
WHAT'S THE MATTER? ... NEVER MIND!

An afterthought on [LYNDON LAROUCHE, THE 'STRONG HYPOTHESIS' OF BIOPHYSICS, 1987](#)

by Pierre Beaudry, 11/23/16

FOREWORD: "TEMPTING THE DEVIL"

Devil – What's the matter? Why aren't you happy? Didn't you just win your election?

Trump – I don't know what's wrong with me. I should be happy. I finally got everything I ever wanted. I'm making money, I'm successful, and I'm the President.

Devil – Yeah but, sometimes, when you think you're doing well, you're actually doing badly. Believe me, I know, I've been there. And besides, when you're doing badly, it is better that you not think about it. You never know. You might end up doing something that you'll regret.

Trump – You're right. You never know. I thought I was making progress, but then, I heard LaRouche say: "We are making progress, but this kind of progress does not satisfy the requirements of Mankind. There is something in the universe that is controlling and defining what the universe means as a mission." Hey, I don't see anything wrong with getting the controlling shares of that.

Devil – I don't know. I don't trust this guy LaRouche. He doesn't care much about money.

Trump – Yeah, that's what I also thought. But then, he said he's putting everything on "What makes the universe work." That's big. You can't have it bigger than that. I've always been tempted to go with "BIG." What do you think?

Devil – Never mind!

Figure 1 Lyndon LaRouche: [Mankind Must Change the Behavior of the Universe As Such.](#) *"What we've come to in this change that's hitting now, we're hitting probably a mistaken confidence. That doesn't mean we're doing something bad as such, but it means we have not really captured what the principle is, on which the future of mankind depends...."*



INTRODUCTION

"And what's happening now is, to a large degree, progress, but it's not conclusive.... What you're looking at is: what is the nature of creation. The question is: what is the fundamental purpose of the human being? What is the nature of Mankind as a universal thing? The universe is organized and therefore you have to think about a universe which is intrinsically organized. Not practically organized, but intrinsically organized.... People don't know what makes the universe work."

Lyndon LaRouche, [Mankind Must Change the Behavior of the Universe As Such,](#) November 19, 2016

Tell me what your conception of “matter” is, and I will tell you “what” you are. The fact that mind is not the same as matter has not bothered people much throughout history, because most people never bothered asking themselves: “What’s wrong with my conception of mind?” Here is how Lyn formulated the problem for us thirty years ago, in 1987:

“Today, the principal obstacle to recognition of the simplest of truths about the universe around us is the axiomatic acceptance of the view that reality is composed of objects interacting in empty space and time. The contrary view, first typified for modern physics by the work of Kepler, is virtually ignored, and unknown.

“It is assumed that the name of ‘matter’ ought to be restricted to that which is sensually tangible. Thus, the quality of ‘matter’ is delimited to discrete objects. The quality of discreteness becomes, for such opinion, the definition of ‘matter.’

“In that popular view, occurrences exist only as interactions among discrete particles so defined. Space is assumed to exist, but only as the space either occupied by discrete objects, or separating them from one another. In this same view, the existence of time is poorly defined, such that one might be less certain of the existence of time than of space. ‘Time’ tends to be degraded to a mere epiphenomenon of the occurrence of material interactions among particles.

“Most important: in this view, neither time nor space is allowed to exert any influence on events, except in the sense of distance among discrete particles.

“The definition of matter itself becomes discreteness. Magnitude depends logically, in this view, on the assumption that two bodies may be compared to the effect that one is larger, smaller than, or neither larger nor smaller than the other. Smaller than signifies the existence of some smaller object; the limit of this, at which smaller than ceases to exist, is assumed to be irreducible, elementary form of the existence of matter.

“The properties of interaction among particles in space and time are inferred from both the mere fact of discreteness and the notion of magnitude adduced from blind faith of the existence of such axiomatic discreteness of matter.

“Space and time are each assumed to be infinitely continuous, in the sense of simply linear continuity, and without the property of discreteness. Thus, the ‘immateriality’ of space and time is defined, and so space and time are assumed to be intrinsically inefficient.” ([LYNDON LAROUCHE, THE ‘STRONG HYPOTHESIS’ OF BIOPHYSICS, 1987](#), p.4.)

Now, this is an axiom buster if I’ve ever seen one. Lyn ends by stating, tongue in cheek, that if it is “immaterial,” it is “inefficient.” Are you going to take this lying down? What about your mind? Why is your conception of “space” and “time” so impotent that they are excluded from your conception of matter? What’s wrong with this kind of thinking? How is the universe of matter organized, internally, in accordance with principles? Is the internal organization of matter in accordance with the same principles as those of the internal organization of mind?

1. KANT’S IDEA OF SPACE CAME FROM HIS WRONG IDEA OF MIND

“It’s the interconnectedness, stupid!”

Dehors Debonneheure

Kant defines space as “A formal *a priori* condition for perceiving what is given for the senses as a whole.” ([Reflexionen über Metaphysik](#), AA22, 435.) What’s the matter with that notion of space? The irony of the notion of space which Lyn has identified above as “immaterial” is that it actually reflects the false notion that Kant has of mind, which Lyn had been properly criticizing for decades as being impotent.

Similarly, in a Kantian mind, space and time are empty and impotent mental containers filling themselves with everything that is discrete and linear in the universe. Moreover, nothing in the universe can affect space and time because they are both outside of things that go bang in the night. In that respect, Einstein was right: “God does not shoot pool.”



Figure 2 Kant's idea of God. Pinerest.com

So, why do people look at space as if it was a pool table and God the local hustler? As Lyn noted, in a Kantian world, the idea of space calls for two *a priori* mental deductive assumptions by means of which the mind should be able to locate everything in the universe. These two underlying assumptions are *linearity* and *discreteness*. *Linearity* applies to space and *discreteness* to matter. See my report: [**THE LEAST-ACTION PRINCIPLE OR, HOW TO INCREASE YOUR ENERGY-FLUX-DENSITY**](#). This Kantian view of space has been taken for granted by most people as coming from an assumed common intuition which is that all human beings live in a world in which space has everywhere the same properties.

The first property is that space is *isotropic*; that is to say, it has the same value in all three directions as determined by Cartesian coordinates. All three coordinates are straight line perpendiculars derived from a common central point. The second property is that space is *homaloidal*; that is to say, space is a flat domain where figures may be constructed linearly at any scale in accordance with Euclidean space.

The underlying assumption of such a Euclidean-Cartesian-Kantian universe is that the idea of space must be congruent with sense perception because all of our senses are spatial functions.

This fallacy is confirmed by the Minkowski notion of *spacetime* which serves as the basis for the popularized view of Einstein's Theory of Relativity and is generally represented mathematically as the Minkowski-Raum invariant which reduces time to space. Take their equation:

$$S^2 = c^2 (t_2 - t_1)^2 - (x_2 - x_1)^2 - (y_2 - y_1)^2 - (z_2 - z_1)^2$$

Whereby c is the speed of light, t is the interval of time as measured in any reference system within a quadratic form, and x, y, z , are the space coordinates.

Although t and x, y, z , taken together, should be conceived as expressing the *curvature of physical space-time*, and therefore, should reflect a non-linear notion of curvature, S^2 attributes the same linear value in all four coordinates. Thus, time is just another spatial directionality added to the three Cartesian space coordinates. As a result, what you get is a *four dimensional Euclidean-Cartesian space*. Since the additional direction, t is qualitatively indistinguishable from the other three; the result is that the Minkowski-Raum notion of *spacetime* is not real.

What is wrong with this whole way of thinking is that everything is derived, deductively, from a choice of false underlying assumptions which are established as an *a priori* frame of reference for sense-certainty, and is concocted to appease mathematicians. It's all a fake. Throw it out.

2. THE TWO FALSE UNDERLYING ASSUMPTIONS OF DISCRETENESS AND LINEARITY

“The universe is the organizer.”

Lyndon LaRouche

The great majority of so-called “scientists” take for granted that science has to be logical in its elaboration process, and that all phenomena observed in that

process have to be based on sense perception. Why? Because Aristotle said so; and he was a practical man. Furthermore, to be more rigorous, such knowledge is grounded, as Lyn showed, on *discreteness* and *linearity*. The irony, here, is that the reason most “scientists” have adopted both of these underlying assumptions is because they were the two fundamental requirements for their mathematics to work. Mathematics will not work without those two axiomatic conditions. In other words, if you want to have mathematics, you have to have *linearity* and *discreteness*. That’s the long and the short of it. As Lyn put it:

“The axiomatic assumption *hereditarily* common to all deductive method is the assumption of *discreteness*. This assumption is commonly expressed in the form of statements to the effect that the existence of time and space is *linear*, with no possible quality of *discreteness* associated with space as such or time as such. ‘Matter,’ in contrast to such notions of *space* and *time*, has the essential, assumed characteristic of *discreteness*.”
[\(LYNDON LAROUCHE, THE ‘STRONG HYPOTHESIS’ OF BIOPHYSICS, 1987, p. 9\)](#)

And, the reason why *discreteness* is the underlying choice of axiomatic property for all of matter, and *linearity* for space and time, is because they can be mathematically divided into as many parts as you wish. And, if you divide things into small enough parts that you don’t see any space between them, then, you can make believe they are real. The overriding quality of *discreteness* and *linearity* is in the quality of their *High Definition*. In other words, *the higher the definition, the more you have been fooled*. If you can get real people and cartoon people walking together, hand in hand, you will be the “Trump” of the day. This is how Lyn identified the nature of this fallacy:

“In other words, in the definition of a ‘point,’ in each and every deductive system, the “point” in space or time has the attributed *quality (property)* of being infinitely divisible, without limit; whereas *substance*, or *matter*, cannot be subdivided without limit. *Matter* can exist, according to such species of axiomatic assumptions, only to the degree that there is a limit to our assumed ability to subdivide it into smaller portions. *Matter* can

be reduced, it is assumed, only to some definite, smallest degree, which latter is assumed to be the *elementary* state of existence of *matter*.

“In all deductive systems, all of the possible properties of *matter*, or *substance*, are derived deductively from the bare, axiomatic assumption of the self-evident equivalent of *matter* to *discreteness*. If the proponents of the method do not themselves argue for the existence of such a connection, it can be shown, nonetheless, that those proponents have unwittingly adopted such an assumption as a hereditary feature of all applications of that method.

“Thus, in all deductive method, *percussion action* and *action at a distance* are the only forms in which events can occur within abstract, linear space, and abstract, linear time. These two *properties* of *discreteness* are expressed as a single property, in the deductive method's notion of *force*.

“For this reason, all deductive method is, intrinsically *linear*, and false to reality on that account.” (*Ibidem.*, p.9.)

3. WHY DEDUCTIVE LOGIC MUST BE REPLACED BY LEAST-ACTION

“The missing connection is the benefit of the other.”

Dehors Debonneheure

The specific purpose of Lyn's paper on “*The Strong Hypothesis*” was to clearly establish the boundary conditions between deductive logic and creativity in biophysics. My question is: “Why do these two domains exclude each other?” Lyn asserted outright that if your thinking is essentially dependent on *discreteness* and *linearity*, you cannot be a creative human being. Why is that so? Why is the door to creativity closed to the deductive thinker? Let's take the “deductive” example that Lyn chose to demonstrate this, and see why it is true. Lyn said:

“In deduction, *creation* signifies that something exists at moment B, the which did not exist at an immediately preceding moment, A. ‘Creation’ thus signifies the occurrence of such a moment B. No representation of *a*

process of creation, bridging the two moments, is possible; the term, "creation" is used in all deductive method to signify that which no logician knows, for which he can supply no intelligible representation. Thus, in the mouth of the logician, the verb *to create* is a meaningless one." (*Ibidem.* p. 10.)

In other words: "It is one thing to say it, it is another to do it." If you ponder on this statement for a moment, you will discover that by considering the two moments A and B, separately, in the Kantian modality that I have indicated above, those two moments must be separated like two different moments of time. This implies that once B exists, A has passed; otherwise you have a contradiction in which B is also A, which would mean that two different moments exist at the same time. Leibniz used to enjoy playing with such logical traps that he called the principle of non-contradiction. However, just for the fun of it, let's make believe that we were to "actually" replace this deductive principle by a better principle; that is, by the least-action principle of the Peace of Westphalia?

Take a situation where you need three moments: A, B, and C, whereby A becomes congruent with B and C, only when the difference between B and C is eliminated. *That's how the process of creation of physical space-time works. The point that Lyn is making is that logical deduction is incapable of representing such a process of creation, because the only way to represent it is by generating a performative form of constructive geometry, whereby it is the interconnected congruence between ideas and actions which becomes the only proof of their validity.* That's why Lyn said that it is only by dumping the deductive principle and replacing it by a Cusa kind of "Maximum-Minimum" principle of least-action, that you can approximate such a creative process. As Lyn demonstrated:

"Although it is now clear enough, that the geometry known to Plato et al. was a *constructive*, or *synthetic* geometry, rather than a deductive system, it is meaningful to state, that modern constructive geometry begins with Cusa's *De Docta Ignorantia*. Cusa's 'Maximum-Minimum' principle, in that location, is not merely an *isoperimetric theorem* principle; it is the first modern statement of a universal *principle of least-action* in physical

space-time. *The least perimetric displacement subtending the relatively largest area of volume generated by that action.* It is also, more generally, a solution to the classical Parmenides problem, of rendering intelligible the efficient interdependency of microcosm and macrocosm.” (*Ibidem.*, p. 12.)

And, there you have it: that is the axiom buster among the three A, B, and C. This is the way to generate *a maximum amount of work with a minimum amount of action.* In other words, what is required for the mind to free itself from deductive logic, and become creative, is to apply itself to the reality of such a *performatively efficient triply-connected form of least-action.*

This is the reason why, adopting the curvature of *least-action* of the Peace of Westphalia of 1648, is the only way to bridge any two different moments of change in physical space-time. This also establishes the crucial link that the human mind requires to connect Macrocosm and Microcosm. Moreover, Lyn added this fundamental conditionality:

“Starting from this notion of least-action, all intelligible forms of constructible existence in visible (discrete manifold) space are generated without additional axioms or postulates, and by methods excluding any employment of deductive methods. All notions of axiomatic discreteness of ‘matter’ are excluded; this elimination of axiomatic discreteness forces us, as Kepler exemplifies this for the foundations of comprehensive modern forms of mathematical physics, to eliminate the relatively distinct notions of *matter*, *space*, and *time*, and to introduce *physical space-time* instead.

“It is to be emphasized that Cusa's 1440 *De Docta Ignorantia* already establishes a true ‘non-Euclidean geometry,’ one entirely distinct in notions of method, as well as axioms and postulates, from the deductive system of *Euclid's Elements*. This non-Euclidean (constructive) geometric method, premised upon no assumption but the principle of least-action, is the underlying distinct principle in method within the more fundamental qualities of work of Pacioli, Leonardo, Kepler, Desargues, Fermat, Pascal, Leibniz, Gauss, Riemann, et al.

“In *constructive* geometry, as in the elementary form of *synthetic geometry* elaborated by Professor Jacob Steiner et al., the existence of ‘points’ and ‘straight lines’ is constructed, thus eliminating all assumptions of *linearity* and *axiomatic discreteness* embedded in all deductive method. Multiply-connected circular action suffices to generate both of these linear forms from nothing but continuous circular action; both points and straight lines appear as *singularities*, *discontinuities*, or *boundary conditions* generated by continuous least-action. ([LYNDON LAROUCHE, THE ‘STRONG HYPOTHESIS’ OF BIOPHYSICS, 1987](#), p.13.)

In other words, if you apply such a creative conception of least-action to a *New Peace of Westphalia* process for the world today, you will create the best conditions to implement a *win-win* policy of economic interconnectivity for the whole of mankind and you will be able to travel in a *force free* manner beyond this planet. See [Annex D- APEC Connectivity Blueprint for 2015-2025](#).

The solution, therefore, is to apply the LaRouche condition of this *force-free action* in a manner such that “*Whatever we say of the fundamental principles of astrophysics must be shown to be true for microphysics and living processes as well, and similarly for all combinations of the three.*” ([LYNDON LAROUCHE, THE ‘STRONG HYPOTHESIS’ OF BIOPHYSICS, 1987](#), p.19.) Prove the truth of this reality to yourself by solving the following *force-free* constructive geometrical problem.

CONCLUSION: CONSTRUCTING WITH A SIMPLE PERFORMATIVE- SELF-SIMILAR-CIRCULAR-LEAST-ACTION

How to construct a Platonic Solid with self-reflective-triply-connected-circular-least-action alone.

In 1987, Lyn proposed to replace deductive logic by the principle of circular and spiral least-action. But, how could that be done? After some years, I realized

that people had difficulty with this idea of least-action because they were looking for something complicated, when, in fact, it is really child's play. (See my report: [LANTERNLAND](#)). Here is an example of how easy and simple constructive geometry can be.

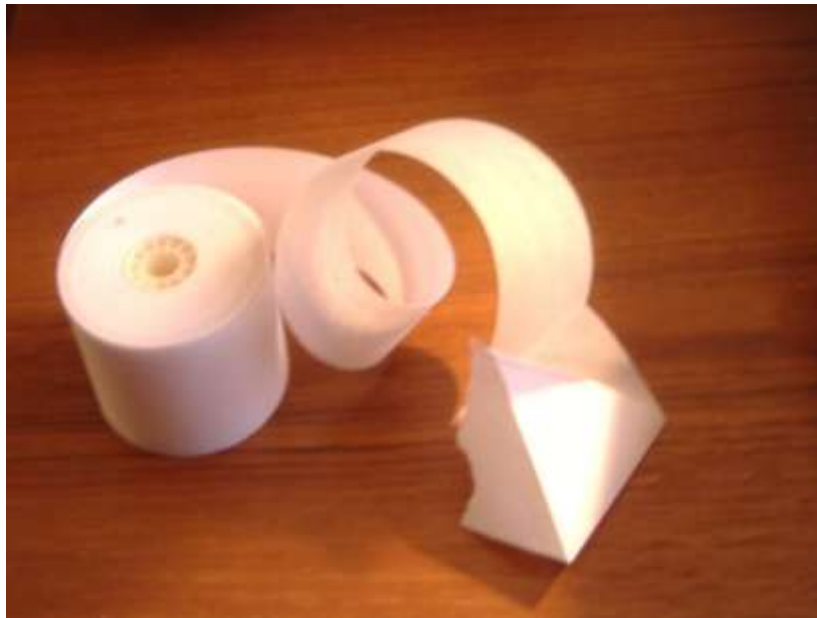


Figure 3 Take a roll of calculating machine paper and tear up a strip about a foot long.

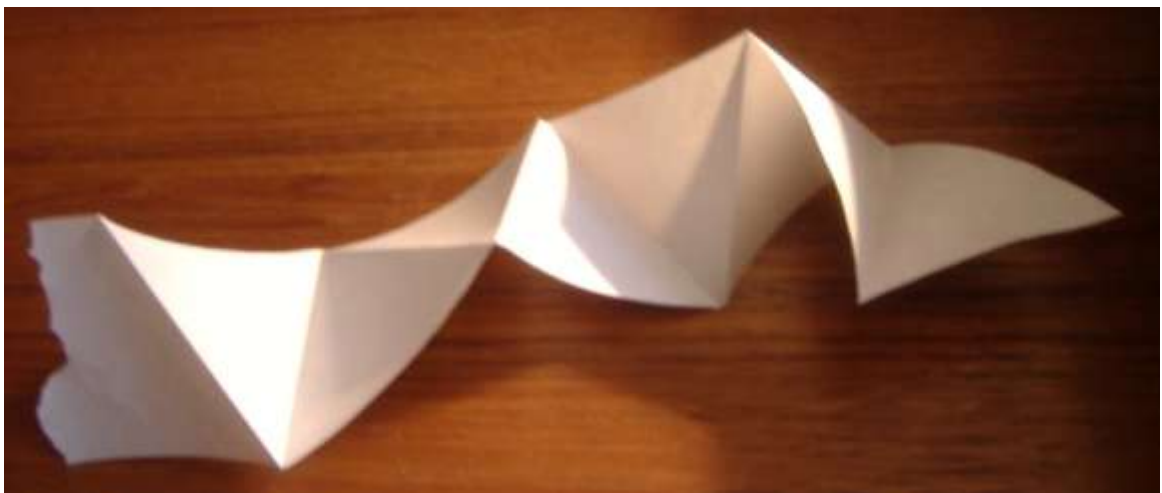


Figure 4 Fold the strip, back and forth, into eight equilateral triangles.

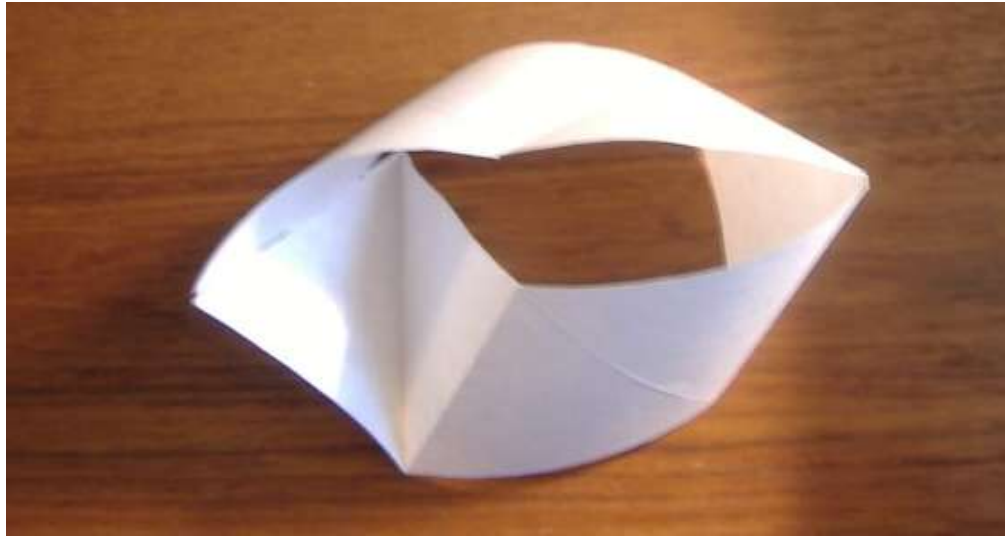


Figure 5 Turn your construction into a Moebius Strip and scotch-tape the two ends together such that the outer-side of the first triangle connects and closes the loop against the inner-side of the last triangle.



Figure 6 Rotate the entire closed strip on itself until the least-action creates a tetrahedron.

Going through an axiomatic change is a similar child's play, because this is how a child's mind works. Now, compare what Lyn has been saying in 1987 with what Xi Jinping said at the APEC CEO 2016 meeting on November 19, 2016, in Lima Peru:

“Connectivity unleashes potential and underpins interconnected development. We need to build a multi-dimensional connectivity network that covers the Asia-Pacific. After eight years, Latin America is again playing host to the APEC meeting. We should seize this opportunity to align connectivity programs of the two coasts of the Pacific to support and boost the real economy in the whole region. We should follow up on the Connectivity Blueprint adopted at the APEC meeting in Beijing in 2014 and strengthen physical, institutional and people-to-people connectivity, so as to make the Asia-Pacific fully connected by 2025.” (Xi Jinping, [Enhanced Partnership for Greater Momentum of Growth](#).)

VOILA!