Physical economy is the basis of human knowledge

by Lyndon LaRouche

The following is the third and final part of a series entitled "The Science of Physical Economy as the Platonic Epistemological Basis for All Branches of Human Knowledge." Parts 1 and 2 appeared in our Feb. 25 and March 4 issues.

4.0 Economics as the only science

The preceding successive phases of this presentation have prepared us to introduce now observations which many readers will find the most shocking of all. At least, that will be a rather common initial reaction. We shall present the argument supporting the following such conclusion: *that all valid human knowledge rests upon demonstrations found empirically within the domain of physical economy.* As a first step, situate that proposition within those outlines of a *theory of knowledge (epistemology)* which are implicit in our arguments here thus far.

Thus far, we have indicated six levels of human knowledge, the five lower among which are accessible in intelligible form as human knowledge. These may be represented in the following order of ascending rank:

1) The lowest, nearest to bestial level: sense-perception, naive, usually irrational reaction to experience.

2) Formal knowledge, as cohering with the notion of judgment of experience by means of an axiomatically "hereditary principle."

3) Individual, valid, axiomatic-revolutionary discovery, overturning a body of formal knowledge: *hypothesis*.

4) An ordering-principle, or Cantorian *type,* generating a succession of valid hypotheses: *higher hypothesis*.

5) The notion of an in-some-sense orderable ranking of differing qualities of *higher hypothesis: hypothesizing the higher hypothesis*.

6) Implicit certainty of the existence of a higher, non-temporal order subsuming hypothesizing of the higher hypothesis, as higher hypothesis subsumes hypoth-

Lyndon LaRouche (second from left) receives the diploma of his election to the International Ecological Academy of Russia last October, at the Feb. 18-21 Schiller Institute and International Caucus of Labor Committee sponsored conference in Washington, D.C. Prof. Taras Vasilievich Muranivsky (left) and Prof. Wolter Manusadjan (right) are vice president and president, respectively, of the academy. LaRouche is joined by his wife, Helga Zepp-LaRouche. This article is the fuller elaboration of the speech he gave at that conference.

esis: Plato's *The Good,* and Cantor's *absolute.*

On the premise of the argument elaborated during the preceding pages of this report, we focus attention upon a more restricted part of this epistemologist's array, the three Platonic "levels" of hypothesizing. Now that we have listed the six levels of what might be regarded as the range of knowledge, we limit our use of the terms "knowledge," or "human knowledge," to signify the products of a more or less successful use of consciousness of the intelligibility of the three levels of hypothesizing.

For the case of simple *hypothesis,* the first, and simplest, of the three levels of hypothesizing, the implicit relationship to an increase in physical productivity, per capita and per square kilometer, was adequately indicated earlier here.

For the second case, *higher hypothesis,* consider one specific *type* of such a scientific method of discovery.

For this case, employ Eudoxus' method of exhaustion, as used by Plato, Archimedes, and Cusa, among others. Reference, as a model of the use of this method in generation of hypothesis, the cases of Plato's *Parmenides* dialogue and of Cusa's application of Plato's *Parmenides* paradox to solve the paradox of Archimedian quadrature. This signifies, implicitly, that every proposition to be tested for an included paradox should be reduced to its constructive-geometric form of representation, and that representation then driven, by the method of exhaustion, to beyond its limits. The existence of a geometrically defined ontological "species gap" between that function and some asymptotic boundary, at that limit, defines the relevant paradox.

Hypotheses defined by aid of employment of this method constitute a *type,* a type which corresponds to a specific way of generating a series of higher hypotheses, an *higher hypothesis.*

In geometry generally, there is another, distinct principle, also used by Plato, and by Johannes Kepler and Carl Gauss, among others. It may be used in conjunction with the method of exhaustion, but represents a distinct type of generative principle. This may be described as "the quantum field principle," as illustrated by the use of geometrically ordered distribution of singularities by Kepler to determine the available orbits and their harmonic relations, or the seemingly "magical numbers" prompted to our attention by Dmitri Mendeleyev's discovery of the Periodic Law of chemistry.

The second is closely related to a third principle, pertaining to the differences in ordering subsumed by the distinction between positive and negative curvatures. This was stressed by Kepler, but was already treated implicitly by Plato's "quantum field" treatment of the dodecahedron and Golden Section.

Each of these available choices of generative principles may be employed, singly, to generate the quality of ontological paradox implying an hypothesis. Also, for example, the first two might be employed in combination. The more numerous the valid such generative principles so employed, the greater the formal power of the resulting type of higher hypothesis. This comparison is an obvious choice of example of *hypothesizing the higher hypothesis,* as adumbrated for representation here.

This imagery leads us to recognition that the sole source for certainty and intelligibility within the totality of human knowledge is a view of physical economy which corresponds to such notions of hypothesizing. This is the epistemological consideration which implicitly underlies a competent science

of physical economy.

As Genesis I specifies man's given power and corresponding responsibility to be the master of this temporal universe, so mankind must measure its relationship to that universe.

This injunction of Genesis I is proven to be no unintelligible command, as if to be carried out in blind faith by the obedient.

It is a fully intelligible instruction, thus a knowable truth fully binding professed heathens, too. This certainty is imposed upon all rational persons, as we are able to demonstrate absolutely the manner in which individual man's power of creative reason sets mankind apart from and above all other existences within this temporal universe. It is therefore the intelligible principle which Gottfried Leibniz recognized as *natural law*. This is the basis for the lawful authority of a universal morality, as even the professed heathen must recognize this to be the case.

As man must give an accounting for the behavior both of his species and of himself individually, so must we constantly judge our society, and ourselves, in every facet of our activity and existence. This, reason instructs us that we must do according to such implicit, and specific requirements of universal natural law.

That use of the term "accountability" may be seen as interchangeable with the properly defined term "knowledge." That signifies *knowledge of mankind's relationship to the temporal universe*. That also signifies, for each of us, our individual relationship to the process of influencing the relationship to this universe of our nation as a whole, of mankind as a whole. That means, that there can be no true knowledge without such a sense of accountability for mankind as a whole, as that sense is imparted to us by the power of creative reason.

That means, therefore, *knowledge of hypothesis*. That means, therefore, *knowledge of hypothesizing*. That means, therefore, *knowledge of hypothesizing the higher hypothesis*. That requires, therefore, knowledge of some yardstick, by means of which principle of ranking the internal ordering of the process of hypothesizing the higher hypothesis may be rendered efficiently, morally intelligible.

Example: today's global crisis

Up to the point of this concluding section of the report, we have emphasized the approach by means of which the correlation between scientific progress and increase of mankind's standard of living and potential population density may be rendered efficiently intelligible for guiding education and other indispensable policy-shaping practices. We have situated that aspect of the subject-matter, physical economy, in respect to a presently ongoing, global collapse, a seemingly unstoppable collapse into a looming void of global "new barbarism," a void which is the extinction of all civilization as we have known it.

Let us underscore a few, perhaps pedagogically indispensable, illustrative points from among this crisis's painfully embarrassing personal implications for many ordinary citizens of various nations.

That looming smell of something akin to Apocalypse does not permit us to limit blame for the world's presently worsening misery to accusing a relative handful of politicians, or some analogous scapegoat. The problems before us are not the result of "mistakes"; the failure of policy-shaping which presently grips the entire planet is of a systemic, global, and axiomatic quality. The evidence presented by this crisis, is that the human race, virtually in its entirety, has failed; the existing body of generally accepted public opinion, in all nations, at every level of society, and of virtually all persons, has caused this present crisis.

The fact that we might attribute "blame," in the sense that we can show how this matrix of pathological opinion came to rule virtually all of this planet, top-down, does not permit the use of the term "innocent by virtue of ignorance" to excuse the unwitting citizen. That citizen may indeed have adopted destructive forms of popular, and populist opinion out of blind ignorance and pathetic suggestibility; but, his support, even his mere toleration of such dogma, has contributed to allowing the crime against all humanity which those beliefs have brought about.

If one is driving an automobile to destruction under the influence of intoxicants, one gains no escape from the laws of nature by pleading momentary ignorance. If one chooses to believe that "free trade" is the naturally superior policy of all humanity, and millions of people in some foreign country die of hunger and disease because of the imposition of "free trade" upon that region of the world, you who support that idea have guilty complicity in the suffering and death of those millions. That person is fully as guilty personally as the drunken driver who kills a pedestrian.

The intended thrust and relevance of this argument is the following. If a catastrophe to society is brought about by the deliberations of a few, using principles unknown, or not tolerated by, the majority of the society, then the error of opinion which must be corrected should be designated accordingly. However, if the disaster is caused by application of beliefs which have been generally supported, or even merely tolerated by, the majority of adult opinion, then the majority of that nation is to be blamed. We must say, under such a circumstance, that the condition cannot be cured without exposing the criminal disposition inhering in the relevant aspects of the prevailing public opinion of that nation's majority. So, today, for example, everyone who supports those immoral ideas called "free trade" is guiltily complicit in respect to the ongoing destruction of civilization as a whole.

That illustrates in part what we signify by our use of the term "systemic."

Those of us who stand as candidates for election, or have visible claims to expertise of some sort or another, are constantly confronted with the question: "What is your alternative?" respecting this or that proposed or existing policy. In respect to the effects of today's "free trade" dogmas,

my own answer to a demand that I politely propose "alternatives," rather than denounce, is: "When you make the demand, 'What is my alternative?' I tell you that you are being dishonest; you are evading the implications of the issue which you find morally demanding upon yourself. If I see a man sexually abusing a child in the street, and someone asks me, 'What alternative do you have to suggest to that man?' I would react in the same way as I do to the evasiveness of your diversionary question now." When a murderous or suicidal policy is axiomatically wrong, it is immoral to demand any alternative to promptly defying, uprooting, and destroying that axiom of belief.

For example, the evasive question: "Destroy 'free trade'? What, then?" In the case of the United States, for example, the mere elimination of "free trade" means a "relapse" into the wonderfully successful "protectionist," anti-John Locke, anti-Adam Smith, Leibnizian principles reflected in Article I of the U.S. Constitution, and U.S. Treasury Secretary Alexander Hamilton's, and also Friedrich List's explication of those principles. One does not require a documentary proposal of new alternatives to remove a fish-bone from the throat.

Whence comes the global influence of those ideas which are responsible for the self-destruction which threatens imminently all nations and peoples, including the United States, today? To this point, it could be proven beyond intelligent rebuttal, that the spread of the ideas of John Locke, through the political victories of the British Empire since 1763, has established the selection of those popularized ideas whose influence is responsible for the ongoing global collapse today. This includes, as examples of that phenomenon of influence, former British colonies, which have established their nominal political freedom, but which administer their own nations "quite independently" under the influence of ideas premised axiomatically upon the multicultural principles of British empiricism.

Yet, halt there for a moment. Look at that post-industrial rust-bucket which is today's post-Harold Wilson, post-Margaret Thatcher Britain. With that set of facts before one's eyes, could anyone be so naive as to insist that the ruin of the world has been conducted to the advantage of the Celtic-Anglo-Saxon population of the United Kingdom, the ordinary British person's in-gathering of Locke's Life, Liberty, and Property? Yes, the hallmark of the global self-destruction in progress is the spread of the influence of British empiricism into places which include India, Argentina, Nigeria, Brazil, and the United States today. It must also be emphasized, as well as merely granted, that this spread of empiricism came through such signal events as London's participation in the victories of 1763, the London-directed Jacobin Terror in France, the 1815 Congress of Vienna, Britain's use of the Russian revolution of 1905 to defeat the policies of Count Sergei Witte, its use of its protégé Adolf Hitler to overthrow the 1933 Kurt von Schleicher government of Germany, and Britain's geopolitical wars against threatened economic cooperation in northern Eurasia, World Wars I and II. That is all true and useful information, but it does not address, and might be misused to divert attention from, the underlying issue posed by the present, systemic global crisis.

The British Empire was not some autochthonous development thrown up by the ranks of the people of England, Wales, Scotland, and Ireland. It was imposed from abroad, by the most powerful force in the Mediterranean of the time, the world-capital of slavery and usury, Venice. During the period from 1582 onwards, London, like Rotterdam, was taken over by the neo-Aristotelianism of Padua, the cultish, hesychastic "spiritualism" of Gasparo Contarini's circles, and the family financier trusts of Venice's *Giovani* faction. These Venetians around the notorious Paolo Sarpi came like a Hollywood filmmaker's "body-snatchers," to take the souls of Englishmen and turn some among them into privileged replicas of Venetian oligarchs. The ideas of these Venetians were essentially a continuation of the pagan Roman pantheon, of the former Greek and Hellenistic center of Mediterranean usury and kookery, the Delphi cult of Apollo, and of the evil usurers and slave-traders of Baal and Moloch before that.

The issue here ought to be more or less readily intelligible. It is not the exertion of physical force by men which rules mankind. Mankind is ruled by the force of ideas, by the interplay of those contending ideas which, acting through the minds of men, thus control the physical conduct of society.

Biologically, there are no intrinsically good or intrinsically bad nationalities; the term "race" is essentially a meaningless one, which would mean nothing but for the regrettably persisting lunacy of belief in race by some deranged creatures. The human race is made up of nothing but individuals who share in common that spark of creative reason which defines all persons as in the image of the Creator. There are only good versus bad ideas; there are some very evil axioms of belief proliferating around this planet still, including bad ideas whose germ is as old as Shakti, Ishtar, Baal, Dionysius, and the old whore Gaia's Apollo Cult of Delphi.

The Venetian "body-snatchers" conquered the general opinion of numerous British institutions, spreading those anti-Renaissance ideas known as empiricism, usury, magic, and racism. This was the foundation for the ideas of such later British radicals as Adam Smith, Jeremy Bentham, John Stuart Mill, John Ruskin, Aleister Crowley, Bertrand Russell, and H.G. Wells, and John Rawlings Rees's London Tavistock Clinic. The now-departed imperial institutions which formerly flew the Union Jack were temporarily the vehicle through which the generally accepted authority of these ideas was spread. The acceptance included, today, the majority of the establishments and textbooks of most nations of this planet.

Those times have passed. Today, Britain's elite has collapsed like old Sodom and Gomorrah. The nineteenth-century Britain has become an inglorious rubble, a shrunken, pathetically mewling relic of its departed imperial past. The trouble is, the disease spread by that departed empire has a cancerous life of its own. The grip of those entropic Venetian

ideas upon the decision-making of governments and international institutions has efficiently ensured that the decisions carried into practice are, at least predominantly, a force for destruction of civilization as a whole.

Example: today's official lies

The evidence of global physical-economic collapse, which we identified in the beginning of this report, is indisputable statistically, and is evident to any mature citizen who compares the bill of consumption of 25 years ago, and the photographs of places from that time, with the corresponding evidence from today. New York City, for example. Yet, we hear repeatedly of recoveries which in fact never occurred; the only evidence which might appear to corroborate those glowing reassurances is the cancerous growth of purely speculative forms of financial liabilities.

The correlated feature of this same recent history, is the record and results of successive, post-1965 changes in policies. Of this one might say, "The more things change, the more they remain the same." Things become worse. The problem is acknowledged, and a reform is promised. A reform is then made. Things become worse. Worse, and then worse, and then worse: So it has gone, from reform, to reform, to reform, for most of the world, for about 30 years. The problem does not lie with any one policy, but with the axiomatic assumptions which underlie the way in which successive reforms in policy are made. The banner upon which such U.S. reforms, always for the worse, have been made, is emblazoned, "Democracy and Free Trade."

Examine briefly the fraudulent way in which the word "democracy" has been employed. For this purpose, focus for a moment on the turning-point in the Civil Rights campaigns of the 1960s.

Until the Rev. Martin Luther King was assassinated, the Civil Rights movement was moving to reestablish those notions of *legal right under natural law* which were engraved in the plain intent of the 1776 Declaration of Independence and 1789 Federal Constitution. If an African-American were denied such rights, then that right did not really exist as a right for anyone; if, on the contrary, anything which African-Americans won as a right, became thus reestablished in fact as a right for every person. Then, "bang"; it ended. Immediately, that spring of 1968, the Ford Foundation of McGeorge Bundy and Dr. Kenneth Clark intervened at Columbia University campus, and elsewhere, to mummify the Civil Rights movement, and replace integration with a new guise for old "Jim Crow," a program of recruitment to an African-American "theme park" in an all-American multi-cultural human zoo.

In Britain, the Labour Party provided socialized medicine, until the private competition was no longer an available alternative, and then the trap was closed upon the victims who had formerly thought themselves beneficiaries. I have no reason to doubt the sincerity of President Lyndon Johnson's support for civil rights; he sponsored a ticket on the train of progress for all Americans, African-Americans included. What happened after Dr. King was assassinated? They went to the ticket-window, they took their tickets, they boarded the train, they found seats awaiting them; but, the train never moved. The railway line had just been closed down by the authors of the newly introduced "post-industrial utopia." Outside that train gathering dust, were the recruiters for the Ford Foundation's segregated, all-African-American theme park, offering recreational drugs to lessen the pain.

That is what the word "democracy" has come to signify in the mouths of the propagandists for "Project Democracy." "Free trade" meant, since 1978, deregulation of transportation, deregulation of banking, and, after 1982, deregulation of those who loot public and private pension funds with "junk bonds."

Those are sufficient illustration of the point to be made. In each case, and the almost limitless number of analogous ones which could have been listed, the problem is located not in the fallacies of a particular law, or other form of policy. The problem is located in the generative assumptions *underlying* each of a succession of policy-reforms; the problem lies in the "hereditary principle" of presently accepted modes of policymaking.

In each case of this type, statistical reporting on the state of the economy, or others, the fault in the standard of measurement for analysis, and the flaws in the type of policy-shaping employed to design reforms, are usually coordinated in character. In economy, as in the example referenced, the flaw is often to substitute nominal values, such as notional valuations of capital in monetary terms, which is a most common cause of statistical hoaxes. Related kinds of axiomatic fallacies are the general rule for most cases.

Any case of this sort may reflect one, or a combination of two, types of fallacy in the policy-shaping assumptions used. Either the axiomatics are disastrously wrong from the beginning, as is true for "free trade," or a limit has been reached, in which region what was tolerably successful under earlier conditions is no longer tolerable. In these kinds of cases, there is some useful resemblance to the notion of Platonic higher hypothesis, at least in the negative sense. It is the generative principle of faulty policy-shaping which must be altered, axiomatically. Unless that is done, attempts at reform will proceed in no direction but from worse to still worse. The solution is to apply the principle of higher hypothesis.

4.1 Economics and higher hypothesis

The increase of mankind's potential population-density is the yardstick to be applied to control the choice of higher hypothesis. For our purposes here, we may approximate "potential population-density" by increases in the physical-economic productive powers of labor, per capita, per household, and per square kilometer. We include implicitly in this education, medical care, scientific research, and engineering services to production, physical distribution, and basic economic infrastructure. This does not include all aspects of required consumption and productivity, but it includes most of the total, and is the most characteristic content of increase of

potential population-density generally.

The implied proposition is, that increase of potential population-density, as I have defined it, is in some way a basis for proof of a type of higher hypothesis. Since so-called "fundamental," or, better said, axiomatic-revolutionary discoveries in physical science are the most typical source of increase of the physical productive powers of labor, it is also an implied proposition, that increase of potential population-density provides the metrical standard for judging choice of scientific method. Perhaps this appears an extremely radical claim; put that to one side for the moment. Examine the salient implication of the implications stated thus far.

The spectacle of the hair rising upon the napes of some necks among the science professionals reflects the stubbornness of the widely held, but exaggerated belief among most mathematicians, that proof is mathematical in nature, at least in respect to form. This belief is tolerable as long as the propositions examined in this way are limited in type to those consistent with the "hereditary" axiomatic implications of the form of mathematical repesentation employed. Once an axiomatic-revolutionary proposition is put on the table, the ordinary sort of mathematical proof becomes axiomatically an absurdity; proof of this is identified above.

Although it is presently the conventional view that we must rely upon "inductive" generalizations from formal proofs, once we acknowledge the implications of axiomatic-revolutionary forms of discovery, the fallacy of inductive formalism should be promptly apparent. In the latter case, we must treat the act of discovery itself, formally a "mathematical discontinuity" terminating the competence of the "hereditary principle," as the primary datum.

The latter requirement is not mysterious, provided one has been educated in agreement with the Classical Christian humanist tradition of Gerard Groote's Brothers of the Common Life. As I have been obliged frequently to reference this matter: Such a Classical education rejects the textbook methods for those of replicating the act of discovery reported by original (or proximate) sources. The effect of this method is to accumulate knowledge in the student's mind, each discovery in the form of its replication, as a reliving of the original act, by that student. That student is familiar with the reality of hypothesis, in that way. These moments from some of the greatest minds in all prior history live, as glimpses of the original discoverer's innermost personality, within the mind of the student. Thus, the notion of a principle of discovery is readily accessible to a student who has been educated in this way.

From this standpoint of reference, one can trace readily the nature of the causal sequence linking an original axiomatic-revolutionary discovery to its efficient consequences as increase of the physical productive powers of labor.

Once a discovery has been effected, its efficiency must be demonstrated in what is loosely termed often as "a crucial way," according to strict notions of design of experiment. This was described, among other locations, in the current *Fidelio* (Spring 1994) report on my 1948-52 discoveries in physical economy. The refined crucial experiment serves as a model of reference for introducing a new technology as an included principle of machine-tool design or analogous applications. The transmission of the physical expression of a discovery, in this way, together with the cognitive principle involved, is the source of increases of the physical productivity of labor—per capita, per household, and per square kilometer.

As indicated, a continuation of this process generates a not-entropic form of increase of the ostensible ratio of "free energy" to "energy of the system," as measured in per-capita, etc. terms. This includes the previously stated qualification, that the ratio of producers' goods production to households' goods production increases, although the physical quantity and quality of households' goods consumption, per capita and per household, is increasing, while the per-capita social cost of producing the market-basket is declining. It is this not-entropic form of ordering principle, taken together with its practical implications, which serves as a good approximation of increases in relative potential population-density.

It is the impact of a principle of discovery upon such a desired not-entropic result which is the demonstration of the validity of that form of higher hypothesis. In the corresponding fashion, this is also the referent for hypothesizing the higher hypothesis.

Restated: This view is measuring, so to speak, the relationship between mankind and the universe. This is made in the only way possible; the practical question to be answered, is *whether there is greater or lesser correspondence between the intended production of the preconditions for successful reproduction of the human race, and the laws of the universe which govern the results of those attempts?* The answer to this question is not to be found in fixed ideas, not in ideas premised formally upon a fixed set of axioms, but only in some principle of change of such ideas, from a lesser to greater degree of efficient correspondence with the lawful ordering of our universe. This desired correspondence, through such change, must plainly be measured in no other terms than relative potential population-density.

This is a question to be resolved by resort to some generally accepted classroom mathematics. This is the means by which to discover what is a relatively better or inferior form of mathematics, as the geometric comparison of the algebraic, non-algebraic, and transfinite types of mathematics exemplifies such variety.

In this sense, and no other, the standpoint of physical economy is the fundamental premise for physical-scientific, and also artistic, knowledge. Knowledge itself is man's conscious examination of mankind's conscious powers for generating valid axiomatic-revolutionary hypothesis, for accomplishing that by aid of discovery of a scientific method of successive discoveries, called an higher hypothesis, and for improvements in the quality of such a scientific method, called hypothesizing the higher hypothesis. This is claimed, and nothing more.