

# New Breakthroughs in the Development of a Vaccine Against the Coronavirus

by Dennis Small

There are many particular issues which we raised and discussed in the report that's been mentioned—"LaRouche's Apollo Mission to Defeat the Global Pandemic; Build a World Health System Now!" But I'm going to leave a lot of that for the discussion period. I want to focus on a slightly different angle of this, which is, as my title indicates, the new breakthroughs in the development of a vaccine against the coronavirus. The way I want to start the discussion is by telling you a little bit about the organizing that's going on with the youth movement around LaRouche and the Schiller Institute. I think you'll see what I'm getting at over the course of these remarks.

This new round of the youth movement—because the LaRouche movement over decades has, in fact, been a series of youth movements one after the other. Some of us going back a little further than others, but the idea here is that if you want to shape the way a country works, if you want to shape the way our nations



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move, if you want to educate a President, you need to build a youth movement. We have been engaged in internationally coordinated days of action around the world. The youth have played a very prominent role in this, and there's been a lot of back and forth among them.

Most recently, on the 31st of March, nearly three weeks ago, there was an international conference call with Helga Zepp-LaRouche, with youth from nine countries on it—70 or so people—discussing this idea of the urgent need for a world health system as part of creating a New Paradigm to entirely replace the existing bankrupt system. The discussion was quite important and moving for the people who participated. So much so, that there were follow-up discussions in different languages around the world, because not everyone unfortunately was able to listen to Helga, who spoke in English. So, there was a Spanish-language call for example, which drew 25 people on April 1st. Again, the discussion was among Spanish-speaking youth, but from all around the world; different countries—Europe, the Americas, and so on.

Again, the question posed there was, “How do we bring about the kind of transformation that's needed?” We're talking about, as Jason was saying, a total transformation of society and the economy. We need to do today what the Renaissance did in the face of the Black Death of the 14th century. An entirely new system; a new way of thinking; a new cultural, scientific approach across the board. That's the nature of the discussion being held with these youth in particular, and the task being posed to them is, “From among you

must arise the new Cusas, Cervantes, Dantes, Keplers, and so on.” It's a charge which young people who are thinking about how to change the world take on very seriously.

### A New Generation of Renaissance Geniuses

We will be having further discussions among these layers in the period immediately after the Schiller Institute conference which is next weekend. Already, there is—and I won't go into details—an endless process. There's a huge amount of fermenting interest in LaRouche's ideas; educational, classes, discussions going on; demands among these youth to understand what's behind the crisis; what's really going on, what's occurring at this point.

You may be asking yourself at this point, what in the world does this have to do with developing a vaccine for the coronavirus? Well, the issue is not simply that these youth—university and other youth—are a very important part of the political movement to organize for such a world health system. There's something more underlying, deeper, more profound as to what the actual issue is.

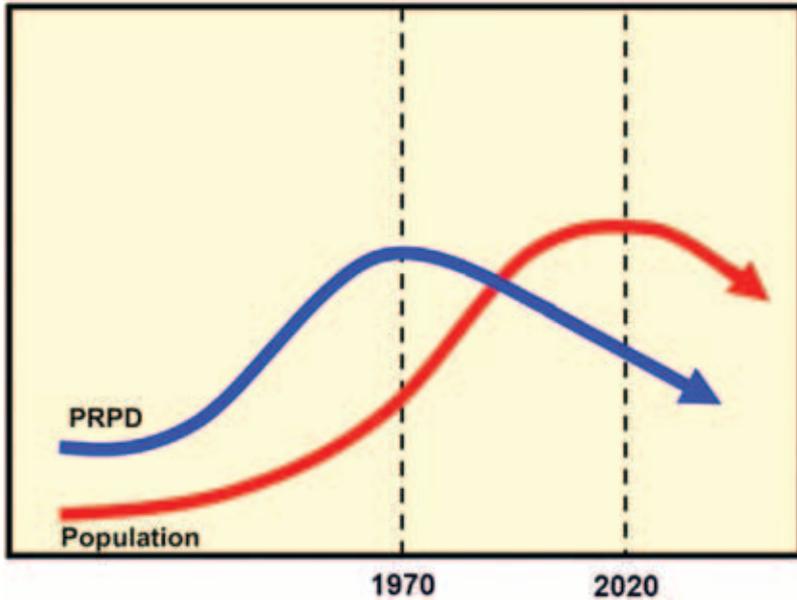
We have to look at what Mr. LaRouche says about the cause of what he foresaw as the pandemics which we are now facing—a pandemic which threatens the very existence of the human species—and there should not be any doubt about that, that it threatens our existence. Both in terms of the disease as such, the financial system is blowing apart, that threatens our existence for sure, when the Fed, Wall Street, and the City of London are engaged in the bail-out of a \$2 quadrillion speculative bubble.

You cannot possibly finance necessary health measures under those conditions. But it also threatens us morally; it threatens us culturally, in that there are conditions arising where people are beginning to contemplate such questions as who should live and who should die—lifeboat ethics. Maybe we have to triage; maybe we can't afford to have older people on ventilators. Those kinds of questions which undermine and challenge our very humanity. So, I think that our species is actually threatened on many fronts.

What's actually behind this? Well, it has to do with exactly what was discussed before: 50 years of policies which destroyed the very basis of human economic development. And in particular, what Mr. LaRouche has described as the *potential relative population density* of

FIGURE 1

**Potential Relative Population Density**



a society; which is nothing other than a measure of the power of a society to generate those creative ideas, scientific, cultural, and so on, which in turn unleash technological advances which permit economic development to maintain a growing population with increased longevity at a higher living standard and with a great propensity for just those same types of creative demands.

Now the problem is, when you have an economic system like the current one, which creates a potential relative population density—in other words, a power of society—which is actually less than that of the population. When you’ve got a population of 7.7 or 7.8 billion people, whatever the latest numbers actually are, but you actually have an economic system that can only maintain 6 billion, what’s going to happen?

**Potential Relative Population Density**

**Figure 1** is a very simple graphic from Mr. LaRouche, which presents what happens when your potential population density, which is the blue curve, after a beginning of a sharp descent in the 1970s after the assassination of Kennedy, the destruction of the Bretton Woods system, and so on, began to plummet to such a point where the human population actually overran and became greater than that relative potential population density.

We have now reached the point where what is threatened is a sharp, dramatic drop in that red curve, the potential relative population density, unless ... We shouldn’t be flattening curves, we should be bending that blue curve of the potential relative population density back up such that we unleash the creative powers of the entire species to maintain not only the current population, but a growing population. If we do not do that, what will happen—and is already happening—is what you see portrayed by Albrecht Dürer. We will, in fact, unleash what Dürer presents in this rendition of the Four Horsemen of the Apocalypse. That’s in fact what we’re facing here.

The issue is actually a little bit more complicated than simply a general lowering of the potential relative population density of the planet. That is one of the

things that LaRouche describes in this paper, this document which Dennis Speed mentioned at the outset, which is a 1985 document called “The Role of Economic Science in Projecting Pandemics as a Feature of Advanced Stages of Economic Breakdown.” He states very clearly that if you lower the nutrition level, as austerity policies have done especially in the developing sector, misnamed “developing” sector, because they’re not developing; they’re under-developing. If you do that, then you are going to get a reduction of the potential relative population density, and you will either have starvation or war or pandemics or all of the above. That’s what we’re getting under the present system.

**When Lower Forms Proliferate**

But Mr. LaRouche also presented a more differentiated picture of how this actually happens. This is the point I really want to focus on, because what he says in this discussion is the following:

Society is an integral part of the biosphere, both the biosphere as a whole, and regionally.... Rather than viewing a deep fall of the potential relative population-density, as merely a fall in the relative value for the society as such; let us examine this as a fall in the relative level of the biosphere including that society.... [T]his must



*The Four Horsemen, from Albrecht Dürer's series of woodcut illustrations for "The Apocalypse," 1498.*

tend to be adjusted, by increasing the role of relatively lower forms of life ... [which] "consume" human and other higher-level forms of life as "fuel" for their own proliferation.... In that variant, human and animal pandemics, and sylvatics, must tend to resurge, and evolve, under certain kinds of "shock" to the biosphere caused by extreme concentration of fall of population-potential.

So, in other words, you have to look at the dynamic interaction of man as part of the biosphere. In fact, a superior part of the biosphere which should be referred to as the noosphere, following the discussions of Vladimir Vernadsky. And when we are so foolish as to allow our—the noosphere's, the creative part of living

matter—potential relative population density to dip below the level necessary to maintain a growing human population, we unleash a process not only in the human population. We unleash a process of devolution of the biosphere itself.

We create a situation where lower platforms of the biosphere actually result and create a more backward form of life dominating in that biosphere. This is exactly what is happening today; this is precisely what we're seeing. If you're looking for conspiracies, and you want to know who generated, who created the coronavirus? I'll let you in on a secret: It was not a lab in Wuhan. It was not Fort Detrick. It might have been Prince Philip, admittedly, because he likes to do these things. But actually, you want to know who created this coronavirus? It was the biosphere. That's because we messed up; we, the noosphere.

How does this work, and what does this have to do with creating an actual vaccine for the coronavirus? A real vaccine, not just for the coronavirus, but for this generalized problem. For this, I want to turn to Vernadsky. This will be very abbreviated, and very compact; intending only to interest you in further study and reflection on these matters.

### **The Unbridgeable Distinction**

Vernadsky, in a number of his works, but in particular in one that I want to refer to, a document that we have published and is available, called "The Problems of Biogeochemistry, Part II" (1938)<sup>1</sup> discusses that there is an unbridgeable distinction between non-living matter—the lithosphere; rocks and stones and such—and living matter. He says this has many features to it. One he refers to as a special geometrical structure for living processes, which is a space he says which does not correspond to Euclidean geometry. He then sets up a tabular form of discussion of this where he says, there is actually an "acute, unbridgeable distinction between living natural bodies and inert natural bodies." He then discovers various aspects of this—right-handedness and left-handedness, which makes a chemical distinction in living bodies;

1. In *150 Years of Vernadsky: The Biosphere (Volume 1)*, an anthology published by 21st Century Science & Technology, 2014, pp. 46-65.

spatial distinctions and so on.

But what I want to get at is the question of time, because Vernadsky brings this up. He says, look, all inert matter, “all physical-chemical processes in inert natural bodies are reversible in time.” In other words, you can just turn the clock backwards in an inert, non-living process. If it’s a chemical process of that sort, you just do it in reverse. He says “the space in which this occurs, the space of Euclidean geometry is an isotropic state.”

He says, in living matter however—the biosphere—time and the direction of time, because it has a direction, is actually irreversible. In other words, you can’t simply turn back the clock. Which in one sense is obvious if you think of the point when living matter becomes dead matter. When a person dies, you can’t turn back the clock; it’s not a reversible process. What Vernadsky says is that this comes from what he calls “a special state of space-time, having a substrate that corresponds to a non-Euclidean geometry.” Further on the question of time, because this has everything to do with how we have to get the noösphere back on top of the biosphere, and get this process under control. Don’t blame the biosphere for acting like a biosphere. Blame the noösphere; blame human society for having ceased to act like the noösphere, and acting instead like a bunch of dumb biospheres. That’s the problem here.

Vernadsky says, on the question of time (this is from notes from 1941-42; it’s a different document). He says:

Time, being expressed by a polar vector in physical-chemical, and biological processes in living matter, is irreversible; it does not go back. That shows that entropy will take no place in the material medium of living matter.

There’s a lot to this in terms of why LaRouche insists on anti-entropic processes, not entropic processes, being the actual nature of the physical universe. Then Vernadsky goes on to describe this [in “The Problems of Biogeochemistry Part II”], and he says that you may well have different states of space-time, because the space-time of living matter is different than the space-time of non-living matter. Then he goes on to develop that the space-time of the noösphere, of creative living matter, is itself also different than the space-time of merely living matter. He says that these are co-existing,

but in fact, “the geometrical state of physical space lies deeper than all physico-chemical processes. But I think it is even more real than they are.”

### **The Geometry of Physical Space-Time**

In other words, there is a geometry, there is a physical space-time geometry which determines the particular form of development which occurs in it. It’s not things that happen in an open, unpopulated space-time; it’s something far more complex than that.

What does this have to do with the coronavirus? Absolutely everything. Because, take a look at the question of time. In the lithosphere, as non-living and inert matter as Vernadsky described, is the arrow of time moving in a direction which is reversible. In the case of the biosphere, as he says and it is the case, time is irreversible; because it’s not simple time. It’s the geometry of a space-time corresponding specifically to living matter; which is why it never arises from non-living matter. So, you have a situation where time is of a different characteristic.

Now, let’s look at the noösphere; let’s look at human society. Time is different. It’s not that of the lithosphere; it’s not that of the biosphere. It’s not simply that time is irreversible; it’s reversible but in a different way. Because, man and our creativity, is the only species that shapes the present by living in the future. We are the only species that can do this, by having a concept, an idea, having creativity of something that must be created. Then you go about and you create it. This is what LaRouche refers to as “time-reversed causality.”

He gave extensive examples of this, which are extremely fascinating, and I refer you to them in music to actually understand Classical music. It’s actually the principle behind humor and jokes. You’ve never heard a dog tell a joke. Dogs can be funny, but they don’t tell jokes. Because jokes are based on exactly this same principle of time-reversed causality, where you have a concept of the future, and you make the present correspond to the transition to that future. That’s what human beings actually are. What distinguishes us, above all other species, is that quality of creativity, and the emotion of love of humanity that accompanies that creativity. This is the issue of the youth movement; this is the issue of youth.

If you want to see a person act like a real human being, look at his or her relationship to their child. Be-



*Lyndon LaRouche being interviewed by LPAC-TV in 2014.*

cause the attitude towards that child, and the attitude towards youth in general is one of un-egoistic love; charity, *agapē*. It's one of selfless love; it's one of the emotion of creativity associated with intentionally making the future better than today. People have that associated with their children. And some people have that associated with all of humanity; that's what *agapē* is.

### **Un-Egotistic Love**

What is a youth movement? A youth movement is the future of humanity. A youth movement is people looking into their own future through the eyes of the youth who will be on Mars; who will be conquering new galaxies; who will be out there doing exactly what Jason was talking about—having these vaccines. There's absolutely no reason to think that our species is going to extinguish itself, unless we act like imbeciles, unless we act like mere biosphere creatures.

That's the issue before us. We have to create, as the Renaissance did with the Middle Ages. We have to create a form of society which is worthy of the dignity of man; a form of society whose economy is based not on feeding a speculative bubble, but channeling credit in the way Hamilton insisted, and the American Revolution put into political practice. Creating an economy which fosters the conditions in which the creativity of every single individual on the planet can develop that quality. That has to be our concept of the future which

informs how we act today.

We will not solve the coronavirus from the bottom up. This will not be settled by looking at small measures here and now and so on. It will only be settled by looking at the totality of where we must go, which is what we present in this paper. What has to be done? We need a world health system. If you think it's far-fetched, you're not thinking like a human being; you're thinking like a Harvard-trained economist. There are very few forms of life inferior to that. Maybe a Chicago-trained economist is inferior; I don't know. That's a subject of worthwhile debate.

But, you have to think of Africa, where there are 1.3 billion people, where 50% of the population still lives in poverty. They don't have running

water to wash their hands in. Fifty percent of the population living in urban areas live in slums. They can't shelter in place; they're sheltering in place with 12 other people, and their place, on a good day, is a tin shack. We have to transform Africa; we have to do it with American methods. We have to build new nuplex cities; we have to create massive health infrastructure. We have to build high-speed rail like the Chinese are doing, and we ought to be involved in doing.

We have to reorganize this planet and its political system. We have to have a summit meeting of the heads of state and government of the United States, China, India, and Russia to get down to business and act like actual creative human beings. And put this existing financial system into bankruptcy reorganization. Wall Street and the City of London will be hollering, but we're not going to hear them; they'll be in quarantine, deep quarantine until they recover. Which will probably take more than 14 days. The rest of the human species can get down to the business for which we have been created. And this entire planet can absolutely be transformed.

That is why the Schiller Institute is so focussed on building a youth movement. That is what the youth movement is going to do, is bring that spirit to the planet. That is why this is the major new development and the breakthrough for a vaccine for the coronavirus and what created it.