

# EIR LaRouche's Triple Curve

## LaRouche Explains How He Developed the 'Triple Curve'

*The following exchange, which took place during Lyndon LaRouche's Jan. 22 Webcast, encapsulates the central problem now on the agenda of the Obama Administration, and all mankind.*

**Question:** Mr. LaRouche, we represent a multi-disciplinary group centered at Stanford, Berkeley, and Princeton which, since early November, has been tasked with working on your 'Triple Curve Function' as a model for economic analysis. Little argument can be made now as to its accuracy in defining our current predicament. However, it's my understanding that you developed this model long before our financial instruments, like derivatives, ever existed. This may be too involved a question for you to address in this venue, but if you can, would you please indicate to us how you were able to forecast this dynamic before the instruments which arguably caused this current crisis were even born?

**LaRouche:** Essentially, I understood economics. That's why. My discoveries in economics were, of course, part of a childhood experience, in a sense. My father was a consultant in the footwear industry and a few other things, and I was never dumb. Got into a lot of trouble for that reason. No, but in 1953, I, in a sense, completed a phase of what, shall we call, my education, and by that time, I had adopted, understood, that we can not possibly deal with or understand economic processes, except by looking at them, first of all, as *physi-*

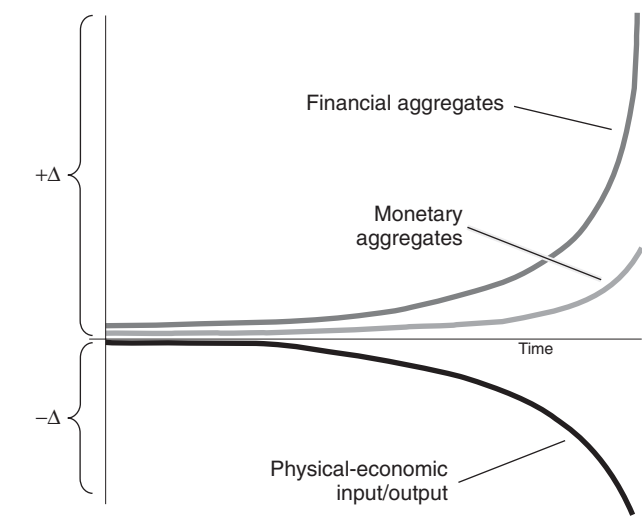
*cal economic processes* rather than monetary or financial processes.

And secondly, that we could not do this unless we abandoned the usual Cartesian-type methods of thinking about economy, even physical economy, which are prevalent in most universities today. That you had to use, you had to apply the concept of *dynamics*, as reintroduced to modern civilization in the 1690s by Gottfried Leibniz, and then the advanced concept of dynamics by Bernhard Riemann. And Riemann's conception, as exemplified by his famous Habilitation Dissertation of 1854, is the key to the competent understanding today, of any kind of physical process, and economic processes as physical processes can be only understood as Riemannian systems. Now, in Riemannian systems, the variable you're looking at, is dynamics, and you could go back to the *Dynamicum* of Leibniz in 1695, *Specimen Dynamicum*, for the definition of this.

The point was that the reductionists in physical science and so forth are idiots, and they should not be allowed—they can repair things, but they should not be allowed to try to design anything. Because, you see, the difference between man and the beast, is that no beast is capable of creating the discovery of a valid universal physical principle. Only an individual human mind can do that. This, of course, is the reason implicitly why Academician Vernadsky emphasized the question of the Noösphere, as distinct from the Biosphere: That

FIGURE 1

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human beings are essentially spiritual, you would call them, because what happens in the human body is a biological entity, apparently, but it has a function that performs intellectually which is not biological. And this function is called creativity, and it is most easily identified, that is, from a scientific experimental standpoint, by the discovery of a universal physical principle. It also has a complementary way of being defined, in terms of artistic composition. But the most common approach is to physical principles.

Now, in physical principle, as in the case of the Leibniz differential, as opposed to all the other versions of the things, the calculus, is that this concept of Leibniz comes essentially from the discovery of gravitation by Johannes Kepler. And what Kepler did was to discover the differential, the infinitesimal, in terms of the characteristic of the planetary orbits, such as the orbit of Earth: that there's no way by quadrature of the ellipse or quadrature of the circle, that you can define the meaning of the infinitesimal in the curvature of the planetary orbit.

### The Harmonics of the Solar System

Now, this was then treated again by Kepler in what is called *The Harmonies of the World*, and in Book IV of *The Harmonies of the World*, he takes the thing up in a very specific way, which is later addressed by Albert Einstein. And that is that the harmonics of the organization of the Solar System are such, that you can not ex-

plain this from a visual standpoint, or from a simple aural system. That is, not from the sense of sight, the use of the function of the concept of the section of sight to portray the orbital pathway, or from the function of sound, simple sound, to define the orbital pathway. But rather, you would have to rely upon something from music, called harmonics. And you realize then, when you do this, that you are dealing with something, a phenomenon, in which neither the sense of sight nor hearing defines the phenomenon you're looking at, the phenomenon of change, which you're looking at, which defines the orbital pathway of the planetary system.

So, Leibniz in this sense, in the 1690s, returned to this conception, because he was a student of the work of Kepler—all modern science, all competent modern science, comes from the work of Johannes Kepler, of physical science. Anything else is—forget it. So, he recognized that the infinitesimal of the calculus, which he had originally discovered based on this appreciation of this work of Kepler, involved an ancient conception which is called the infinitesimal, of dynamics. And therefore, we understand that creativity is always expressed—creativity in terms of physical principle—is always expressed in terms of this kind of dynamics, of the infinitesimal, which has no finite quality, but is simply the appearance of a principle as a discontinuity in a system of action.

So therefore, what the difference between man and the animal is, is that mankind, by discovery of new physical principles, and applying these to production, is able to transform man's power to generate physical values, to increase man's power to produce something. That sort of thing. And so therefore, this kind of concept is the basis for all competent science, all competent economy. All present economists, as taught in universities, do not know this, and therefore they try to figure out, from a financial system, the idea of profit, in terms of a *financial* system or marginal income, in terms of a financial system, not in terms of a physical system. And all progress in science is based on that.

For example, let's take the simple case of simple stupidity among today's typical environmentalists. If you measure power in calories, you're an idiot. If you think a calorie of sunlight is equivalent to a calorie of nuclear power, you're an idiot. Because a calorie of nuclear power is thousands of times more powerful than a calorie of sunlight. Sunlight is very useful, when it comes in the form of solar radiation, in terms of chlorophyll. Extremely useful. Then the sunlight increases its

work, the power increases its work on behalf of man, or on behalf of nature, in many ways. Whereas if you simply use it as power, what do you do? You use up all the sunlight, you make a desert. If you take the sunlight and apply it to plantlife, you make prosperity. So sunlight, in a sense, as a living principle—the chlorophyll is a living principle—actually increases man’s power in and over the universe, whereas the same number of calories consumed as solar power for a solar reactor, is a waste of time. If you have enough solar reflectors, what have you got? You’ve got a desert. Have enough calories, have enough chlorophyll, you’ve got a forest. That’s the difference. And you’ve got human life, and all kinds of things.

So therefore, it is human creativity, individual creativity of the individual human mind, such as universal physical discoveries, the application of these to the productive process in particular, that is the means by which man is able to increase his power to exist on this planet.

So what you have then, you have financial systems, all these financial systems in economy: They’re not worth anything! Because they don’t take into account the most important thing: How you increase the productive power of labor per square kilometer and per capita, in a world in which the key opposing factor is depletion. If you simply try to do the same thing over and over again, and expand the population on that basis, you’re going to run down the planet. If, on the other hand, you use creative methods which involve this concept, which Leibniz defined as the differential, the infinitesimal, and you apply this as in the case of chlorophyll, or the case of nuclear power, which is thousands of times more efficient than the same amount of calories expressed in the form of sunlight impinging on the Earth.

So, what happens is, you find in the history of mankind that all backward societies, including especially societies of slavery, prohibit the slave from developing discoveries of principle. The slave is told to follow in the footsteps of his father, of his grandfather, of his great-grandfather, and not to try to change the way in which he produces. Now, the effects of this is in all societies which are fixed-mode societies, lead to the destruction of the society by itself, simply by continuing to exist. All societies which are successful, take natural resources and increase the power of natural resources by these kinds of methods called discoveries, which reflect the same kind of principle which Kepler recog-

nized in the organization of the Solar System, or that Einstein and others recognized in terms of the way the world is organized.

### **The Factor of Creativity**

So, the problem with economists, generally, is they don’t look at this factor of creativity. They call all kinds of things creativity, including the ability to masturbate in new ways—but that’s not creativity. which is the discovery and use of newly discovered principles which increase man’s power in and over the universe, and the organization of these discoveries in the form of production or other relevant ways to increase the power of man to exist, and to exist in a better way. So therefore, economy is not to be studied, first of all, as financial economy or monetary economy, but to be examined as a physical process, a physical scientific process, with attention to things like life, as in the case of Vernadsky’s work, on life and on the idea of the Noösphere.

So, you’re looking for the principle of change, which distinguishes, on the one hand, living processes from non-living ones, and human processes, which are distinguished advantageously from non-human living processes. And this is expressed by invention, by production, and also by the development of an appropriately improved infrastructure, such as an increase of nuclear power; and the greater the nuclear power in terms of per-square-centimeter power, the greater your productivity.

So therefore, if I go into India, and I find an Indian farmer who is what he is in his skill, and I bring in the factor of nuclear power in the form of enhanced water resources, freshwater resources, which you can only make efficiently from nuclear reactors, as with say the thorium-cycle reactor which is appropriate for the coast of India, then you have increased the productive power of labor of that farmer, without changing the way he produces, because you have changed the conditions under which he produces, and therefore increased his productivity. So, all economy is based on that.

The problem we have, for example, is under the former director of our monetary system, the Federal Reserve system, [Alan Greenspan], who was an idiot and his idiocy has dominated the interpretation of what productivity is in the United States today. Forget Greenspan. Get rid of him. He’s gone. Get rid of what he did. Therefore, we have to have a system which functions not on the basis of counting dollars, or counting marbles, but by counting the increase in the level of

productivity per capita and per square kilometer of the United States, and of other countries. This means investment, capital-intensive investment, in technologies and in modes of production which multiply the effective productivity of the working individual or the producing individual.

Therefore, if you want an economy which is going to grow, you have to have capital-intensive investment. Because to build a nuclear power plant, that costs a bit of money. It wears out over, say, 40 or 50 years, if you maintain it properly. Say a 40-year investment. It's a capital investment, and the importance of the capital investment is not the size of the investment in money. The importance of the capital investment is the amount of the increased yield per moment of action that you get as a result of that power, at that intensity. It's just simply a matter of physical science. You raise the level of energy-flux density of any process, you raise the potential productivity of that process. And you simply have to know enough science, enough physical science and other things, to know how to make that work. That simple.

So therefore, what we need is capital-intensive, long-term investments, concentrating first of all on the basic economic infrastructure. First of all: water, power, mass transportation, and so forth. Make these more efficient. Therefore, even simple labor will be increased in its productivity, because you have created the environmental preconditions for enhancing the effective power of that act of production. And that's the point.

So, for me, it was simple to forecast. My forecast cycles always worked in these ways. The condition I was forecasting about was different. The auto industry forecast I did back in the 1950s, which was unique, was very simple for me. I was simply doing consulting in this area, knew a number of these auto industries, knew how the thing was rigged, and I said—along with other industries, which were doing something similar—this is finished. It's gone. When I find that somebody has a vehicle which has a 24-month useful life, and it's sold on the basis of 36 months, with a giant balloon note in the 36th month, and I find that not just the auto industry is being run that way, but many other industries are being run that way, I can look at the capital factors and tell you at the point, this is going to blow out. It's that simple. And it's that kind of consideration, to give a simple illustration, which I used. It's always the same.

We kept coming back to one condition under Truman, we got to another condition, which is the Vietnam War condition—under the Vietnam War condi-

tions, we were destroying the economy. And we were going to destroy the economy once the policy of Wall Street and London was introduced, the policy against which Kennedy fought in the steel negotiation issue. Once Kennedy's policy was eliminated, the United States was going to go the way these guys were going to send 'em, and it went that way.

By 1968, it was going that way. In 1961, they blew it. The same thing happened in the 1970s. They blew it again: the Trilateral Commission. The Trilateral Commission did the greatest amount of destruction to the United States economy, in terms of rate, of any time in its modern history. Until we got to George Bush, George Bush I, the Emperor George Bush I, and he did a good job in this.

And then you had the effect of the green revolution, in effect, the anti-industrial, the anti-nuclear, all this kind of thing. And again, what we were counting upon as production was fake. The ratio between the cost of production to the U.S. population as a whole, and the benefits of production, was such that we were losing.

And what happened then, is Greenspan came in, and Greenspan said this doesn't work. (This is after the October 1987 crash. It didn't work. Well, I forecast that one.) And what he did is, he went to financial derivatives, self-inflating fake money. And the world economy now is sitting under the weight of \$1.4 quadrillion of absolutely fake money, and under the present conditions, that fake money is growing, like a cancer, while the world economy, in terms of employment and production and goods produced, is shrinking.

So therefore, what you have to do is you have to take the cancer and you have to excise it! The entire financial derivatives bubble created by Alan Greenspan has to be taken out in the backyard and shot! And then buried! That's the solution.

So, there was nothing mysterious about this, because if you think about how these curves function, it simply was to me—I had a Vatican conference I attended, the way it happened, and it was on health care. So, I submitted a report to the Vatican on my participation in that conference, and later, in the following months, I was running for President, so I just published this Triple Curve on that basis. All it was, was a description of what I know about the way the system is working, and the way the system has worked ever since I first got into the business back in 1953, as a successful student of the work of Bernhard Riemann on the principle of creativity.