to this rigor, the idea of separating the subjective from the objective is absurd. There exists nothing "objective" outside the realm of this rigorous kind of "subjectivity."

There is no possibility of a true science which is not of this rigorously *subjective,* or "anthropomorphic" form. We see, in science, efficient forms of *subjective* certainty of the Creator's universal natural law. By that means, we increase the potential population-density of our species *in this universe as a whole*. The implicit increase of potential population-density is the proof of the *anthropocentric* experiment on which even the mere possibility of science depends. Since this science is produced by the sovereign faculty on which account the individual person resembles the Creator, the potential creative reason, the only possible form of science is in that image, that *anthropomorphic* image.

APPENDIX B

Physics and natural law

The characteristic flaws of modern classroom opinion on the subject of science, are chiefly, that in virtually all instances, these opinions are *empiricist* and therefore *reductionist,* and in all but a dwindling minority of cases frankly *radical-positivism*. For purposes of illustration, two summarized cases are chosen as examples here. The first, is the fact, that although the formulation of Newtonian gravitation is a simply algebraic parody of Kepler's Third Law, Newtonian physics is subject on this point to a pervasive folly called the "three-body" paradox.[1] The second is the reductionist's refusal to recognize the most crucial kind of importance of non-algebraic functions in shaping the internal history of mathematical physics.

As viewed today, the first mathematical physics, that of Johannes Kepler, is shaped, in effect, by the corollary of the "hereditary principle," that the existence of a single case of a theorem required by nature, requires a corresponding theorem to be implicit in whatever corresponds to an underlying, integral, indivisible set of axioms and postulates of science (mathematical physics) as a whole.[2] The relevant point permeates Kepler's three principal works,[3] and appears, as a central feature, in the "Snowflake" paper.[4] That is key to understanding the Newtonian blunder underlying the three-body process, and addresses thus implicitly the objections which might arise to our use of the "book of nature."

As the success of Kepler's "missing, exploded" planet, illustrates the point,[5] the Keplerian laws are derived from the construction in which available planetary orbits are not left undetermined. In the London Royal Society's algebraic manipulation of Kepler's Third Law to derive a formula for Newtonian gravitation, the "hereditary principle" of Keplerian physics is disregarded, thus generating the "three-body" paradox.

That "hereditary principle" is a fact, adduced by Leonardo da Vinci et al., that the universe includes living processes, which are harmonically ordered, in morphology of growth and function, in implicit harmony with the Golden Section. This is the characteristic feature of *action* in Keplerian mathematical physics which defines action within the universe as reflecting a specific physical space-time curvature of the universe as a whole, in contrast to the simplistic error of Descartes, Newton, et al., in presupposing a *linear* space, time, matter manifold.

The relevant general import of this first example, is that *reason,* whose action here is centrally expressed as the corollary of the "hereditary principle," shows the mere existence of *a crucial phenomenon*—in this illustration, the da Vinci-Kepler harmonic topology of all living processes—to be sufficient to define an aspect of universal natural law.[6] This example demonstrates the dangerous absurdity of Isaac Newton's famous motto, "I don't make hypotheses." To reject an hypothesis, is to reject all hypotheses but those embedded in one's own peculiar choice of blundering ignorance. Newton, for example, adopted his own policy in defiance of the available (e.g., Kepler's) evidence, and thus, as a result, stumbled inte "three-body" paradox.

The second example to be considered here, is the proper view of the discovery of *physical least action* and isochronic qualities located within non-algebraic geometries as two facets of the same, one concept. The discovery of these qualities by Christiaan Huyghens, Leibniz, and Johann Bernoulli, was *explicitly* the foundation of Leibniz's calculus; the rejection of the cycloid-related non-algebraic functions by the Cartesians and Newtonians is analogous to the nature and consequences of Newton's blundering into the "three-body" paradox.

Look at the physics of the *tautochrone* and *brachistochrone,* as Huyghens, Leibniz, and Bernoulli viewed this successively.[7] Here is the germ of not only a large family of constructions based upon multiply-connected circular action, but these constructions are also the determination of a mathematical physics of Leibnizian *physical least action.* Or to state the corollary point, these physical principles which are common to all processes of a definitely curved physical space-time, are thus susceptible of a constructible, and therefore *intelligible representation.*

That said, turn attention to the central ontological issues of classical Greek and Hellenistic philosophy, from Pythagoras through Archimedes. As Plato and Archimedes, and Nicolaus of Cusa after Archimedes, exemplified this, the Platonic dialectic treatment of the universalist issues of ontology and form of process of knowing, is best fostered by situating the propositions to be examined in the context of such an effort to supply intelligible representation by means of a proper selection of *transfinite* "hereditary principle" of geometrical construction.

It is the case, that for physics as physics, the generation of the non-algebraic family and its functions, is the most appropriate method of such intelligible representation.

Now, to close the circle, to sum up the point immediately at issue. We reject the notion that the authority of the "book of nature" is extended to the reductionist view of physical science in general or to the modern positivist views in particular. Add the following important observation.

The common characteristic of the practice of law under Adolf Hitler and the U.S. federal courts today, is radical positivism in law. For Nazi Germany, the forerunners are Prof. Karl Savigny and Karl Schmidt. For fascist trends in the U.S. law-practice today, the authors are the British empiricists: Hobbes, Locke, Hume, Adam Smith, Jeremy Bentham, and John Stuart Mill, for example.

The Nazis cried, "All is permitted!" The Anglo-American liberal empiricists propose a global neo-malthusian mass murder ("population control") vastly more extensive and savage than that of the 1920s-1940s Harriman-Hitler "eugenics" movement.[8]

The argument to be made against the more obvious objections to our "book of nature" is summarized as follows.

The fundamental laws of our universe are imbedded for human reason's knowledge in respect to the principles of hypothesis formation which we bring to observation of crucial empirical evidence. The use of crucial experimental evidence to explore the question of the validity of the hypothesis-forming functions, is the universalizing aspect of rigorous scientific thinking. This is the classical method of such as, notably, Plato, Cusa, Leonardo da Vinci, and Leibniz, for example. The principle of hypothesis-formation tested experimentally in this way, is of the form of a higher order *Cantorian transfinite*. The higher reality under which that latter transfinite is subsumed, is itself a transfinite ordering-principle of yet a higher order.

By knowing these three levels, the immediate generation of hypothesis, the higher hypothesis, and the hypothesis of the higher hypothesis, we make each and all of these three directly the subject of our conscious reason. We know each of these levels *consciously,* by means of constructing a geometrical or analogous intelligible representation of each, and also of the relationship of each to each and all. To say that, is simply to supply a succinct description of the dialectical method of classical philosophy as Plato, Cusa, and Leibniz exemplify that practice.

In the chapters following the preface, the branch of physics which is the Leibnizian science of political-economy is presented in its essentials, from the standpoint of those features which are crucial in such a way as to bear more or less directly upon a constructible form of intelligible representation of *natural law,* upon the ecumenical content of the "book of nature."

Notes

1. Lyndon H. LaRouche, Jr., *In Defense of Common Sense,* (Washington: Schiller Institute, 1989) Chapters 3-5, and *Verteidigung des gesunden Menschenverstandes, Kommentar,* (Wiesbaden, Germany: Dr. Böttiger Verlags-GmbH, 1990) pp. 157-193. See also above, Chapter 7, notes 7 and 8.

2. Lyndon H. LaRouche, Jr., *In Defense of Common Sense,* pp. 11-42.

3. Johannes Kepler's three principal works are *Mysterium Cosmographicum, The Secret of the Universe,* trans. by A.M. Duncan, (New York: Abaris Books, 1981); *Harmonices Mundi, (The Harmonics of the World);* and *Astronomia Nova, Astronomie Nouvelle,* (Paris: Librairie Scientifique et Technique Albert Blanchard, 1979.) (The frontispiece of the 1609 French translation of *The New Astronomy* continues, "explaining the causes of heavenly physics presented by the commentaries on the movements of the planet Mars on the basis of observations of the illustrious Tycho Brahe.")

4. Johannes Kepler, *The Six-Cornered Snowflake,* trans. by Colin Hardie, with the Latin text on facing pages, and essays by F.J. Mason and L.L. Whyte (Oxford: Clarendon Press, 1966).

5. Lyndon H. LaRouche, Jr., *In Defense of Common Sense,* Chapters 3-5, and *Verteidigung des gesunden Menschenverstandes, Kommentar,* pp. 157-193. See also above, Chapter 7, Note 9.

6. See Max Planck, *Vom Wesen der Willensfreiheit,* (Frankfurt am Main: Fischer, 1990), p. 35. For comparison, consider the definition from Max Planck's 1949 "Zur Geschichte der Auffindung des physikalischen Wirkensquantum": "Was mich in der Physik von jeher von allen interessierte, waren die grossen allgemeinen Gesetze, die für sämtliche Naturvorgänger Bedeutung besitzen, unabhängig von der Eigenschaften der an den Vorgängen beteiligten Körper." ("What I was interested in in physics from the beginning mostly were the great universal laws which are important for all natural events independent of the properties of the bodies participating in this event.")

7. Christiaan Huyghens, *The Pendulum Clock,* (1673), and then the Bos translation, Ames, 1986, and Jean [Johann] Bernoulli, "On the Brachistochrone Problem," D.E. Smith, *A Sourcebook in Mathematics,* New York, 1959, pp. 644-655.

8. Not only did the U.S.A.'s Skull and Bones lodge brothers Averell Harriman and Prescott Bush perform important collaborating roles in putting Adolf Hitler into power in quasi-occupied Germany in 1932-1933, the Harriman family, with shameless openness, avowed the sympathy by the Harriman-led eugenics movement in the U.S.A. with the Nazi Party's "racial purification" policies.

This continues into the George Bush-led "new world order" today, out of President Bush's long association with the racialist ("population control") policies of the Draper Fund.