of the country's electricity. It is the only nuclear power plant in all of Africa.

The state utility company, Eskom, had planned to build a new nuclear reactor complex in South Africa, but accepting bids from reactor vendors for new units was halted in 2008, when the government decided that the plants were too expensive. Earlier this year, all work was stopped on South Africa's groundbreaking high-temperature Pebble Bed Modular Reactor project (PBMR). Instead, under pressure from "greenies" and incompetent economic policymakers, South Africa is spending millions on solar panels and other such idiotic projects.

But many South African leaders realize that nuclear is essential, and the Department of Energy has pledged to restart effort to secure new nuclear power plants. Earlier this month, Johannesburg held talks with Moscow; accepted a draft memorandum of understanding with Brazil; and in May, signed a nuclear cooperation agreement with Algeria.

The nuclear discussions with China, however, importantly include financial institutions. The Standard Bank Group is to sign a memorandum of understanding with Industrial & Commercial Bank of China, to promote nuclear cooperation. The two banks have been involved in discussions between China Guangdong Nuclear Power Company and the South African government. This could lead to financing arrangements for South Africa to import Chinese nuclear plants. Transfer of Chinese nuclear technology is also under discussion with China National Nuclear Corp.

Popular Support for Nuclear in South Korea

Aug. 29—The Korean Nuclear Energy Foundation, a research body of South Korea's Knowledge Economy Ministry, reports that in a survey of 800 Koreans, 88.4% said that the development of the nuclear industry is necessary, while 61.1% are in favor of constructing more nuclear reactors in South Korea. The South Korean *JoonAng Daily* reported the story. This is a significant growth of support for nuclear since the last poll was conducted six years ago.

According to the government authorities, the support for the nuclear power industry has been rising since the country's successful bid to construct four APR1400 reactors in the United Arab Emirates (U.A.E.).

The Korean Knowledge Economy Ministry commented: "The recent survey shows that exporting nuclear power plants is not only beneficial to the Korean economy, but it also raises the interest and trust of the Korean public in the overall nuclear industry. Korea's nuclear power export industry should be seen as a net growth engine, and the government will continue to promote awareness among the public."

Evolution and Organismic Communication

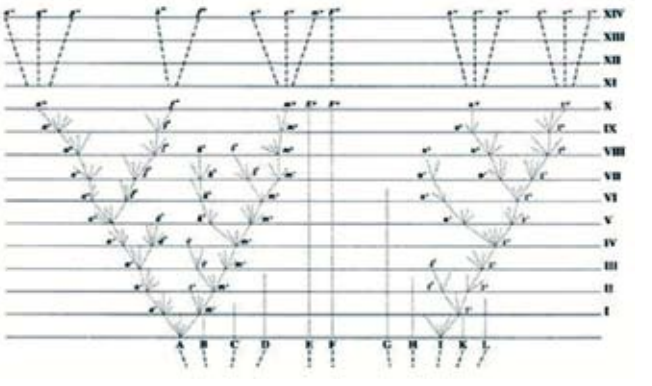
by Jason Ross

According to the neo-Darwinists, the tree of evolution splits and develops in a single manner: Genetic changes conferring a competitive advantage are preferentially passed on to the next generation, leading to different kinds of specialization and a development towards more competitive forms of life (**Figure 1**). I intend to show that this idea is so completely absurd, that it may no longer even be considered as a basis from which to posit "alternative" theories.

This will occur on several counts: the failure of an evolutionary "tree" to correspond to the organismic differences and development actually observed, the great variety of hereditary mechanisms beyond genomic transformations, and, most importantly, the fraud of attempting a mechanical explanation, where each state comes to exist because of previous states.

Additionally, mechanisms of embryological and cellular development and communication will be considered from the standpoint of dynamics and cosmic radiation.

FIGURE 1
Darwin's 'Tree of Life'



The "Tree of Life" included in Charles Darwin's Origin of Species *(1859) represents all evolutionary development as vertical differentiation, excluding any horizontal connections. This caricature of Darwin appeared on the cover of a Parisian satirical magazine of the 1880s.*

The Trouble with Trees

There are many ways of conceptualizing and organizing groups of phenomena. The characteristic of a tree as the scheme is that each element or branch has one unique immediate ancestor. On a structural (or physical) tree, each leaf has one twig that it springs from, which has only one limb it grows out of, coming from one branch, which, like all branches, comes from a trunk. Under this organizational scheme, there is no possibility of branches having joint children, of limbs combining into a new trunk, or of leaves connecting with each other. When a tree structure is imposed on the evolutionary development of life, it is pre-supposed that there is no horizontal development or connection, but only vertical changes,

i.e., changes from organisms to their direct descendants.[1]

An evolutionary tree is particularly ill-suited for understanding the development of single-celled life (e.g., bacteria). An ancestral, generational approach to development is familiar to us in the sexual reproduction of animals and plants, but unicellular organisms do not engage in sexual reproduction in this familiar form. Instead (following the typical, but inappropriate, language), "mother" cells split asexually into identical "daughter" cells, without the need for a "father." Unicellular organisms do, however, engage in behavior that seems to resemble the sexual reproduction of higher species. This takes two forms: one of which appears to be characteristic of the organisms themselves (plasmid transfer), while the other takes place in a larger context (viruses).

In the case of plasmid transfer, one bacterium transfers a piece of its genome to another, by excising a segment and copying it, then physically passing it off to another bacterium which incorporates it into its genome. In this world of what is known as horizontal gene transfer, the application of a tree is questionable. It would only be through the development of different species,[2] incapable of engaging in such plasmid transfer, that the distinct branches of a tree could be formed. However, the not-infrequent transfer of plasmids among what are classified as different bacterial species, forces the characterization of links between species as a net: It is said to be reticulate.[3]

While most viruses only add their own genetic material to their hosts, it is also possible for viruses to pick up parts of their hosts' genomes, and transfer them to others. This introduces a factor beyond direct plasmid transfer between bacteria: viruses are a new vector. The numerous cases of viruses that infect across species lines, indicate again that it is impossible to have branches on a tree that are unable to interact.

Tantalizingly, because their functional cycle lies outside any particular species as such, viruses must be considered as potentially a major factor in the evolution of life as a whole.

Your Father's Eyes; Your Mother's Sweet Tooth

While the genome indisputably plays an essential role in known forms of life, allowing for the easy production of proteins, including those not currently existing in a cell, there is much more to heredity than an organism's DNA sequence. Four examples will be discussed here: introns, gene expression, genomic tagging and conformation, and other biological non-genetic inheritance.

An organism's genome codes for the production of proteins, which perform many functions in a cell (e.g., as enzymes). It is now known that codons, triplets of the base pairs making up DNA, code for specific amino acids, and that strings of DNA are decoded (transcribed) into amino acids, which are then strung together into proteins. While the process by which this occurs is by no means completely understood, enough is known to be able to point out some anomalies. Introns are one example.

In all higher forms of life (plants and animals), a large portion of DNA is not used: In the transcription process, segments of the DNA seem to be thrown away while the remaining pieces are stitched together, and then form the appropriate protein. These non-expressed segments are called introns, while the segments that are then transcribed into their products are called exons. There is as yet no clear understanding of how the transcription process "knows" whether a certain segment of DNA is an intron or an exon. Furthermore, under certain conditions, a portion of DNA may change its role from intron to exon. What would be the immediate competitive advantage in developing a repertoire of potentially expressible introns that are not yet being used?

While the genome can be thought of as a gigantic recipe-book, it cannot itself explain which dishes an organism decides to cook at a given moment. For example, there is no difference between the DNA in the cells that produce your hair and the cells that produce your toenails, but it certainly is a good thing that each cell remembers its proper role! The field of embryology takes up the question of progressive cell differentiation in single organisms, typically with the same DNA in all cells. As the embryo develops and tissues form, the genome is selectively expressed to correspond to the cell's role in the entire organism.

1. As an example, there are many efforts to represent the Indo-European languages with an image of a tree, which, while it has many merits, makes it difficult to graphically represent such linguistic phenomena as the Norman Conquest of England, and the introduction of French words. An example tree: (follow this link).

2. I use this word with concern. A species is defined for higher, sexually reproducing life, as a group of organisms that are able to mate and produce fertile offspring. This definition does not apply to bacteria; there is no universally accepted definition of species for bacteria.

3. As with so many English nouns, scientists are fond of using the longer, Latin-based adjectival form, *reticulate,* instead of the perfectly good English *net* or *net-like*.

Several other factors are at play in determining expression. DNA can itself be "marked" by replacing a hydrogen on a base pair (cytosine) with a methyl (CH_3) group, in a process known as methylation. Methylated DNA is less likely to be transcribed. The histones around which the DNA wraps itself play a role in determining its conformation (shape), which can also be a factor in determining which genes are to be expressed.

Additionally, it is possible to inherit behaviors in a non-chemical-biological way. Behaviors can, by the internal biological environmental differences they engender,[4] alter gene expression. This different behavior, and the resulting change in expressed phenotype, is heritable, without being a change in the genome itself.

Changes in gene expression are also determined by environmental factors outside the organism. In fact, there are plenty of heritable changes that are not genetic in character at all.[5] Changes in cell membranes are passed directly to daughter cells, as are mitochondria.

It is thus possible for evolutionary changes to take place very rapidly, by changes in the set of genes that are expressed, and not simply changes in the composition of the genes themselves. A recent article has demonstrated that higher apes contain a number of genes in common with humans, but the apes do not express them, while human beings do.[6] What role may cosmic phenomena play in triggering such changes in gene expression? What potential exists, waiting to be tapped into?

Returning to viruses, it is remarkable that, in human beings, not only is the majority of our DNA composed of introns, but most of it is viral DNA. The basis for that statement is the lysogenic behavior of viruses. While viruses can "commandeer" a host cell, and use its machinery to reproduce themselves, eventually causing the cell to pop open (lyse) and release copies of itself, they can also hop into the host cell's genome. This process, called lysogeny, allows a virus to remain incorporated into a host's genome, and offer new genetic material. Although it is integrated into the host genome, viral DNA maintains characteristic code sequences revealing its origin.

In a remarkable example of the role of viruses in evolution, the human placenta's syncytium (the region across which nutrients from the mother and waste products from the child transfuse) requires a protein for a singular behavior. The cells of the syncytium lose their cell membranes and merge into a gigantic, multi-nucleated cell. The protein allowing for this transformation is coded for in viral DNA![7] Viruses could be serving as vectors to set up the dynamic for the expression of revolutionarily new phenotypic characteristics, just waiting for the appropriate cue to come into play.

The response of viruses to very specific electromagnetic radiation, particularly in the ultraviolet range, and the many unanswered questions of the determination of which parts of the genome are to be expressed, give the opportunity for extraterrestrial factors to play a role in the evolution of life on Earth.

Evolutionary Leaps and Direction

Here, we reach the epistemological kernel of the error of neo-Darwinism: mechanism. Under a mechanical view, each state of a system can be understood as resulting from the previous state. This rules out teleological considerations and the opportunity for functional dynamic wholes and directions. Several topics will be briefly considered here: the correlation between cosmic radiation and biodiversity, the phenomenon of punctuated equilibrium, and dynamics.

Compelling evidence exists that there is a strong correlation, statistically impossible to ignore, between cosmic radiation incident upon the Earth and cycles of biodiversity, measured as the number of genera alive at a given time period.[8] Such a correlation demands that evolution not be considered as a terrestrial phenomenon, and implicitly forces the entire universe to be the context for any scientific study. The means by which

4. Dietary preferences, for example. Experiments with human mothers fed carrot juice, and pregnant rabbits fed juniper berries, have shown that their young develop preferences for these foods.

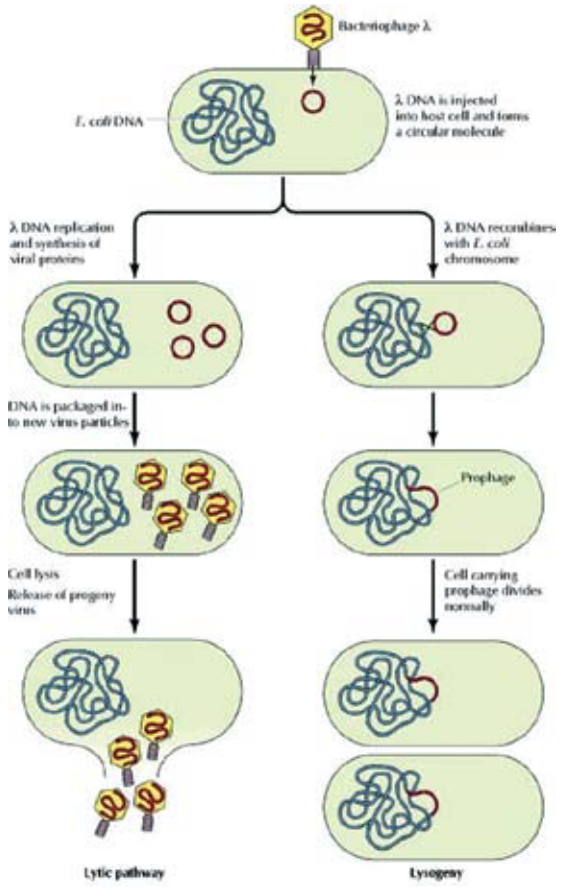
5. Jablonka and Lamb cite M.M. Clark et al.'s work on Mongolian gerbils. Female gerbils, in a male-dominated uterine environment, develop different behavioral characteristics, including territorial aggressiveness, and male-biased litters. Their female children will then be more likely to have male-biased litters, etc. See Jablonka and Lamb, p. 146, and M.M. Clark et al., 1993, "Hormonally mediated inheritance of acquired characteristics in Mongolian gerbils," *Nature,* vol. 364, no. 6439; Aug. 19, 1993, p. 712.

6. For a similar article: http://tiny.cc/gq12v

7. I owe this example to Frank Ryan's *Virolution* (see References). The required protein is coded by the envelope gene of a human endogenous retrovirus, known as HERV-W. The characteristic "long terminal repeat" bookends of viral genomes allow their identification in host genomes. See *Virolution*, and Sha Mi, Xinhua Lee, Xiang-ping, et al., "Syncytin is a captive retroviral envelope protein involved in human placental morphogenesis," *Nature,* vol. 403, no. 6771; Feb. 17, 2000, pp. 785-89.

8. Sky Shields, "Kesha Rogers' Victory Launches the Rebirth of a Mars Colonization Policy": http://larouchepac.com/node/13802

FIGURE 2
Lytic and Lysogenic Pathways of Bacteriophage



www.cbu.edu/~seisen/Viruses.htm

A virus behaving in a lysogenic state integrates itself into its host DNA, whereas one in the lytic state reproduces rapidly without integrating, eventually popping (lysing) the cell. Ultraviolet light can trigger some viruses to switch their role.

the intention, given expression through cosmic radiation, acts on life, have yet to be studied to the degree they warrant. One obvious initial possibility, is the role of viruses. Since some viruses can be triggered to go from lysogenic (dormant) to lytic (active) states by ultraviolet radiation, the possibility confronts us that the role of viruses as evolutionary mediators is orchestrated on a galactic level (**Figure 2**).[9] More will be said on the potential for radiation to direct the development of life in the next section.

Those studying evolutionary history face the emergence of punctuated equilibria of whole-Earth evolutionary stages. Single-celled organisms existed on the planet for more than a billion years before multicellular life finally began to form. In another example, the process known as the Cambrian Explosion (about 570 million years ago), a tremendously yeasty period of evolutionary development, took only 5-9 million years. In general, while different species exist in the fossil record, "halfway-species" are hardly to be found, and many evolutionary technological upshifts (e.g., flying birds) seem hard to imagine as having been driven by intermediate competitive advantages.[10]

Some neo-Darwinists hold that stressful environments lead to more mutations, an hypothesis for which there is some evidence, but even seemingly "close" genes require a large number of changes, which would seem difficult, if they proceeded randomly.[11] Again, if the potential for new phenotypic expressions is being developed, without being expressed along the way, we need not worry about competitive advantages of life along the path of development—life may simply leap.

To truly consider these phenomena with fresh eyes, the mechanistic approach inherited from Descartes, Newton, Darwin, Bertrand Russell, and their ilk, must be rejected. While great success has been made in physics and engineering by the consideration of efficient causes, this cannot be projected upon life processes. (Indeed, point-by-point mechanism is not even true on the abiotic level—see "The Matter of Mind."[12])

Unlike the so-called laws of physics, which describe abiotic goings-on with formulations that are independent of the direction of time, almost all empirical generalizations about living processes have a clear direction to them. But, this direction is not a vector! On the scale of evolutionary time, these processes are not directed as an arrow, from one possible state to another, but are, instead, the development of greater domains of possibility. A new potential may appear to come from the past, temporally, but it is not generated from it, causally. Time is drawn forward, not pushed.

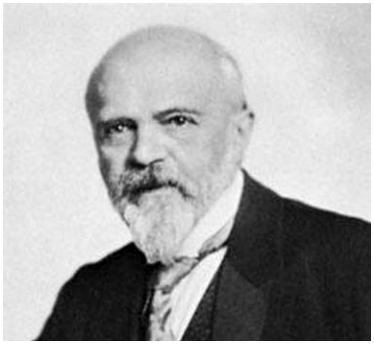
We will continue this theme as we consider organization across cells.

9. Not only does cosmic radiation originate from distant locations, the entire galactic electromagnetic field can play a role in which radiations are directed towards the Solar System at any given time.

10. What use is the development of a wing that is completely non-functional for flight? How would a useless appendage repeatedly be selected for, until it is able to serve a purpose?

11. See Brig Klyce's discussion of the supposed random mutation creating antifreeze protein genes at panspermia.org/neodarm.htm

12. http://www.larouchepac.com/news/2008/12/15/lpactv-matter-mind.html



Since the late-19th-Century experiments of the German biologists Hans Driesch (above) and Hans Spemann (left) revealed that the differentiation of cells as the embryo develops was not determined by the physical composition of the cells, it has been necessary to consider the developing embryo as a whole, and not as a growing collection of cells.

Russian biologist Alexander Gurwitsch hypothesized a biological field to guide the development of cells, and performed studies on one possible means of organization of the field: what he called mitogenic radiation.

Cellular Communication and Poetry

Embryology is a fascinating discipline. Nineteenth-Century experiments revealed that the differentiation of cells as the embryo develops was not determined by the physical composition of the cells. If it were, it would be impossible to switch cells around in a 16-celled embryo, and have the organism, as a whole, develop properly, compensating for the change. Since experiments such as this had been successfully performed by German biologists Hans Driesch (1867-1941) and Hans Spemann (1869-1941), it has been necessary to consider the developing embryo as a whole, and not as a growing collection of cells. Russian biologist Alexander Gurwitsch (1874-1954) hypothesized a biological field to guide the development, and performed studies on one possible means of organization of the field: what he called mitogenic radiation.

In a famous experiment, Gurwitsch oriented two onions, such that the root tip of one pointed perpendicularly at a location on the axis of the other. He discovered that the region pointed to by the first tip had a greater rate of mitotic division than neighboring regions. Experiments with different shielding materials led him to conclude that this mitogenic radiation, as he called it, expressed itself in the ultraviolet range.[13]

Continued work on this subject, with the great advantage of sensitive photomultipliers, has indicated that seemingly all biological processes emit various sorts of electromagnetic radiation. Examples, such as the coordinated development of groups of fish eggs, sympathetic symptoms of disease expressed by cells in optical communication with infected ones, and variations in organized cell behavior, that is induced by the spectra permitted to pass between cell groupings, indicate a great responsiveness of life to such radiation.[14]

In evolutionary terms, it stands to reason that the cosmic radiation environment can play a major role in regulating cellular activity, both directly, as triggering radiation, and potentially, through inducing Cerenkov radiations of appropriate frequencies in organisms. The previous discussion of viruses, and the turning genetic expression on or off by environmental factors, offer no shortage of fields of study to explore the means by which the environment of the galaxy as a whole shapes the development of life here on our current home planet.

It must be emphasized that while factors such as cellular emissions, virus operation, and genome transcription may serve as mechanisms for such development, they are not the cause. As an example of a disposition to move towards a different state, I offer the simple example of a mixture of hydrogen and oxygen gas. Such a mixture in a vessel is not at a thermodynamic optimum: The combination of the gases to form water would be

13. Lipkind, *Op. cit.*

14. See Jonathan Tennenbaum, ``The Biophoton Revolution,'' *21st Century Science & Technology,* Winter 1998-99.

preferred. Yet, such a transformation cannot occur without a catalyst, such as a spark in the chamber.

Although higher apes may have human genes which they are not expressing, and the Cambrian Explosion may have been the letting loose of a great evolutionary potential, such triggered releases are not the same as the process that set up the disposition for such changes.[15] Here we must join with Percy Bysshe Shelley, who lauded the role of the poet in crafting a dynamic, along which thoughts could then run.

No matter what the British biologist Richard Dawkins might claim, there is no proximally advantageous mechanistic cause for the development of such genomic potentials. Indeed, the cause of evolutionary development is just that: a cause. Not being able to find it in the realm of mechanism does not mean it does not exist, but rather, that we are seeking in the wrong place.

We find a process rigorously analogous to this development of the universe as a whole, in the creative advancement of human society. At this point in human and planetary history, it is essential to organize culture around the goal of manned colonization of the Moon and Mars. Without a personal commitment to such a shift—without such a political-cultural goal—it were impossible to make the "scientific" breakthroughs required to piece this matter together. A faulty view of the fertile potential of human nature will, necessarily, analogously, lay barriers to what may seem to be discoveries of "scientific" matters.

To truly be a scientist, one must also be a legislator of mankind.

15. The development of the genome, creating new evolutionary potentials, does not require competitive advantage along the way. The problem of the utility of middle stages of development would not be an issue, to the extent that changes in expressed characteristics actually occur with surprising rapidity.

References

Eva Jablonka and Marion J. Lamb, *Evolution in Four Dimensions* (Cambridge, Mass.: MIT Press; 2005).

Brig Klyce, "Cosmic Ancestry," http://panspermia.org

Michael Lipkind, "Alexander Gurwitsch and the Concept of the Biological Field," Part 1, *21st Century Science & Technology* (Summer 1998), and Part 2, *21st Century Science & Technology* (Fall 1998).

Frank Ryan, *Virolution* (London: Harper-Collins; 2009).

Sky Shields, "Kesha Rogers' Victory Launches the Rebirth of a Mars Colonization Policy": http://larouchepac.com/node/13802

Andrew Young Speaks the Truth

In an Aug. 28 interview with CNN Newsroom on the Glenn Beck rally at the Lincoln Memorial on the anniversary of Dr. Martin Luther King's "I Have a Dream" speech in 1963, former UN Ambassador, one-time Atlanta Mayor, and close King aide Andrew Young made remarks reflecting the best of the Civil Rights movement. These remarks will resonate with those who have been reading *EIR*.

Young said that, although the economic issue was an aspect of Dr. King's speech in 1963, his address was primarily political. "Today, the issue is no longer primarily political. It's an economic problem we are facing now.... I would say it started back in 1973, when we ended what was called the Bretton Woods agreement that created a fair economy for the whole world. Oil was $3 a barrel then. In six months, it was $30 a barrel and went on. Then, the other thing was in the second term of President Clinton, ... the Glass-Steagall Act repeal. Those three events are the events that helped shape our present-day economy. They, I think, caused the housing crisis. I think they caused the imbalance in the banking situation.... What we're seeing [in the Beck rally] is a march of people who really feel frustrated and confused, and they want to blame somebody, but they don't know who to blame, and they don't really understand the predicament we're in."

Asked by CNN, "Does it bother you that this day would be used as a backdrop in which to have that discussion, or to voice concerns or those frustrations?," Young, noting that there were *two* simultaneous rallies, one called by Beck, and the other by Rev. Al Sharpton, replied, "No, it doesn't concern me, because I wish somehow they had been able to get together. As Dr. King put it, the focus should be on making the system work for everybody."

In highlighting the dismantling of the Bretton Woods System and the repeal of the Glass Steagall Act, Ambassador Young was absolutely right. He was also right to point to the common aspirations of the two groups of Americans who came to Washington last week, to cast a vote of no-confidence in the current political leadership of the nation.

In fact, the nearly half-a-million people who, by informed estimates, participated in the Lincoln Memorial rally, did not travel from all parts of the country to listen to Glenn Beck or Sarah Palin, both of whom are regularly featured on Rupert Murdoch's media outlets. Like the mass turnouts to Congressional town hall meetings in August 2009, the Washington rally was a clear demonstration that the mass-strike process, identified clearly by Lyndon LaRouche, is growing in both quantitative and qualitative dimensions.

A growing majority of Americans not only want a clean sweep in the November midterm House and Senate elections, they want President Obama to pack his bags and leave office. Eighteen months into his Presidency, Mr. Obama's every move proves that LaRouche was right, on April 11, 2009, in denouncing the President as a Nero-like narcissist, who will destroy what remains of the American Republic, if allowed to remain in office.

LaRouche has prescribed four immediate steps that must be taken to avert catastrophe: Remove Obama from office, reinstate Glass-Steagall, issue trillions of dollars in Federal credits for NAWAPA and other great infrastructure projects, and establish a fixed-exchange-rate world financial system, through treaty agreements with leading nations, including Russia, China, and India.

With Obama out of office, the other three would follow as naturally as Spring follows Winter.