

Man & the Skies Above

by Lyndon H. LaRouche, Jr.

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You might wish to put some of the blame for today's perilous planetary state of affairs, on that Frederick Engels who claimed he could not see an ontological difference between man and ape. Thumbing his nose at humanity, so to speak. The underlying fact of that monkey business, is that that unfortunate Engels was a British subject, one who enjoyed income from slave-produced cotton, who came to serve as an important Fabian Society asset of his own later time, and, who, thus, in a curious manner of speaking by some, could be said to have come honestly by his faults.¹

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Another big supernova has recently come to the attention of the press. This is reported to have occurred in a distant gal-



NASA, ESA, HEIC, the Hubble Heritage Team, Y.-H. Chu and R.M. Williams (UIUC)
A Hubble Space Telescope image of a supernova remnant (N 63A), the remains of a massive star that exploded in a nearby galaxy. What threat do such stellar events pose to mankind?

axy, but qualified specialists warn us that a similar event might be expected in our own galaxy during the time of some more-or-less-distant-future generations. The question has thus been posed, whether such events mark either the approaching end of everything about us, or require a new step forward in the regular course of development of man's intended role within our universe at large.

The solution for that astronomical challenge to man's future, can be expressed in four steps, in the answers to a series of four interdependent ques-

tions presented in the opening chapter of the main body of this report. I show here, that that challenge of the heavens can only be met by, first, developing the knowledge of the principle needed to meet an immediate scientific-political challenge to life on our Earth today.

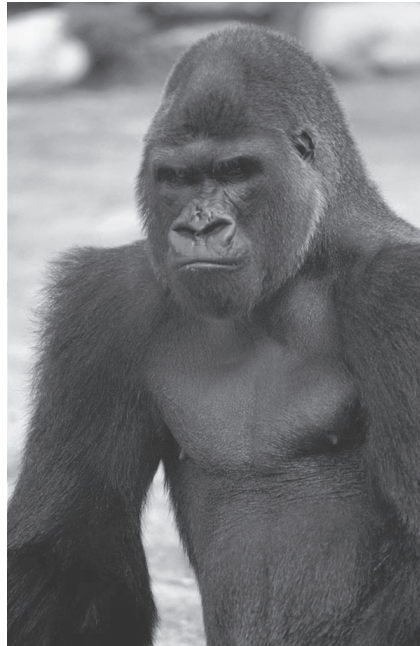
So, in a current series of events of Earth-bound, world-wide impact, we are faced immediately with the threat of a different sort of explosion, an already ongoing general economic crisis of the present world system.

First, we are now confronted by a threatened, global political-economic explosion, one which would be triggered, directly, or indirectly, by what could be a crisis of the just recently elected government in, perhaps, Britain, France, Britain's Cayman Islands, or elsewhere. Or, it could be trig-

1. For example: Fabian Society asset Alexander Helphand, aka "Parvus," was formally absorbed by British interests during a visit to London, during which, a meeting with the aging Fabian Society asset Engels was one of the tempting delicacies put on Helphand's agenda. The connections of Helphand to British intelligence, include the "Young Turk" operation, his role as a British arms dealer operating from that region, his role as the one-time controller of L.D. Trotsky and actual author of Trotsky's "Permanent Revolution," his successful penetration of Germany's war-time intelligence service with his "Parvus Plan" proposal, and his death in Germany, as a putative fascist linked to Coudenhove-Kalergi's operation.



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One of the principal obstacles to preventing a global new dark age today, is the unwillingness of the sympathizers of Al Gore's "Global Warming" swindle, to recognize and accept the essential distinction of man from ape.

gered by the inherently disastrous economic effects of failure to halt the spread of the influence of Al Gore's "Global Warming" swindle, which, itself, might easily unleash an awfully calamitous turn of the current history of mankind.

Currently, as the pattern of recent elections in the United Kingdom and France warn us, virtually all of Europe west of Russia and Belarus, expresses an ongoing pattern of accelerating cultural breakdown of a collection of economically distressed, even ruined, and increasingly ungovernable nations in a virtually globalized western and central Europe. Similarly, a threatened global chain-reaction might be set off by the wild-eyed measures of California's Schwarzenegger government, or kindred potential triggers of world crisis elsewhere.

Thus, within the local neighborhood we occupy within our own galaxy, the most immediate threat, is represented by our second question. That is, *whether that onrushing, global economic-financial crisis, or a similar outburst, would signal the rapid onrush of a global dark age for all humanity, or, hopefully, in the alternative, is it possible that the already worsening political bankruptcy of such current nations, might be, hopefully, only a virtually final warning that we must recognize the urgency of launching a transition into a new and better age for all mankind?*

My answer to both the first and second questions, must be posed in terms of a third. *Do we have presently, a sufficient number of persons who are willing to think creatively, as I propose, and who also possess, therefore, the will to act in ways to ensure that civilization turns back the onrushing threat of a*

global new dark age already descending upon Earthly mankind?

Finally, since the solution to the question respecting the implications of the phenomena of supernovae depends upon development of the creative powers of mankind, *does man have the capability of making the kind of series of successive scientific discoveries through which we might become equipped to deal with such developments?*

Meanwhile, the ultimately related, but immediate question, is, specifically: *whether, or not, we are able, both subjectively and objectively, to reverse that damage to mankind. Is it, perhaps, already too late to be able to return now to the policies of former U.S. President Franklin Roosevelt?*

Could we still make that turnabout,

from current policy-trends, soon enough, to introduce that presently indispensable factor of cooperation among willing nations of the world, without which a plunge into a dark age would be virtually inevitable for the future immediately ahead? *The quality of leadership which U.S. President Franklin Roosevelt expressed, is urgently needed now, if we could believe fairly that the time has not already passed, when we might reestablish the hegemony of what is demanded by a humanistically optimistic outlook, an outlook which could transform the presently onrushing, global crisis, into the beginning of a better age for all mankind.*

In response to that question, my admittedly hopeful estimate is, that we may still have at least a little time to accomplish just that turn, away from the present downward course of world events, and toward a sudden and radical change from the world's presently prevalent direction, toward doom: a change in direction which could still avert a rather immediate plunge into a global new dark age, but, even then, not by much.

There are, principally, two kinds of psychological obstacles to carrying out such an urgently needed reform. The first, and most threatening of these obstacles, is what is typified by the Frederick Engels' unwillingness, then, and the sympathizers of Al Gore's "Global Warming" swindle, now, to recognize, and to accept the essential, functional distinction of man from ape.² The relevance of that distinction, is the principal

2. As in the case of "Parvus," British intelligence has long orchestrated other peoples' wars, revolutions, and the like, as it did the so-called "Seven Years War," and, also, in slyly orchestrating Napoleon Bonaparte's wrecking of

topic of my attention in this present report. The second obstacle, is the Yahoo-like mentality expressed, as if instinctively, by misfortunate creatures such as current President George W. Bush, and the notorious former U.S. Vice-President Al Gore. Nothing could be done to save civilization from the plunge into a dark age, without immediate action to remove the error which those kinds of obstacles to a current civilization's survival represent. There is virtually no visible future for the U.S.A. now, unless, first, Vice-President Cheney were ousted immediately, and, second, *then*, Bush either immediately replaced, or placed under a suitable emergency reorganization of his presently disintegrating administration.

Those inside the leading Congressional and related circles of the U.S.A. political system, who are waiting, as if idly, for a hopeful aftermath of the November 2008 U.S. general election, are, frankly, procrastinating in a way which would

continental Europe: all for the greater glory of the British empire-in-fact of that time. This was done, repeatedly, through such means as taking over the minds of the credulous dupes in the nations which London targets for such manipulations. Engels' silly "Anti-Dühring" tract was a typically British Engels' fury at the successful role of Henry C. Carey in promoting the American System as a design for Bismarck's accelerating the economic development of Germany. Engels, played a crucial role in duping Marx into frankly silly denunciations of the American System of Alexander Hamilton, and of economists such as Friedrich List and Henry C. Carey. Engels' "monkey business," referred to here, was actually a significant element in a political intelligence operation directed by Lord Palmerston's London of that time.

be suicidal for our republic, unless their current behavior were changed somewhat radically, or, unless new leadership came quickly to the surface.

In looking at these crucial questions of principle before us, we must not overlook the often dirty nitty-gritty of politics at its popular roots. The greatest such present threat at that root-level, is the danger to mankind, here and abroad, by former Vice-President Gore's "Global Warming" hoax.

One outstanding, immediate source of danger to all humanity is, that even the conventionally popularized, current academic form of arguments, which might be presented publicly in defense of the actually genocidal, neo-Malthusian lies put forward by such as former U.S. Vice-President Al Gore, all insist, not only that the planet is overpopulated, but that the limits of growth of the human population have already been exceeded. They insist, as does Gore, who is to be recognized as blatantly racist and a virtual candidate for induction into the ranks of the Nashville Agrarians: that the standard of living, and of life-expectancy of the Earth's population, including the reader's own,³ must be greatly reduced. Gore has made it blatantly, and repeatedly clear, that he intends such genocide for Africa, in particular, and, certainly, no good

3. As in the tradition of the Venetian cannibals: except for some, but only some of those among the relatively few surviving very rich, presumably including the Gore who has not exactly shown an intention to take vows of poverty.

LaRouche: Down at 'The Company Store'

April 26, 2007

A friend and collaborator has just forwarded the following note on Gore's confession to my attention. Can anyone now rightly consider it unfair to describe former Vice-President Gore's philosophy as pro-Satanic? Or, would you prefer to believe the spin, that since what Gore hates the most, is the power of creative reason, what he wishes to stamp out as what he considers "inconvenient," is the existence of that human intelligence which a competitive, dull-witted ass might hate and fear, as the affront to the ego he used to like to show off before those poor virtual slaves who toiled for the profit of Gore's notorious "the company store"? Or, perhaps, Gore is simply one of those types of "good old boys" from a Tennessee swamp, who is otherwise classed as a racist?

On Gore and Prometheus, (and knowin' yer place, boy) from: *Earth in the Balance: Ecology and the Human Spirit*; Senator Al Gore; Houghton Mifflin Company, Boston, New York; 1992.

"We have also fallen victim to a kind of technological hubris, which tempts us to believe that our new powers may be unlimited. . . . In a modern version of the Greek myth, our hubris tempts us to appropriate for ourselves—not from the gods but from science and technology—awesome powers and to demand from nature godlike privileges to indulge our Olympian appetite for more. Technological hubris tempts us to lose sight of our place in the natural order and believe that we can achieve whatever we want" (p. 206).

He explains humanity's "technological assaults on the global environment," thusly:

"At the root of this belief lies a heretical misunderstanding of humankind's place in the world as old as Plato, as seductive in its mythic appeal as Gnosticism, as compelling as the Cartesian promise of Promethean power—and it has led to tragic results. We have misunderstood who we are, how we relate to our place within creation, and why our very existence assigns us a duty of moral alertness to the consequences of what we do" (p. 258).

for humanity at large. In fact, Gore and his accomplices intend, helped in this by the “hedge funds,” to plunge the entire Earth, suddenly, into what would be, in effect, the worst man-made dark age known from the historical records of human existence on our planet.

All of the line of today’s neo-malthusian argument, such as Gore’s, now converges, exactly, on Gore’s own copying of the motive of the explicitly, monstrously evil, late Bertrand Russell’s own stated, mass-murderously malthusian intention: Russell’s insistence, then, as early as in 1953, for example, that the human species must be chopped down to much lower levels of population, intellect, and morals, a lowering of the conditions of life which would mean, in fact, if done, a quality of culture comparable to that of the fictional Yahoos described by Jonathan Swift.⁴

Such issues tend to rise to shape national strategy at the highest level of policy-making overall. The issue of Gore’s policy is an immediate threat to people living today, but could also have terrible consequences for many of our planet’s generations to come.

In fact, we now have reason to believe, on reflection, that a U.S.A. under a 2001-2008 Administration under Russell follower Al Gore, would probably have had similar, but perhaps even far worse consequences for the world under Gore, than we have experienced thus far under more than six years of George W. Bush! The devil already in the house is the one who first captures our attention. The image of President George W. Bush, Jr. distracts our attention from the fact that Al Gore is the type of the most despicable kind of cowardly bully, who flees in terror from any direct questioning of his neo-malthusian policies. He is, ordinarily, a cowardly sneak, a man who is a self-righteous whimperer at times when he does not have a clear advantage, like that of a crooked judge, over a chosen victim, especially one, such as an African, caught defenseless up a darkened alley. President Bush’s controller, Dick Cheney, is different, of course; Cheney, not so much a brain as a compulsively lying, mass-murderous bully, is apparently, like the Hitler so much admired in oligarchical London during the early 1930s, a Nazi-like thug under all circumstances.

I emphasize, once more: unless the neo-malthusian arguments, by Gore and others, are defeated now, and also any attempt at actually installing some form of “globalization,” the fate of all humanity were already virtually hopeless for some decades or more to come. For those relatively few among us who know actual history, that has already deadly implications for the existence of man in the universe in even far more distant future times to come.

If mankind abandons the practice of developing those creative powers of discovery of universal principles which we associate with the Pythagoreans, Plato, Nicholas of Cusa,

4. Bertrand Russell, *The Impact of Science on Society* (New York: Simon & Schuster, 1953).

Johannes Kepler, Leibniz, and Bernhard Riemann, we would never build up the kind of scientific-revolutionary development essential to meet the challenges humanity must prepare to master over the long future now before us.

A human race which persisted in submitting to the wicked, Delphic way of thinking typified by the clear and present danger to mankind implicit in Al Gore’s “Global Warming” swindle, would be a people which had abandoned the practical, as well as the moral fitness to survive.

Apes or Man?

On the relevant subject of Al Gore’s mass-murderous, neo-malthusian ecology as such:

This is a practical issue, but also a scientific issue with manifold, severe effects for the future existence of mankind.

The pivotal scientific observation bearing upon the present ecological prospects for mankind, is found in certain apparently elementary, crucial evidence, to the effect that the mathematically stunning ecological disparity between the relative potential population densities among apes and man, respectively, is not merely biological, in the conventional sense of animal biology, but absolute.⁵ This, my view, is a view contrary to the opinions of Frederick Engels’ notable contemporary and co-thinker on this specific topic, the same T.H. Huxley who, like the fictional Dr. Moreau, trained the H.G. Wells who was to become both the author of *The Island of Dr. Moreau* and the chief accomplice of Bertrand Russell, that, as on the public record, from about 1928 onward, until Wells’ own death.⁶

Firstly, on the cited second account, from as much as we know of the species of apes which appear to resemble the human species, the range of the available potential relative population-density of the great apes, has been fixed, as Al Gore would clearly imply, within “ecologically” determined ranges which, in effect, could not have exceeded the level of some millions of living individuals during the range of varying ecological conditions existing during the recent two millions or so years. Whereas, the increase of the potential relative population-density intrinsic to the nature of the human species, has now climbed to the level of more than six and a half billions living individuals.⁷

The ascertainable levels of increase of the human population-density, show that a pattern of manifest increase of

5. That would place Gore, with his “Global Warming” swindle, on the side of the apes, against mankind, not only in the matter of Gore’s racist policies toward Africa!

6. See H.G. Wells *The Open Conspiracy* (1928). With Introduction by W. Warren Prager (London: Praeger, 2002). Bertrand Russell adopted Wells’ book wholly and immediately.

7. Perhaps Gore would wish to solve that perceived problem of “over-population,” in what might be named, euphemistically, “carbon recovery camps”; that, certainly is the manifest thrust of Gore’s mentality on the subject of the populations of both sub-Saharan Africa and Sudan.

Development of Human Population, from Recent Research Estimates

	Life expectancy at birth (years)	Population density (per km ²)	Comments	World population (millions)
Primate Comparison				
Gorilla		1/km ²		.07
Chimpanzee		3–4/km ²		1+
Man				
Australopithecines B.C. 4,000,000–1,000,000	14–15	1/10 km ²	68% die by age 14	.07–1
Homo Erectus B.C. 900,000–400,000	14–15			1.7
Paleolithic (hunter-gatherers) B.C. 100,000–15,000	18–20+	1/10 km ²	55% die by age 14; average age 23	
Mesolithic (proto-agricultural) B.C. 15,000–5,000	20–27			4
Neolithic , B.C. 10,000–3,000	25	1/km ²	“Agricultural revolution”	10
Bronze Age B.C. 3,000–1,000	28	10/km ²	50% die by age 14 Village dry-farming, Baluchistan, 5,000 B.C.: 9.61/km ² Development of citites: Sumer, 2000 B.C.: 19.16/km ² Early Bronze Age: Aegean, 3,000 B.C.: 7.5–13.8/km ² Late Bronze Age: Aegean, 1,000 B.C.: 12.4–31.3/km ² Shang Dynasty China, 1000 B.C.: 5/km ²	50
Iron Age , B.C. 1,000–	28			50
Mediterranean Classical Period B.C. 500–A.D. 500	25–28	15+/km ²	Classical Greece, Peloponnese: 35/km ² Roman Empire: Greece: 11/km ² Italy: 24/km ² Asia: 30/km ² Egypt: 179/km ² * Han Dynasty China, B.C. 200–A.D. 200: 19.27/km ² Shanxi: 28/km ² Shaanxi: 24/km ² Henan: 97/km ² * Shandong: 118/km ² * * Irrigated river-valley intensive agriculture	100–190
European Medieval Period A.D. 800–1300	30+	20+/km ²	40% die by age 14 Italy, 1200: 24/km ² Italy, 1340: 34/km ² Tuscany, 1340: 85/km ² Brabant, 1374: 35/km ²	220–360
Europe, 17th Century	32–36		Italy, 1650: 37/km ² France, 1650: 38/km ² Belgium, 1650: 50/km ²	545
Europe, 18th Century	34–38	30+/km ²	“Industrial Revolution” Italy, 1750: 50/km ² France, 1750: 44/km ² Belgium, 1750: 108/km ²	720
Massachusetts, 1840 United Kingdom, 1861 Guatemala, 1893 European Russia, 1896 Czechoslovakia, 1900 Japan, 1899 United States, 1900 Sweden, 1903 France, 1946 India, 1950 Sweden, 1960	24 32 41	41 43 40 44 48 53 62 73	Life expectancies: “Industrialized,” right; “Pre-industrialized,” left	1,200 2,500
1970 United States West Germany Japan China India Belgium	 59 48	71 70 73	1975 26/km ² 248/km ² 297/km ² 180/km² 183/km ² 333/km²	3,900

potential relative population-density specific to the human species, reflects an induced cultural trait of the human species, rather than a quality attributable to what is called “race” among animals, or than might be attributable to merely biological changes in some alternate, biologically fixed characteristic of the particular biological variety of human individual. No species of animal, but only mankind, has exhibited what might be inferred to be a biologically allowed, *voluntary* increase of population of the type which is the characteristic distinction of the human species’ power to increase its own potential relative population-density *voluntarily*, as no other species could do.⁸

Furthermore, if there are relative variations in manifest performance among the individuals within a culture, it is the willful changes in culturally determined impulse of the society as a whole, such as political changes, which determine the essential distinction within which individual ranges of individual performance of a particular nation as a whole could be situated, as if this could be seen to be statistical. The essential determination is broadly cultural *in effect*, but is rooted, nonetheless, in the development, as if in “education,” of the mental processes, and related conditions of life, of the voluntary contributions by *the maturing, chiefly creative, individual member of society*, as if one at a time.⁹

A great academician of Russia, V.I. Vernadsky, who discovered the *true* physical principle distinguishing living from non-living processes (the *Biosphere*), also applied the same scientific method to show, that, absolutely contrary to Al Gore, as the opening chapter of the Biblical book of *Genesis* also repudiates Gore’s wicked opinions, the existence of mankind has contributed a quality of useful, creative changes in the planet, that in a way whose effect (the *Noösphere*) is generated by principled means which are specifically human, and thus, in that sense, independent of the factor of customary animal forms of biology.¹⁰

It is, perhaps, therefore more or less obvious, that our best evidence in our search for the source of this remarkably unique feature of the existence of the individual member of the human species, is the evidence that the uniquely human

power for willful increase of potential relative population-density, is associated with what is typified by man’s discovery and willful use of what are discoveries of universal physical principle; that is to be considered in the sense associated with the definitions of principle associated with the work of Bernhard Riemann. That is the universal physical principle on which the avoidance of recurring new dark ages, or ultimately more awesome kinds of catastrophes, depends. Without obedience to that principle, every new culture arisen from an earlier dark age would be, at its least worst effect, the rebirth of yet another cycle of doom, like each and all of the ancient and medieval empires of Asia and Europe of the past (and elsewhere).¹¹

Often, we hear representatives of nations complaining that they were cheated by either contemporary, or earlier leading foreign powers. In some degree, we know that that has often happened; however, the collapse of *leading powers*, such as that collapse, the “New Tower of Babel,” which the present-day globalizers are seeking to recreate, could not be blamed on any one other than themselves. The most memorable features of the actual human record, as from earliest known times, include the image of waves of self-inflicted cyclical collapses of the leading powers of that time, such as Babylon, the Achaemenid Empire, Rome, Byzantium, of the medieval *ultramontane* order, as we witness this again in the doom spreading, again, during the recent forty years, under the influence of the U.S.A. and its

11. As I shall clarify this point in a later chapter of this report, the only competent formal representation of the act of creativity within an individual is of the form of the specifically anti-entropic function represented by the generation of a new universal physical principle, as this may be illustrated by such a case in the realm of Riemannian physical hypergeometries. In other words, the universe as a whole is anti-entropic, such that the so-called “Second Law of Thermodynamics” is a hoax, insofar as such behavior is treated as an expression of an infallible universal principle. In poetry and Classical musical composition, the same quality of specifically human creativity is located in Classical irony, as represented by the paradigmatic challenge of the fugues of Bach himself, Wolfgang Mozart, and Ludwig van Beethoven. How marvelous the fruit of those Sunday salons of van Swieten’s was! It is not the components of such a composition which form the substance of the idea of its wholeness, but, rather, an insightful performance which finds the idea of the composition as a whole in a performance which stands above, and perfectly unifies the entire performance of the score to absolute singleness of effect. Mozart’s *Ave Verum Corpus* is an excellent selection for demonstrating the underlying principle of such counterpoint in the relatively most concise and simple, but stunningly rich way. Creativity is a form of mental action which is among the objects of thought located within the general area of what Dr. Sigmund Freud identified as “the pre-conscious.” Conscious thoughts may “pop out” in a manner which surprises the consciousness of the thinker, but that frequent experience is an expression of the nature of discovery as a thought set into motion by the quality of intention. What is heard is the effect; what pre-shapes the effect is a motivation, the motion within the mind which generates that effect. The meaning of that which generates the witnessed result lies in that “preconscious” motivation. The properly apprehended thought, to which the name should be given, comprises all of the relevant elements of the situation: the motivation, the utterance, and awareness of the impact of that utterance on the setting in which the utterance is expressed.

8. Increase in the characteristic *potential relative population-density* occurs, among lower forms of life than man, only through human intervention, as in agriculture.

9. The act of true creativity exists only within the bounds of the biological individual, not as if creativity could be located in the “wiring” used to connect individuals into a single functional artefact. The creative individual can only provoke the experience of a creative discovery in others, as by the kick of a “quick start” of the relevant potential in each among the others. The 1940s “Task Oriented Group” experiment conducted at MIT, was an interesting idea, but nothing reported respecting the results of the experiment suggested an actual “ignition” of creativity.

10. On the distinction between a *true* physical principle and what is merely a statistical generalization: I imply the ancient method of the Pythagoreans, Plato, Nicholas of Cusa, Cusa’s follower Kepler, and Riemann. See immediately below and later.

western European associates today.

Fortunately, while a true account of history and pre-history, is only part of the relevant historical and pre-historical record, rather than the entire span of actual human life on our planet, it were better to rely on what we know; for the rest, be certain that what we know corresponds to the standard of a proof-of-principle experiment.

Thus, often, when we proceed in that way, we find that the doom of a once-dominant power, is accomplished through the successful suppression of the known policies which could, and should, have prevented the catastrophe which the culture imposed upon itself. We can also show, in a sufficient number of known cases, that continuing to use the policies which had promoted prosperity, as under the policies of U.S. President Franklin Roosevelt, after that President's death, would have prevented the collapse which was set into motion by policies which have governed the U.S. economy increasingly since the relevant events of 1968.

From the combination of these comparisons, and also more thorough, scientific examination of such patterns, we are able to show, and to understand, that success and failure of entire cultures, are reflections of certain deep principles, principles of the same characteristics as any among the experimentally proven universal principles of relevant science.

For example, contrary to a popularized view of the matter, we may examine the known cultural development to this effect, as over the span since the most recent, long "ice age," as associated with the leading development of cultures of Eurasia started from roots in maritime cultures existing during that period of glaciation. In that case, the progress of civilization is traced from such times, chiefly, as an upward movement of civilization from the oceans and seas, into the colonization of the vicinity of the mouths of great rivers, and, thence, gradually upstream. The most crucial of the evidence which we know of the cultural development associated with the period since about 19,000 years ago, is the impact of the emergence of elementary astrophysics, as the *Sphaerics* known to the ancient Greeks from Egyptian sources, a body of knowledge which expresses the characteristics of astronavigation, and from the relationship of the superior maritime cultures, as of the Mediterranean, relative to inland cultures.¹²

Now, consider the historically most recent progress in modern forms of mass transportation, as are developed, or are foreseeable in the process of development, in a combination of modes of man-controlled heat-supply at the levels of intensity of nuclear-fission and thermonuclear-fusion. When those advances are combined with massive programs of develop-

ment, physical economy can be developed today in the more inland regions with an efficiency competitive with the relative advantage of maritime-based cultures earlier. I have adopted what relevant scientific circles have introduced as the standard of what is identified roughly as "relative energy-flux density" as the principal correlative and gauge of man's ability to increase society's potential relative population-density.

This development is crucial at the time, today, when meeting the requirements of a growing population in Asia, demands that we bring modern, science-driven civilization to the development of habitation and applied fundamental progress in science and generally employed technology, up into the northward interior of the Asian "heartland." The intent of this must be, to cause that region to become a stratum of northern Eurasian culture which will be largely dedicated to supplying the needs for modernization of the conditions of life for the generality of the population of nations such as China and India. It is not economical to simply mine those northerly regions; they must be developed through reviving the capabilities of a European civilization which were nearly lost through recent decades of willful collapse in use of progress in science and technology, as was done in the aftermath of the assassination attempts against Charles de Gaulle and the assassination of U.S. President John F. Kennedy.¹³

Sphaerics

In this respect, all competent European physical science, on which progress in the human condition depends absolutely, is chiefly traceable to its proximate origin in the same, Egypt-derived methods of "*Sphaerics*" employed in building up the pre-Euclidean, astrophysical foundations of science among the Pythagoreans and the circles of Socrates and Plato.¹⁴

13. Although the later breakdown of the economies of North America and Europe was already implanted for the future in the pro-recolonization motives of Winston Churchill's Britain and the U.S. Truman Administration at the time of President Franklin Roosevelt's death, the shift to accelerating, presently deep decline of productivity in Europe and North America, began with the assassination of President John F. Kennedy and the launching of the U.S. "long war" in Indo-China. The rise of the "68ers," began the cultural-paradigmatic downshift, which led to the breakup of the Democratic Party's broad base in labor and agriculture, and to the role of the Nixon Administration under George Shultz et al., in pushing the U.S.A. and the world into the long wave of cultural and physical-economic decline which has ruled over the world during the 1971-2007 interval to date.

14. The celebrated Euclid was, explicitly, a Sophist and a consummate ideological reductionist. Euclid's work is dominated by the theorems which he mimicked from the discoveries which can be demonstrated to have been actually made by the combined efforts of the Pythagoreans and the overlapping circles of Socrates and Plato. As the *Tenth Book* of Euclid's *Elements* underlines this most ironically, Euclid's work is based chiefly on a parodying of the work of those predecessors, thus to make the discoveries appear to have been derived originally from the *aprioristic* set of definitions, axioms, and postulates introduced by Euclid and his school. The famous fraud, the system of astronomy of Claudius Ptolemy, in contradiction to the earlier competencies of Aristarchus of Samos, is an outcome of the *aprioristic* method of the Sophist Euclid. (Cf. Carl Gauss's youthful mentor Abraham

12. For example: Any calendar which contained an echo of the cycle of the North Pole, would indicate such a characteristic. Northern Europe, for example, was under various phases of an ice age until about 17,000 B.C., and the characteristics of the notable ancient coastal cities of the Mediterranean cultures from which European civilization sprang, were fortified against populations of the interior.

To restate that point, the relevant historical cases, as extended to studies of developments in modern times, show us why that “upstream” pattern has been usually characteristic of all known long-wave case-histories of this type. It is fashionable among some to interpret the evidence of such case-histories in terms of “energy,” as the idea of “energy” was recklessly misdefined in an arbitrary way by the typical cases of Clausius, Grassman, and Kelvin. For such purposes as understanding the “history” of human ecology, the correct choice of concept is named “power,” despite the pro-Satanic, Olympian Zeus of Aeschylus’ *Prometheus Bound*. Power is fairly measured in approximation as “relative energy-flux density” of the power deployed, upward, to relevant, more advanced forms of generation of power, to motivate technological and related progress per capita and per square kilometer of entire nations and larger regions of the world.

This progress in the development of the forms of power and their uses, is typified by the progress from burning of wood, to nuclear fission and thermonuclear fusion. The measurement of the application of such modes in an upward pattern of “energy-flux density,” in respect to per-capita and per-square kilometer “investments,” shows us why the upstream pattern, as described, has been the implicitly inevitable choice of global pathways to development.

There is a related, second leading consideration. This consideration is crucial; without it, no competent insight into modern society’s economics and statecraft were available. The subject so denoted, is the actual discovery of a universal physical principle, a power specific to the “design” of the sovereign powers of the individual personality, and lacking in all other species, including the higher apes (*and, implicitly, the cultural retrograde promoted by Al Gore*).

There are, of course, false definitions of scientific discovery, such as that Ockhamite doctrine of *philosophical Liberalism* introduced to modern society by Venice’s Paolo Sarpi, dogmas which operate on the basis of substituting apparent “cleverness” for the actual creativity which is typified, uniquely, by the discovery of a universal physical principle, as by Kepler’s uniquely original discovery of the principle of universal gravitation. Apes can be clever, but no ape ever made a knowledgeable use of the communicable discovery of a conception associated with an actually universal physical principle.¹⁵ *I mean the discovery and consequent employment of an actual universal physical principle, as this was typified by Archytas’ constructive doubling of the cube, in ancient*

Greece, and the discovery of gravitation by Johannes Kepler,¹⁶ which latter was crucial for all competent efforts of science in modern times thereafter.

The modern centuries’ scientific-technological revolutions in increase of potential relative population-density, revolutions which are expressed in upward surges of potential relative population-density of the planet as a whole, have spread throughout much of the world, from origins in modern European civilization’s development of interdependent methods of science, statecraft, and economy, since a time during the Fifteenth Century. The evidence to this effect, is typified by the influence of the work of the founder of the modern European doctrine of experimental science, Cardinal Nicholas of Cusa, using a *method of discovery and use of universal principles*, which underlies the work of his followers Leonardo da Vinci, Johannes Kepler, et al., and is expressed in the foundations of the modern sovereign nation-states, in the form known as the commonwealth, first under France’s Louis XI and then of England’s Henry VII.

It is the principle of *Sphaerics*, the principle referred to as *dynamics* by Leibniz and Riemann, for example, which is the principle which typifies the underlying root of discoveries of universal physical and comparable principles. *It is the mental act of such a discovery, by an individual person, which absolutely distinguishes the human species from all lower forms of life.* This is the same kind of conception of principle, as the principle of life defines what V.I. Vernadsky defines as the *Biosphere*. *It is the principle of discovery of universal principles which defines the Noösphere.*

Vernadsky defined the Biosphere as distinct from the presumed pre-biotic domain, by the fact that both non-living and living processes employ selections from among ostensibly identical chemical elements. Life never appears, nor could appear in non-living matter; the principle of life uses the components from the same Periodic Table as in an updated Mendeleev Periodic Table. The increase of the accumulated *Biosphere*, of living processes and their products, relative to the

16. The succession of the discoveries of principle by Kepler, Fermat, and Leibniz, as in that ordered succession, was crucial. Kepler’s uniquely original discovery of gravitation, produced Kepler’s insight into the need for development of an infinitesimal calculus. The discovery of such a calculus, as had been specified by Kepler, was uniquely the work of Leibniz. “Infinitesimal” signifies, for Leibniz, as for Kepler, the experimental demonstration that the rate of change of curvature within the planetary orbit is *ontologically infinitesimal*. Fermat’s discovery of what we have come to know as the universal principle of least action, when combined with the Leibniz calculus, established the platform on which Leibniz, in collaboration with Jean Bernoulli, presented that catenary-cued universal principle of physical least action, on which the notion of a *physical (as distinct from merely formal)* complex domain depended, laying thus, in turn, the experimental basis for the crucial discoveries of Bernhard Riemann. Any competent form of modern theory of economy depends, for example, on the notions of a mathematical science of physical economy which now depend upon the work of Riemann. Similarly, it is the work of Riemann, when seen as a reflection of the original discoveries by Kepler, which provides us a working approach to use of V.I. Vernadsky’s discovery of both the Biosphere and Noösphere.

Kästner on anti-Euclidean geometry.) The intrinsic incompetence of the Cartesian method and its derivatives, which continue to corrupt modern science, and commonly taught and practiced economics, with the effects of such reductionism, to the present day, is an expression of the continuation of the same specific type of Sophist tradition into modern educated practice.

15. Charles Dickens’ characters the Artful Dodger and Uriah Heep were clever enough, although utterly unprincipled.

weight of the planet as a whole, defines the physical efficiency of a principle of life as a universal physical principle. Similarly, the increase of the relative mass of the effects of human intervention, relative to both non-living and living processes otherwise, is the experimental definition, as by Vernadsky, of the *Noösphere*. The action by the human mind, in increasing the potential relative population-density of the human species, thus demonstrates its own existence by the effect of man's employed discoveries of universal physical principles in increasing the mass of the accumulated *Noösphere*.

The implications of that experience for that present principle of Vernadsky, are made clearer, if and when we take into account, for comparison, the prevalent virtual loss of use of the principles of European scientific progress, during most of the seven centuries following the close of the Second Punic War and the deaths of the greatest scientific thinkers from that time, the Cyrenaican genius of Egypt: the Eratosthenes trained in the Platonic Academy, and, also, Eratosthenes' contemporary and correspondent, Archimedes of Syracuse.¹⁷

The most relevant illustration of the nature of discoveries of universal physical principle, and of their use in sustaining and increasing the potential relative population-density of societies, is the role of the modern rediscovery of the ancient Classical principle of physical science, *Sphaerics*, by the leading genius of Europe's Fifteenth Century, Cardinal Nicholas of Cusa. This discovery, by Cusa, has had a dominant, underlying role in the increase of the economic power, per capita and per square kilometer, of European civilization over the performance of the cultures of the remainder of the modern world, until the most recent decades.

This method of *Sphaerics*, as employed by Plato, and as revived by Nicholas of Cusa, beginning his *De Docta Igno-*

rantia, has served as the point of departure for the revival of the foundation of all competent strains of modern European science, through such successors of Cusa as Kepler, Leibniz, and Riemann. This method is of the nature which Albert Einstein came to emphasize as the special significance of the functional relationship of the work of Kepler to its outcome in the work of Riemann. This notion as expressed by the great Einstein, is of crucial importance under conditions of today's catastrophic world economic crisis.

The featured practical implication of this present report as a whole, is, that without ridding economic policy-shaping of the intellectual and moral corruption implicit in the widely practiced, neo-Cartesian, *aprioristic* methods of forecasting widely employed today, it were most unlikely that the needed subjective reorientation of our economy's policies could be organized politically. I explain this point in the course of the following body of this report as a whole.

That manifest, unique, creative power of the individual human mind, and the effect of the development of the use of that natural power specific to our human species, is the key to the content, astronomical and otherwise, of the following report as a whole. That is key to finding the answer to the implied question posed at the opening of this introduction.

1. The Case for Economic Science

To trace the pathway of investigations, which lead from the observations just made in the preceding general introduction, on the matter of the existential quality of ironical implications, for mankind, of the recently observed supernova, the following lesson from an actual physical science of economy, is indispensable. *That is to emphasize the point introduced in the foregoing introduction, that the only competent answer to the question bearing on the matter of the supernova, is a question of the essential nature of the power of increase of the development of the quality of human knowledge itself, as a true universal, rather than a factor limited to some particular kind of human knowledge which presumes the existence of only a fixed, presently adopted repertoire of a limited sort of available array of general physical and comparable principles.* In respect to the principal subject-matter, of physical economy, at hand, as we shall see in due course in this report as a whole, the long-term relationship between economy on Earth and astrophysics, is reciprocal. In other words, the essential feature and effect of the solution which I present from this point forward, is a matter of *epistemology*.

The connection to be understood for practice, lies in an underlying, efficient and fundamental principle of *ontology*, rather than some experiment within the bounds of statistical mechanics.

As the reader either already knows, or will discover, the implied existential issues of scientific principle which the

17. Despite Archimedes' known achievements, there was a crucial error, as shown by Cardinal Nicholas of Cusa, on the subject of the issues of the squaring of the circle (and parabola), in the course of Cusa's founding of modern European science. The modern concept of the physical significance of the properly defined *transcendental*, is crucial, a concept which Leibniz et al. defined as the ontologically infinitesimal, according to the requirement presented to "future mathematicians" by Kepler. This is contrary to the false notion of D'Alembert, Euler, et al., that the notion that the Kepler-Leibniz infinitesimal is merely an error. Euler, for example, defined the idea of the "infinitesimal" as merely a matter of mathematical abstract formalism, rather than ontologically real, rather than efficient. This notion of the transcendental was already clarified, before the life of Archimedes, in ancient Greece by Plato's friend at Syracuse, Archytas. Archytas' solution for the construction of the doubling of the cube, was a crucial experimental demonstration of the ontological, as distinct from allegedly fictitious formation of the actuality of what is better named the "transcendental" of the Leibniz calculus, rather than a mystical use, by Euler et al., of "infinitesimal." Archytas had, thus, demonstrated that the practically efficient, fundamental principle of geometry was a principle of the constructive mode of *physical* geometry central to the work of the Pythagoreans and of Plato, as opposed to the merely formal, *aprioristic* geometry of ancient Euclid and Claudius Ptolemy. Eratosthenes was a follower of Plato and of Archytas on the relevant matter of Archytas' constructive doubling of the cube.



Albert Einstein emphasized the special significance of the impact of Johannes Kepler's work, with its conception of "sphaerics," on the contributions of Bernhard Riemann..

supernova poses for mankind today, are four, restated here as a follows:

First, the role of the application of newly discovered fundamental physical principles actually defines any long-ranging scientific-economic progress. Therefore, we must require that sane species of both entrepreneurs and their nation's governments take into account *the implied effects of the use, or non-use of newly discoverable universal physical principles*. For precisely that reason, *reductionist methods of policy-shaping, such as those of ordinary accounting practice, are worse than useless for shaping long-ranging economic policies of practice*.

Second, it were incompetent to employ any method of policy-shaping or auditing, which considers only a part of the whole economic process. For this reason, *reliance on each and all of today's frequently employed mechanistic-statistical methods of analysis and forecasting must be excluded*, in favor of their replacement by a *Riemannian dynamic* treatment of the integrated action of an economy, including all efficient factors affecting the total territory and all of the population as a whole.

Third, that there are two principal, contending notions of science, and, therefore, of economy, on the planet today.

Before introducing the fourth point, respecting the nature of human creativity, in a later chapter of this report, I explain the initial three, beginning with the matter of the third point just stated. I focus now on the implications of the modern

form of sovereign nation-state and its specific economic characteristics.

Careful attention to the principal among the most relevant changes in the history of political-economy since the 1439 point within the great ecumenical Council of Florence, and since the 1648 Treaty of Westphalia on which all competent and moral practice of statecraft depends, is indispensable, still today, for anything approaching competent understanding of even the rudiments of economic and related history since that interval. The following account contains the indispensable essential points, on which competence in economic policy-shaping today now depends absolutely.

The conception on which the Fifteenth-Century founding of the institution of the *commonwealth* form of modern, sovereign nation-state, such as that of France's Louis XI and England's Henry VII, was premised, is rooted in Cardinal Nicholas of Cusa's *Concordantia Catholica*. Modern physical and related experimental science was founded, chiefly by the impact of the same Nicholas of Cusa's *De Docta Ignorantia* and subsequent writings setting forth the principles on which all competent modern science was premised thereafter. Cusa's powerful influence during the period leading into and immediately following the Fifteenth Century's great ecumenical Council of Florence, was continued explicitly, for modern science, by committed followers of Cusa, including Luca Pacioli, Leonardo da Vinci, and Johannes Kepler. As the very title of Cusa's *De Docta Ignorantia* attests, this body of science was rooted in the ancient Classical Greek legacy of *Sphaerics*, as by the Pythagoreans, Socrates, and Plato.

The leading initial opposition to this modern European rebirth of science by Cusa et al., came from the remains of the powerful Venetian financier oligarchy seeking to return to the quality of power over Europe it had commanded prior to the disastrous effects of the preceding century's New Dark Age. The Venetian financier-oligarchy regained significant elements of its former imperial power through the Fall of Constantinople, and the sequel of that event.

Despite the Fall of Constantinople, the emergence of the first modern nation-states of the commonwealth form, Louis XI's France and Henry VII's England, unleashed a social-economic revolution in statecraft, the notion of the *commonwealth*, which made it impossible for the resurgent Venetian financier-oligarchy and its forces grouped behind the Spanish Inquisition, to consolidate its political power on its former, medieval scale, in Europe and the Mediterranean region generally. The writings of Niccolò Machiavelli, on statecraft in general and warfare in particular, both identified, and contributed to the efforts of emerging nation-states to, repeatedly, roll back the assaults by the forces of Venice's spread of religious warfare against that modern nation-state development which had been built up around Nicholas of Cusa's definition of the modern sovereign nation-state (*Concordantia Catholica*) and science (*De Docta Ignorantia*).



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The year 1492 was a year of awesome irony, and a crucial point of change in world history. On the one hand, it was the year that Christopher Columbus, under the influence of Cardinal Nicholas of Cusa, made land-fall in North America; on the other, it witnessed the expulsion of the Jews from Spain, under the reign of terror of Grand Inquisitor Tomás de Torquemada.

Thus, the general religious warfare in modern Europe, which was begun by Grand Inquisitor Tomás de Torquemada's reign of terror continued from 1492 (coinciding with the expulsion of the Jews from Spain), until Cardinal Mazarin's crucial role in establishing the rock on which modern European civilization has depended for its continued viable existence since, the 1648 Peace of Westphalia.¹⁸

In the meantime, approximately A.D. 1580, a masterful Venetian scoundrel, Paolo Sarpi, had consolidated a powerful faction among the Venetians, which, in its later guise as a Netherlands faction, later ruined a France misled by Louis XIV, took over the English monarchy under the Stuarts, and prepared the way for the Thirty Years War of 1618-1648. After the 1648 Treaty of Westphalia, the rise of one of modern

history's greatest nation-builders, France's Jean-Baptiste Colbert, led to the defeat of the imperial ambitions of the City of Venice itself; but, the Venetian interest of the followers of Paolo Sarpi was not defeated. Sarpi's intention was reincarnated, as with the help of the Paris-based Venetian, the Cartesian Abbé Antonio Conti, in the guise of what is to be recognized, today, as Anglo-Dutch Liberalism, as this was typified, as in the history of England, by William of Orange, a force of evil greatly aided in its efforts by the follies of the silly Sun-King, France's foolish Louis XIV.¹⁹

As Machiavelli's *The Art of War* and his commentaries on Livy, make the implications of the issues of the Sixteenth and early Seventeenth European centuries clearer, the Renaissance political and economic transformation of the character of the modern city and nation-state, had produced a combined scientific-technical, social, and political situation, which, in net effect, could not be mastered with any degree of finality by the so-called "Aristotelean" methods of the late Roman and Byzantine empires, and as prevalent in most of the times and places of the post-Charlemagne Middle Ages. This kind of failure of the so-called Aristotelean doctrine, had been utilized for the rise of power of a new Venetian faction, one premised on the dogma of William of Ockham, and led by Paolo Sarpi.

The particular significance of the philosophical liberalism introduced under Sarpi's leadership of his Venetian faction,

18. The crucial point of change in the emergence of what has become world history since that date, is set in 1492. As briefly as possible, Cardinal Nicholas of Cusa had responded to the continuing effects of the Fall of Constantinople by designing a policy for transoceanic voyages to establish allies of the ecumenical cause. The maps of the world, based on a combination of the lies of Marco Polo and the heritage of Eratosthenes' measurement of the Great Circle of the Earth, produced maps, as by Cusa's collaborator Toscanelli, which came into the hands of an Italian captain, Christopher Columbus, in the pay of Portugal, about 1480. Columbus had encountered the testament of Cusa, in which the policy was laid out. Columbus entered into correspondence with Toscanelli. All indicated a continental land-fall, or perhaps the Island of Japan in the location which Venetian lies had placed as the Pacific Coast of Asia. It is, then, sufficient to take into account Cusa's ecumenical perspective (*De Pace Fidei*) and his global, transoceanic intentions, to grasp the awesome irony of 1492: the most forward-looking intention embodied in Columbus's voyage and the most debased intention expressed in the actions of Torquemada. The possibility of the existence of the future U.S. republic stems from the chain of events flowing forth from the crucial moments of 1492.

19. I once inspected the still intact fortified city of Neuf Breisach, a place which attests for you, the visitor, today, as with what Belfort had exhibited during the Franco-Prussian war, to the achievements of a France, despite Louis XIV and other unfortunate interventions later, with the heritage of Colbert and the roots of the achievements of the École Polytechnique of Gaspard Monge and Lazare Carnot.

has been encapsulated, for our immediate consideration here, by attention to the systemic implications of the particular form of Sophistry which Sarpi and his lackey Galileo Galilei applied to the intent of outflanking the strategic quality of perceived threat to Venetian interests which the rise of modern science and technology had represented for ruining the efforts to continue the Aristotelean form of medieval feudal tradition of opposition to an actual form of physical science. *This new form of what became a widespread moral corruption of science and society, was what became known as Anglo-Dutch Liberalism.*

Three Political Options

That aspect of Machiavelli's influence, and the contrasting influence expressed by Sarpi's and Galileo's adoption of the wild-eyed irrationalism of the medieval William of Ockham (Latin: Occam), as catalyzed the division of the principal optional choices of form of modern nation-state among three principal ranges of types among modern European models of political-economy: 1.) The American System model (e.g., Alexander Hamilton's The American System of political-economy), as reflected, most notably, in the policies of practice of U.S. Presidents John Quincy Adams, Abraham Lincoln, and Franklin D. Roosevelt; 2.) The European model of a Liberal blending of financier-aristocracy, from above, and democracy, below, as this arrangement is typified by the European model of parliamentary systems; and, 3.) The dictatorial forms of Liberalism, which might be called the Hobbesian model, in such forms as fascism, adopted by the Liberal system when Liberal financier-oligarchical *control over, and through* the parliamentary system breaks down, or threatens to break down.

Thus, in the language of Classical Greek imageries, the American (Promethean) Model, as might be traced from Solon of Athens, is the only efficient form of effective opposition to each of the modern Liberals' alternatives, the which are the Liberals' alternatives of a parliamentary (i.e., Apollonian) or tyrannical, dictatorial (Dionysian, e.g., terrorist) forms of Liberalism. Such is the triple-point form of the world's existential crisis at the present moment.

In the case of the U.S.A. itself, the prevalent distinction between those who are effectively in the patriotic tradition of the Declaration of Independence and original Federal Constitution, on the one side, and Liberals on the opposing side, reflects an organic opposition to the implicitly pro-slavery dogma of John Locke's Anglo-Dutch Liberalism, that by Leibniz's anti-Lockean "pursuit of happiness" in the Declaration of Independence. The entirety of the fundamental principle of law of the U.S. Federal Constitution, is expressed implicitly in the *Preamble*, which, in a meaningful sense, translates Leibniz's compact "the pursuit of happiness," into the looser, but necessary form of expressed rebuke of John Locke's dupes, into the more popular expression of Leibniz's principle.

Since clarity on this point is of crucial importance, I expand the point just presented, as follows:

Essentially, for the benefit of those who may require this clarification of the actual intention which that content of the Declaration of Independence expresses, human happiness, as Leibniz defines it, is not rooted in animal hedonism; it is rooted in the anticipation of what one's own life will have meant for society during generations to come. Happiness is the certainty that you tried as you should have done, when it were sufficient reason what you have tried would be useful, even necessary to future generations of the nation and mankind, that you had planted the necessary seeds to be harvested in future time.

Your body is mortal, but your soul is not. For our Constitution, it is the realistic pursuit of the happiness of your immortal soul, which is the prompting of your effort to discover and attempt that which will be good in the generations after you have died. You must be encouraged in the efficient right to walk an available choice of pathway toward enjoying now the foretaste of that already earned happiness of the incarnate immortal soul.

You may be at liberty, within reasonable limits, to do otherwise; but, although you may be permitted to choose to act with contemptible naughtiness, within certain limits, you have no affirmable constitutional claim to the fruits of an illicit impulse as such. We should prefer your punishment in Hell to your imprisonment at our cost, while you are alive—if you leave us a reasonable option of doing so: provided you afford society the ability to tolerate your regrettable choices of behavior. You may be permitted to be bad, within limits, but, contrary to the implications of the teachings of the regrettable Thomas Hobbes, John Locke, Bernard Mandeville, François Quesnay, or both Lord Shelburne's Adam Smith and Shelburne's utterly depraved Jeremy Bentham, whether living or stuffed, our toleration does not grant you a moral authority to act so. You have no right to be evil, as Lord Shelburne's Bentham was; we have the right to defeat your intention on that account, but no right to use that as a pretext to "play God" against you, as today's crooked judges do.

Steps Toward a Science of Economy

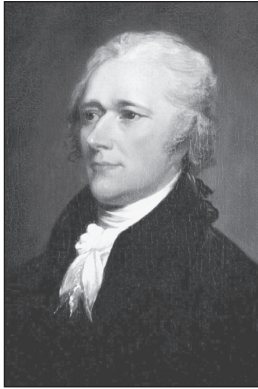
The question to be taken up, at this point in the report, on that account, is:

What is the nature of the competent use of economics for purposes of statecraft, as this must be defined from the standpoint of physical science? To that end, the following summary of that leading issue presently dividing the ranks of modern physical science as such, must be identified as follows.

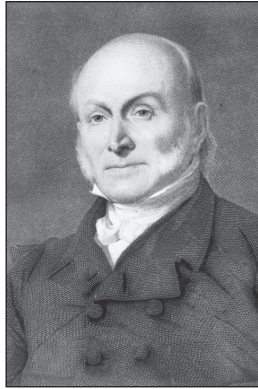
Proceed now with our summary of the opposing meanings of the term "science" in European history. The introductory points to be made on this account, have been made by me in earlier locations, but they must be stated again here, in order to provide a common ground of understanding among us, for treating the subject of economy as we must treat it, urgently, here and now.

Three Modern European Models of Political Economy

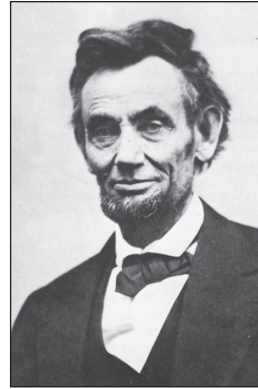
1. The American System



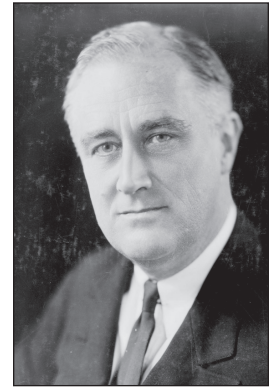
Alexander Hamilton



John Quincy Adams



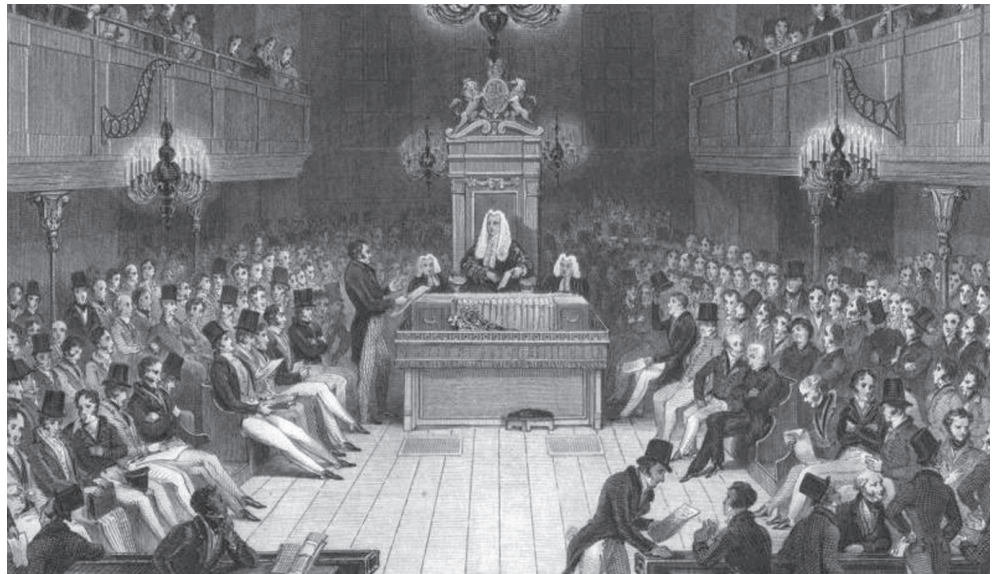
Abraham Lincoln



Franklin D. Roosevelt

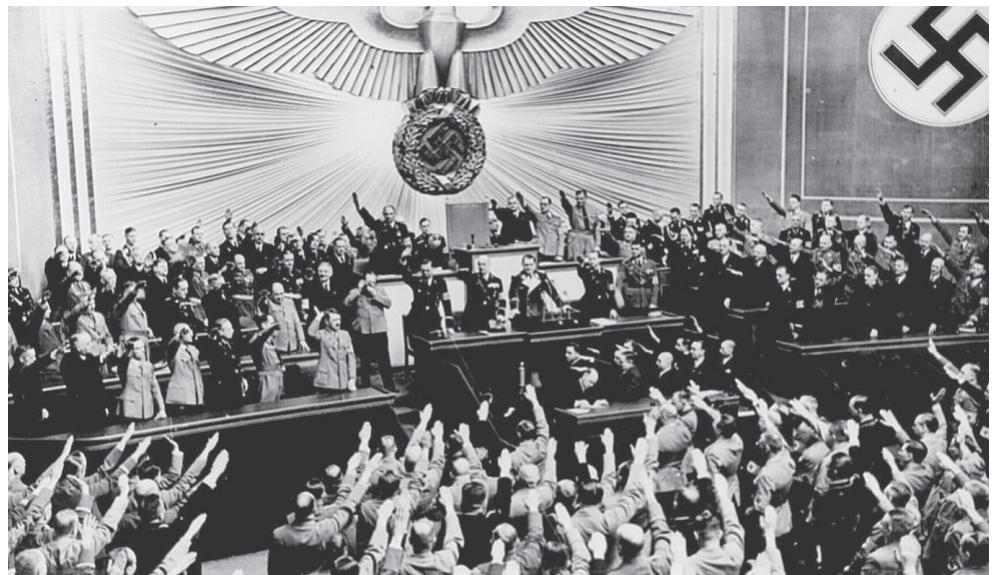
2. The European Parliamentary System

*The British House of
Commons in 1834.*



3. The Dictatorial Form of Liberalism: Fascism

*The Reichstag salutes Adolf
Hitler in March 1938, on the
announcement of the Nazi
occupation of Austria.*



The essential points are not original to me, but were both ancient and are known to relevant modern specialists; however, my argument differs a bit from that of others, chiefly that we might situate the specific subject-matter of currently required political-economic practice, as I have developed unique features of required practice for the special kind of case presented by the need to overcome the currently onrushing, global crisis.

What is properly called modern economy, was originally a by-product of the great ecumenical Council of Florence, as this is expressed in exemplary early forms of practice by the emergence of the actually commonwealth constitution of modern government under, first, France's Louis XI, and, after that, by Louis XI's admirer, Henry VII of England. The best outcome of the English branch was typified by the Seventeenth-Century developments in North America associated with the Winthrops and Mathers, as continued through Cotton Mather and his follower Benjamin Franklin. The further development, beyond those of the pre-1688 phase of the Massachusetts and related Pennsylvania developments, which were largely products of the added influence of France in the footsteps of Louis XI, under the leadership of Cardinal Mazarin and his associate, Jean-Baptiste Colbert, had created the world's most advanced economy, with policies developed largely through the "dirigist" policies of the same Colbert who played a crucial role for scientific progress in many ways, including the 1672-1676 sponsorship of the studies, by Gottfried Leibniz, which produced the original form of the calculus, as presented to a Paris printer in 1676.

Throughout all of this and more, the Promethean tradition in modern European statecraft is expressed for all modern times to date, as a Christian revival of the evangelism of the Apostles John and Paul, built around that cultural legacy for modern science, Classical art, and statecraft which was set into motion, chiefly, by the work of Nicholas of Cusa.

Focus, also, upon the aspect of the ecumenical tradition of Cusa's *De Pace Fidei*, as echoed by the effort of Gottfried Leibniz on this account;²⁰ focus upon those efforts to free Christianity from gnostic abominations traced to both the pagan Roman Imperial Pantheon and the still earlier precedent of the frankly pro-Satanic Delphi Apollo-Dionysus cult. On this account, consider the modern expression of the evil of the imperial Roman tradition of the gnostic, sometimes frankly pro-Satanic proliferations of modern wild-eyed cults; these are often a reflection of the role of Venice, as in the cases of the Habsburg pro-feudalist reactionaries and England's crazed Henry VIII. Consider that special effort, by Venice, to destroy the emerging institution of the modern, civilized form of sovereign nation-state, through the 1492-

1648 fostering of induced religious warfare.²¹

Seen in that setting, European science itself, is, ultimately, the spawn of the astrophysical conceptions and practice of ancient Egypt. This core of this astrophysical conception was transmitted from Egypt to Greece in the expression best known as the branch of Egyptian astrophysics known to the Pythagoreans as *Sphaerics*. Implicitly, *Sphaerics* was rooted, from the start, in the study of the regular anomalies of the universe as the ostensibly spherical domain of an implied astrophysics. No *aprioristic* assumptions of the sort associated with the famous Euclid's *Elements* were tolerated.²²

That is to emphasize, that what ruined the role of geometry as a part of authentic science, was the superimposition of *a priori* definitions, axioms, corollaries, and postulates, as those of the Sophist Euclid, upon what had already been the roster of the established theorems of the competent geometry shared among the Pythagoreans and the Athenian and Cyrenaican circles with Socrates and Plato.²³ Euclidean geometry degraded geometry from the practice of science, to the virtual composition of a poor quality of the merely formal kind of science-fiction which prefigured the rabidly positivist U.S. "science-fiction" writers and related enemies of actual science, during the period following World War II. There are no

21. The pre-modern organization of European civilization was the creation of a Venetian financier-oligarchy which succeeded a declining Byzantium. Venice took over a kind of Norman sea-going banditry which had been deployed by Byzantium against the Augustinian Christianity of Saxon England. These sea-roving bandits had been built up into strategic assets which Byzantium used as part of the apparatus to manage affairs on its borders. The Venetian financier oligarchy took over these Normans, and used them to such included purposes as destroying the accomplishments of Charlemagne, and as named and otherwise actual crusades such as the Albigensian Crusade and the Norman Conquest of Saxon England. The system of permanent warfare (Alexander Helphand's later doctrine of "permanent warfare and revolution," dictated to L.D. Trotsky), called the Crusades, was always an operation run by Venice's financier oligarchy as both a kind of copy and alternative, combined, to the Caesarian system of the Roman Empire. Venice's large degree of control over the Vatican, by aid of such instruments, was part of the means employed for medieval methods of what are popularly identified as "globalization" today.

22. The discovery of the elliptical orbits, by Kepler, was a crucial, included feature of his discovery of the law of universal gravitation. The proper use of "universal" in science always refers to a principle underlying the existence of the universe as a whole; thus, the Pythagoreans and their Egyptian predecessors defined universal science as *Sphaerics*.

23. At this point I should restate as a fact reported in earlier locations: that my aversion to what I perceived then as the false assumptions of Euclidean *apriorism* was clearly established as a permanent fixture of my scientific beliefs by the late Summer of 1936, during my first day of a relevant class in Plane Geometry. My rejection of the idea of an *a priori* form of geometry then, reflected my earlier fascination with the role of the function of geometric forms of elements used in design of supporting structures in optimizing the geometrical distribution of mass in supporting features of a structure. My insight should have required no sustained objection to my argument for a physical, rather than *aprioristic* geometry, but for the powerful hold of the reductionist tradition on the captive minds of academic and other orchestrated opinion.

20. Dr. Ambrosius Eszer, O.P. "Gottfried Wilhelm Leibniz—The Unity of the Churches, and Russia," translated by Will Wertz, *Fidelio*, Spring 1997.

apriori presumptions in a strict form of the system of mathematical astrophysics known as *Sphaerics*.

For comprehension of such subject-matters as the matter of astrophysics, as are posed as the issues of a merely formal, *aprioristic* versus a real physical geometry, the standpoint of *epistemology* is indispensable, as I shall indicate in the course of the following development.

The crucial term here is *discovery of universal physical principles*, as such discoveries are made by the same methodological approach employed by Johannes Kepler for the founding of the original competent form of both modern astronomy and modern experimental physical science thereafter.²⁴ The crucial issue of all scientific method, is the difference between such epistemologically flawed approaches as that of Descartes and his followers, on the one side, and the rigorously creative competence of Cusa, Leonardo, Kepler,

24. The difference between the founding of modern astrophysics by Kepler, and the parodies of some of Kepler's discoveries, as composed by Paolo Sarpi's household lackey Galileo, and Galileo's followers, is shown, most clearly, by considering the essential role of *harmonics* in both Kepler's first discovery of the physical principle of gravitation, in his *The New Astronomy*, and, in the completion of his extension of that principle to the Solar system, in his *The Harmony of the World*. Efforts to explain away Kepler's unique accomplishment by the Titius-Bode Law simply do not function, as we encountered exactly that problem in relevant, heated scientific 1980s sessions of the Fusion Energy Foundation. As in the case of the Periodic Table, the crucial issue (the so-called "wavicle" issue) is also the principle of harmonics. If one reenacts the actual steps made by Kepler in effecting these discoveries, the frauds perpetrated against Kepler and Leibniz by the so-called "Newtonian" followers of Cartesianism on this account, stand out in bold colors. Notably, the same fraud perpetrated by the followers of Galileo against the work of Kepler, was echoed by the Newtonians such as D'Alembert, Euler, and Lagrange, in implicitly denying the existence of the complex domain, in favor of a *merely formal* Cartesian method, rather than the *physically actual* complex domain already implicit in the Leibniz-Bernoulli elaboration of the physical geometry of universal least action. De Moivre, D'Alembert, Euler, Lagrange, et al., who pretended to have refuted Leibniz's solution for what Kepler had proposed as the development of a calculus of the infinitesimal, could not escape the implications of the issues already posed by Archytas' constructive physical doubling of the cube, so Euler et al., proclaimed the solutions to the mathematical-physical problems of this type to involve purely imaginary, but convenient works of fiction. For this purpose, they concocted the gibberish-term "imaginary." In contrast, what Kepler had posed to "future mathematicians" was the implications of the infinitesimal change in direction of motion associated with gravitation, for example. This was the same issue already addressed by Cardinal Nicholas of Cusa's exposure of the ontological error in Archimedes' purported quadrature of the circle. Hence, modern mathematical physics after the development of the catenary-cued Leibniz-Bernoulli principle of universal physical least action, was divided between, on the one side, the legacy of Descartes-Newton, in which the "infinitesimal" was regarded, ontologically, as a purely formal question of "imaginary" existences arising as a frictional feature of formal mathematics practice, in contrast to the ontologically actual physical principle of the manifest function of the "infinitesimal" in the actual universe. This problem also arises in the muddleheaded effort to treat Riemannian hypergeometries as essentially "formal," rather than efficiently physical. This may have some correlation with the reputed high rate of extremely exotic forms of insanity among formal mathematicians who have overdosed on their own dogmas.

Fermat, Leibniz, and Riemann, on the other.

The most essential principle of a mathematics suited to scientific work, is demonstrated by the method of construction employed, by Plato's friend Archytas, in the doubling of the cube. This, together with the discovery of the principle of the sphere by Theaetetus et al., demonstrates the gratuitous and terrible error introduced by adopting any *aprioristic* assumptions akin to those of Euclidean geometry. Archytas' discovery, for example, involves a *proof which is not a deduction, but a construction*. It is not merely formal, but is *ontologically physical*. You can not actually see it; but, you can touch it. It is the action which generates such a discovery of a universal physical principle, which is associated with the passion intrinsic to all expressions, in science and Classical art, because the principles expressed by the act of an experimentally validated discovery are a form of passion otherwise best identified in a strictly Bachian conception of the principle of action of polyphonic counterpoint, as this is expressed through a seasoned Florentine *bel canto* training of choral application of the human singing (and, also, speaking) voice. On this account, and in this way, physical science and Classical musical composition are unified, as Kepler insists, by the impassioned expression of harmonics in both.

Truth is never a matter of deduction; deduction is the father and mother of all the bastards which are the fruit of ivory-tower formalism. The substance of discovered truth, is a matter of a *passion which has been educated*, as the action of constructing the doubling of the cube illustrates such a principle of education. Truth thus defined, so directs the expression of a proven principle as an appropriate choice of discovered course of responsible, self-impassioned human action. It is thus the principle of experiencing such a valid discovery of physical actualities, rather than formal deductive learning, rather than Cartesian mechanistic-statistical judgments, for example. It is that principle which separates good educational practices from the induced skills awarded to trained seals, puppies, and products of our all too prevalent, implicitly brain-damaging, behavioral-conditioning modes in educational programs today.²⁵

The essential forms of such discoveries are expressed as universal physical principles, as this is typified by the already cited case, of Johannes Kepler's uniquely original discovery of the universal principle of gravitation. As I have emphasized repeatedly, in writings published earlier, a universal principle such as the gravitation discovered by Kepler, bounds the universe everywhere. This operates to such effect, that the entirety of the universe is implicitly contained by its influence. Thus, I insist, repeatedly, on the significance of Albert Einstein's locating modern science in the continuity of development linking the original discoveries of Johannes Kepler to the physical principles of Riemannian hypergeometry, a

25. E.g., "programmed learning."



Maestro José Briano of Mexico, a master pedagogue in the art of bel canto singing, coaches singers from the LaRouche Youth Movement in Los Angeles, May 15, 2007. Such Classical training in choral singing evokes the kind of passion associated with the discovery of a universal physical principle. “On this account, and in this way, physical science and Classical musical composition are unified, as Kepler insists, by the impassioned expression of harmonics in both,” LaRouche writes.



EIRNS/Chris Jadatz

geometry of a universe which, as described by Albert Einstein, for example, has no external boundaries, but is functionally finite, self-bounded by the discoverable universal physical principles of which all action within the universe is composed. It is to those principles to which I turn our attention now.

2. The Universal, Creative Human Mind

All of those phases of human existence, which have not led to a threatened, earlier, or later, actual catastrophe, are premised on the functioning of those kinds of processes of the individual, sovereign human mind through which discoveries of *universal physical principles of change* are made, shared, and implemented. This is the only significant difference between a man and a higher ape. It is a social difference, but also a difference in the elementary distinction of the human individual from all species of beasts.²⁶

26. A thorough study of Johannes Kepler’s *The New Astronomy* and *Harmony of the World*, is the best experience in the methods of scientific research, both for the deathless merit of his work, and the extraordinarily careful attention to detailing of the process of discovery itself. The want of available, competent English translations of these works of Kepler had been a crippling omission in science education until recently.

The reader might find it convenient to describe this distinction not only as science, but also as “The Leonardo da Vinci Principle.” As Johannes Kepler demonstrated in his *Harmony of the World*, and as the Periodic Table of Mendeleev and his followers illustrates this point, you can not justly separate a competent body of physical science from the Classical artistic method expressed commonly by Cusa’s followers Leonardo da Vinci and Johann Sebastian Bach.²⁷ For much of this, the teaching of the Sophistries of Euclidean geometry, or its bowdlerized derivatives taught in schools, and the influence of the fraudulent, mechanistic-statistical methods derived from Descartes, are largely responsible.

The case of Descartes is one more of the relatively more significant examples of a mental-moral disorder known as Sophistry. Sophistry, such as that of Cartesianism, is not merely a technical fault, but a qualitative kind of moral failure, the substi-

27. During the middle of the 1980s, I stirred up a bit of a riot, over this point, at a meeting of leading scientists and others assembled by the Fusion Energy Foundation (FEF). Professor Robert Moon, the leading scientist of that body, and a follower of William Draper Harkins, was provoked to reactivate his own earlier work on the ordering of isotopes. This work involved the collaboration of *21st Century*’s Laurence Hecht, who has reactivated that program which had been launched under Professor Moon’s direction. Unfortunately, until recently, no competent English translation of Kepler’s key works were available. The lack of knowledge of Kepler’s actual work among the great majority of practicing physicists, was largely responsible for their wrong-headed, axiomatically reductionist views on Kepler’s discoveries.

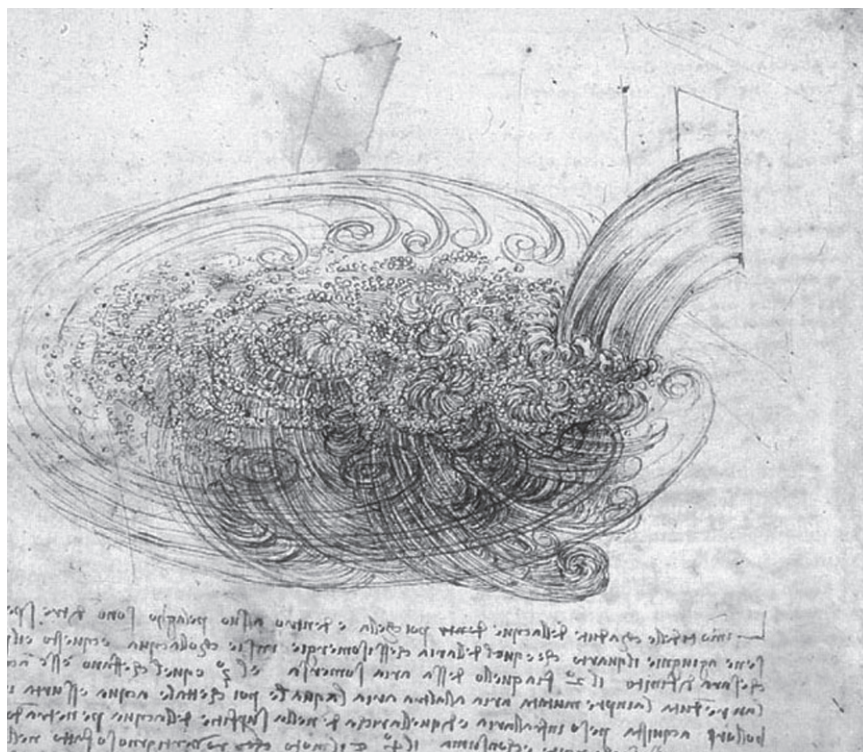
tution of the appearance of mere cleverness, for creativity.

Thus, the modern form of what ancient Classical Greece came to know as Sophistry, is echoed in a modified form as the specifically characteristic, recurring weakness which has appeared within modern, European culture. Worse, through the continuing influence of a *de facto* British world empire today, the other present cultures of most of the planet, have either adopted their own characteristic imitation of contemporary European Sophistry, or have been strongly affected by its influence in significant other ways. The name for this modern copy of ancient Greek Sophistry, is the term *Anglo-Dutch Liberalism*,²⁸ which is often used as interchangeable with the name of *empiricism*.

As I have already indicated in the course of the preceding pages, the Venice-centered European oligarchy had been able to inflict great intellectual, and also material damage, on what should have been today's common knowledge of the new principles underlying the spectacular, revolutionary progress in modern European civilization since 1439. But, the attempt by the Venice-led reactionaries to crush European civilization by using the methods of Aristotle failed. As I have noted, Sarpi reacted to the failures of his more traditionally medieval fellow-Venetians, by decreeing the dumping of Venice's relatively traditional, doctrinal reliance on the Aristotelean shackles of the captive mind, by substituting the essentially unprincipled (and wild-eyed) dogma of medieval William of Ockham.

The lunatic wielding of that intellectually sterile practice of what modern radical positivists have termed "Occam's Razor," expresses the kind of modern Sophistry expressed as empiricism in general, but also produces the extremes of contemporary existentialism, in addition to the logical positivism of Bertrand Russell and such fiercely fanatical Russell clones as Professor Norbert Wiener and John von Neumann. In the extreme, the outcome of Russell and his virtual clones Wiener and von Neumann, is the most extremely brutish form of fascism imaginable; a contemporary Jonathan Swift might have suggested that this is the kind of fascism which might be expected of the Academy of Lagado.

Underneath the kind of exotic products which Anglo-Dutch Liberalism has inherited from the influence of Paolo



"The Leonardo da Vinci Principle": You can not justly separate a competent body of physical science from the Classical artistic method. Here, one of Leonardo's scientific explorations of hydrodynamics is illustrated with the same unsurpassed beauty with which he lovingly produced his greatest paintings.

Sarpi and his household lackey Galileo, there is the heritage of the ancient Sophist Euclid, a heritage expressed in such forms as imitations of Euclid's Sophistry, such as: British empiricism; and, Cartesian types of neo-Euclidean, mechanistic-statistical analysis, and the foolish forecasting methods prevalent in today's statistical-economic dogmatics.

In the empiricist method, and its derivatives, no actual physical principle, in the ontological sense of principle, is allowed. This is illustrated most outrageously in the field of social doctrines, such as those of Thomas Hobbes, John Locke, Bernard Mandeville, David Hume, François Quesnay, Adam Smith, and Jeremy Bentham, where no ontological type of physical principle is allowed, but only what are termed "formulas" or "rules."

To illustrate the most relevant aspects of that problem to be considered by us in this present location, is the bearing of that pernicious, mechanistic-statistical method on the practice of today's customary statistical modes in economic forecasting.

The absence of true principle from Anglo-Dutch Liberal ways of thinking, is the meaning of *Liberalism*. In place of actual principle, a substitute for principle is the adoption of the custom of a certain kind of intrinsically irrational form of priestly or ghastly authority, such as "popular opinion," "customary," "a consensus," or "peer reviewed."

28. A technical term of any competent contemporary political science.

The Meaning of Creativity

In essential opposition to empiricism, we have the conception of creativity as a higher, and more powerful ordering of human behavior than exists in any lower living species. This is the most essential conception in all aspects of human knowledge; and yet, among most contemporaries, it remains the most difficult to conceptualize, even among most of those with an ostensibly rich accumulation of certifiable accomplishments.

The essential problem there, is *a lack of the idea of principle*, as Kepler's discovery of universal gravitation illustrates the notion of principle in physical science, as in his *Harmony of the World*. "Principle," when the term is properly employed, signifies what is otherwise termed, sometimes, as the fruit of a proven "unique experiment." The successful, readily demonstrated, but usually rejected principle of electrodynamics, by Gauss's collaborator Wilhelm Weber, illustrates the existence of cases in which an experimentally, uniquely validated discovery of a universal physical principle, is rejected in favor of defending the wrong claims of figures whose claim to authority in scientific opinion on that particular matter is not science, but "club rules."²⁹ Such an actually fraudulent practice, on behalf of "club rules," is typical of the practice of authentic Anglo-Dutch Liberalism.

Since all actual qualitative stages of improvement of mankind's potential relative population-density, reflect nothing but an ordering of those types of creative processes of mentation on which I focus your attention here, there could be no competent long-term policies for society which did not, in fact, come to grips with the concept of human intellectual creativity, as the Pythagoreans and Plato, for example, had mastered working knowledge of the essentials of that power. The historically validated notions of the practical meaning of universal principle, date back to the Pythagoreans and the other circles of Plato; there has been actual contemporary progress in science, but not much significant improvement in the practical meaning of the term "principle" from that presented by Plato.

Such knowledge of principle as principle, is usually, even categorically, "axiomatically" disavowed, and disallowed in all expression of modern physical science. The principal source of that shortcoming of taught physical science, and other matters, today, is chiefly due, politically, to the influence of Paolo Sarpi and his immediate followers, such as William Shakespeare's enemy, Sir Francis Bacon, and Sarpi's personal lackey, hoaxster, and specialist in the mathematics

of gambling, the Galileo Galilei who trained the Beelzebub known as Thomas Hobbes.

As I have already indicated, earlier here, and in other published locations, Paolo Sarpi was faced with a paradox. If Venice continued its medieval "hard line" policy respecting the doctrine of Aristotle, Venice's cause would be ultimately defeated by the discoveries produced by the influence of the Platonic followers of Cardinal Nicholas of Cusa; but, if it accepted the methods of Cusa's prompting of modern scientific progress, it would be defeated politically by the subversive influence of Cusa's revival of Classical Platonic methods of science on its own people. Sarpi's remedy for this was his policy of sometimes accepting the fruits of scientific discovery, but of preventing the spread of the method of effecting such discoveries as matters of comprehensible universal principles. The result of that sleight-of-hand approach, is what is known as *empiricism*, or the method of *Anglo-Dutch Liberalism*.

This empiricist compromise is typified by the manner in which that Franco-Dutch Liberal, René Descartes crafted his pseudo-scientific method. This method of Descartes was explicitly exposed as fraudulent, by Leibniz, between 1692 and 1695.³⁰ During this period, and following that, Leibniz, in cooperation with Jean Bernouilli, expelled the last refuge of Euclidean thinking from tolerable expressions of physical science, in discovering the significance of the catenary function in defining the role of Pierre de Fermat's discovery of *the principle of universal physical least action*, a principle which, in the work of Leibniz and Bernouilli, supplies the real basis for the ontologically physical, as opposed to merely formal, conception of the complex domain. That development in the work of Leibniz and Bernouilli, provides the basis for what Bernhard Riemann was to launch as a true physical geometry. It is the link, rooted in Cusa's *De Docta Ignorantia*, which defines the essential continuity of development from the work of Kepler, through that of Leibniz, into Riemannian physical hypergeometries. It is along this track, and only this track, that a satisfactory notion of universal principles of physical science, as true principles in the ontological sense, can be found.

So, the work of Cusa's follower Johannes Kepler established the founding of the notion of competent general practice of mathematical physics, as expressing the systematic application of the act of true creativity to human formal knowledge, a quality of act which echoes Kepler's standard for defining an experimentally grounded discovery of a universal physical principle of the universe as a universe. Typical are Kepler's detailed presentation of his step-by-step discov-

29. Laurence Hecht, "The Atomic Science Textbooks Don't Teach," *21st Century Science & Technology*, Fall 1996. www.21stcenturysciencetech.com/articles/Atomic_Science.pdf

For English translation of Wilhelm Weber's 1846 treatise on electrodynamics, see: www.21stcenturysciencetech.com/Articles%202007/Weber_1846.pdf

30. For convenience, refer to G. W. Leibniz's 1692 "Critical Thoughts on the General Part of the Principles of Descartes," and Leibniz's 1695 "Specimen Dynamicum." See *Gottfried Wilhelm Leibniz: Philosophical Papers and Letters*, Leroy E. Loemker, ed. (Dodrecht: Kluwer Academic Publishers, 1992).

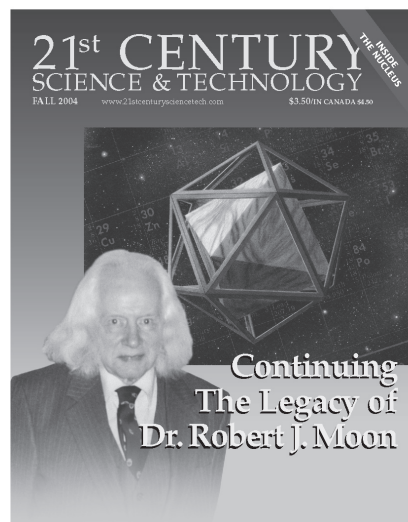
ery of the principle of universal gravitation, first, in respect to the relations among the Sun, Earth, and Mars, and, later, a principle of general, harmonic (J.S. Bach-like) organization of the relations among the Solar system's Sun and its planetary orbits.³¹

The Crisis in Sense-Perception

From the false standpoint of the Liberal standard for modern classroom dogma, it is presumed that the mathematics of modern physical science was derived from an axiomatic basis in the *a priori* system of Euclidean geometry. This presumption leads to a great crisis in the matter of defining what constitutes an actual experimental proof of principle. This is a matter to be viewed, and rejected, by tracing the history of European physical science from the Pythagoreans and Plato to Cusa and his followers.

At the beginning, so to speak, in both the work of the Pythagoreans and Kepler, *harmonics* contributes a crucial part. This feature, harmonics, of the process by which Kepler discovered the full principle of universal gravitation, is such that no honest account of the origin of Kepler's famous formulation could be presented, if it did not grasp the essential, indispensable role of harmonics in shaping Kepler's formulation. It is the indispensable role of harmonics in shaping Kepler's formally expressed conclusion, which, customarily, is "conveniently" omitted.³²

The same challenge of harmonics appears in the extended Periodic Table. A continuing process of exploration, launched by Professor Robert Moon, who was, relevantly, a former student of William Draper Harkins, the discoverer of the neutron, has been continued by Moon's principal assistant in that exploration, *21st Century's* Laurence M. Hecht.³³ This project was launched by Professor Moon in reaction to a heated discussion among the scientists associated with the Fusion Energy Foundation (FEF), a discussion which I had provoked by insisting on the need to dump Newtonian physics from the



Dr. Robert Moon's "Keplerian" exploration of a geometrical model of the atomic nucleus was featured in 21st Century Science & Technology in Fall 2006, and is available at www.21stcenturysciencetech.com.

standpoint of the authentic, anti-Newtonian treatment of the subject-matter.

Professor Moon's project was a revival of one he had begun, and then shelved years earlier, respecting the highly suspicious imposition of a wild-eyed doctrine of "magic number" arithmetic on the subject of the ordering of atomic isotopes. Professor Moon's approach returned to the role of Archimedean solids in Kepler's work on the design of the planetary system. Presently, Hecht is processing extant experimental results from sundry professional sources, to uncover relevant "Keplerian" patterns in the currently updated Periodic Table.

Notable aspects of recent compilations by Hecht et al., are focused on what present information says on Academician V.I. Vernadsky's mid-1930s treatment of the role of the Periodic Table in the functioning of living processes. There is a special practical emphasis on the subject of the increasingly important role of nuclear-fission-related isotopes in medicine and related applications. Here, as in Kepler's astrophysics, and the organization of the Periodic Table, harmonics, as reflected from the work of Pythagoras, comes into play.

That discussion of *harmonics* points our attention to a crucial feature of the discussion of economy in this present location. Eccentric fads in the arguments for elevated musical pitch put aside, the musical scale is a reflection of the living processes of the "chest of voices" represented by a normal assortment of decently trained singers.³⁴ As it appears in Kepler's Solar system, it also appears in the organization of the Periodic Table, and living processes generally. Taking these assorted cases, and others into account as a package: What does all this mean?

The answer to that question must be found through an ordered series of steps. To that end, I shall begin at the

31. Note the remarkable effect of comparing Kepler's method of the harmonic ordering the Solar system, with the actual ordering of not only the Solar system, but the Periodic Table, and the well-tempering system of J.S. Bach pivoted on C=256, as compared with the absurdities produced by the clownish, mechanistic notion of "moveable *do*." This points to the comparison of the ability of stronger varieties of *bel canto*-trained voices to tolerate elevated register passages, against the loss of many valuable good singers at an early phase of what should be extended careers, had the factor of "elevated pitch" not been mechanically enforced.

32. See the two successive reports on a study of Kepler's discoveries of the Solar orbital system by the LYM teams for a summary of Kepler's own statement of the process of his discoveries. See www.wlym.com/~animations/

33. "Robert J. Moon on How He Conceived His Nuclear Model" (transcript of a lecture), *21st Century Science & Technology*, Fall 2004. www.21stcenturysciencetech.com/Articles%202005/moon_F04.pdf

Laurence Hecht with Charles B. Stevens, "Report on Work in Progress: New Explorations with the Moon Model," *21st Century Science & Technology*, Fall 2004. www.21stcenturysciencetech.com/Articles%202005/Moon_Model_F04.pdf

34. For example: "moveable *do*" is a standard ingredient for the production of half-baked musicians.

beginning, restating a point made in a location published earlier.

Sight, Sound, and Economy

Human knowledge of that part of the universe which, as it is said, lies beyond our skins, depends, in first approximation, on the degree of our development of the power of rightly interpreting our sense-experiences. The primary such senses are sight and hearing. While the other senses are important, but relatively less so, to this end, their role in providing us knowledge of our universe, the epistemological problem confronting us at this point of our account, is comparable, in first approximation, to that encompassed by consideration of sight and hearing alone.

The naive, actually erroneous opinion of sight and sound, is that the image they provoke in our mental processes, especially vision, is a fair copy of “what is actually out there.” Wiser opinion regards those experiences as virtually “meter readings.” Contrary to naive opinion, the readings of the meter itself are customarily reliable as meter readings; but, those readings do not represent the actuality of the real world to which they are responding. In fact, it is the cumulative mental experience of such readings, not the instantaneous reading of the face of the meter itself, which prompts us to develop what passes for a functionally meaningful interpretation of the implicitly coordinated, cumulative combination of readings of all of our sense-experiences.

However, as the most commonplace blunders among professional economists should have warned us, the statistical view of the universe relying on the geometry of naive sight alone, is essentially false to reality. The typical fallacy expressed by the typical economic forecaster, is of the form of reliance on a neo-Cartesian opinion respecting the universe which we inhabit. By “neo-Cartesian,” I mean a mechanistic visual-space-like image of a mechanistic-statistical forecast. This imagery misleads the defective economic forecaster into presuming that the future can be seen in a linear, or linear-like extrapolation of a present trend crafted according to the presumptions of a quasi-Cartesian mechanistic-statistical world-outlook.

That world-view is clearly based on a naive opinion respecting the assumption that efficient physical space-time is as might be implied by simply extrapolated observations to the present date. That is the *aprioristic* presumption associated with the Sophist’s Euclidean “solid geometry.”

In reality, the real physical universe is neither Euclidean, Cartesian, nor neo-Cartesian; it is, to be precise, Riemannian. From modern science, we know that the *aprioristic* view is inherently absurd. The processes which reign in our universe, are not premised on linear projections, as in simplistic notions of vision; competent forecasts are based on universal physical principles, such as Kepler’s uniquely original discovery of gravitation, which bound the universe as if at the limits within which the universe is self-contained throughout.

Therefore, competent long-range economic forecasting

depends upon studying the approach of the current mode of action toward nearness in its proximity to a limit. That limit is a functionally defined *boundary*, defined by some fundamental physical principle, or several such principles. Thus, the way in which to craft a competent type of long-range forecast, is directly opposite to that implicit in a mechanistic-statistical projection. The method required is thoroughly Riemannian, that in the sense of Riemannian physical hypergeometries.

This distinction accounts for the intrinsic, multi-faceted incompetence of today’s usual statistical forecast. Qualitative, reflecting a seasoned ability for “feeling out” the situation, rather than statistical forecasts, tend to be relatively much less fallible than statistical ones, for precisely that reason. This disadvantage of the statistical forecast is that it lacks insight into those factors of the human will which may be decisive in shaping some crucial turning-points in the process. Human beings think better than persons who have turned themselves into recklessly inhuman calculating machines. Mathematical forecasters tend to show human qualities only when they deliberately cheat by means of intended fraud.

As Kepler’s original discoveries of astrophysical and related principles show us, we must turn to the faculty of hearing to provide us a method for correcting the inherent errors embedded in naive readings of the sense of sight. To be specific, we require *harmonics*. We must do as the Pythagoreans and Kepler have done, force the suggestions provided by merely seeing to be corrected by warnings heard from the domain of harmonics. In a more adequate regard for experience, we must treat all of our other senses as relevant modification of a world-view premised on the integrated faculties of sight and sound alone.

What I have just summarized, respecting the indispensable ambiguities of sight and sound combined, was shown, by Kepler, to be the composition of our Solar system. It was shown to be the principled form of functional organization of the extended Periodic Table of elements and their isotopes. It was shown to be the organization of mankind’s universe, in Vernadsky’s division of the efficient Earthly universe as a whole, among the non-living, the Biosphere, the Noösphere, and, a fourth domain, contained, functionally, within the integrated Earth-process as a whole.

Such is also the subsuming principle of the organization of the Solar system as a whole. That said, we have now approached a point of literally Stellar importance. In brief, the point to be made, here and now, is that *the notion of a Second Law of Thermodynamics is not only a fraud, but is what should be recognized by sentient beings as an obvious hoax, a hoax rooted in the aprioristic presumptions inherent in the empiricist method*. It is not something proven by experimental evidence; it is a systemic misreading of experimental evidence deduced from the inherent fallacy of the mathematical method employed.³⁵ On that account, the truth is, that there is

35. One way of thinking about the point I have just made here, is to compare

indeed reason for hope for human existence in a stellar universe in which supernovae occur lawfully.

This brings us back to the subject of the essential distinction of the human being from the beasts. The fact is, that employed discoveries of what are correctly identified as universal physical and Classical-artistic principles, such as those of Johann Sebastian Bach, are associated with measurably anti-entropic effects. Man's increasing mastery of our planet, and, implicitly, beyond, expresses a manifest principle of anti-entropy, that as an efficient cause of *willful change* in the universe. *This suffices to demonstrate that a contrary method of describing nature, is shown to be false by the mere fact of human existence. The nature of man in the universe, is, in and of itself, conclusive evidence of the nature of that universe which we inhabit.*

It also demonstrates, that the manifest increase of the human population, to more than six and a half billions living individuals today, demonstrates that real human progress is essentially physical-economic in nature, rather than monetary. Any "theory" of economy which relies on monetarist axioms, rather than physical-economic increase of the potential relative population-density per capita and per square kilometer, is intrinsically worse than absurd.

Two general conclusions concerning man and the universe are to be considered in that light.

Since the increase of the potential relative population-density of the planet depends upon the increase of knowledge of the practice of new physical principles, as applied to both changing the nature we inhabit in coordination with increasing the productive powers of labor per capita and per square kilometer, this event, in and of itself, shows us what it is that the universe has responded to in providing us such an opportunity for success.

3. The Political Principle of Anti-Entropy

The underlying issue of science today, including the prospect for future human life in our present galaxy, is essentially political. There can be no comprehension of any of the principal factional controversies respecting the issues of science and its application to policies of nations, unless a very specific, central feature of all politics, notably, since about 700 B.C., is taken into account as the root of these quarrels. I explain.

my argument with Kurt Gödel's famous exposure of the inherent fraud of Bertrand Russell's *Principia Mathematica*. The problematic feature of that work of Russell's, was not original to him; he simply carried the fallacy of Ockham and Galileo to such an extreme, as to make the nature of Russell's fallacy obvious to Gödel, although not to the relevant Russell devotees and hoaxsters Professor Norbert Wiener and John von Neumann. The intrinsic absurdity of the concept of "information theory" by Wiener, and "artificial intelligence" by von Neumann, are also relevant illustrations of my point here.

All of the most important, and valid conceptions in science appear to mathematics as *non-linear*. The much more important quality of such conceptions, is distinguished by being expressed within the framework of an *anti-Euclidean geometry* (that of Riemann), not merely *non-Euclidean*.

In ancient Classical Greece, the pedagogical best of the celebrated paradigms for this point of view, was provided by Archytas' *construction* of the doubling of the cube. In modern physical science, the crucial paradigm had become the discovery of the principle of non-linear action expressed by the notion, as described in modern times, as by the "infinitesimal," and by Kepler's harmonic characteristic of every planetary Solar orbit.

Thus, contrary to the intrinsic silliness of the attempted hoax, by the "Newtonians" D'Alembert, Leonhard Euler, Joseph Lagrange, et al., against the reputation of Gottfried Leibniz, the so-called "infinitesimal" of the Kepler Solar orbit was not a matter of "smallness" of some kind of very tiny magnitude; it was a way of describing the *inexhaustible* number of "available," successive, ontologically physically efficient changes in curvature, as changes which could be adduced (if you wished to do so), only as defined by the principle of *the constantly changing curvature* of the orbital pathway.

The discovery of that principle of modern science, had been made possible by Cardinal Nicholas of Cusa, in Cusa's recognition of the crucial error of method made by Archimedes' approach to "squaring the circle." This discovered error in Archimedes' work, as first made in modern times by Cusa, was to prove crucial in Kepler's uniquely original discovery of the universal, harmonic principle of gravitation.

All properly defined, universal physical principles are each expressed, each in their own manner and setting, by the same ironical characteristic. That is the meaning of the use of the awkward term "infinitesimal" as in describing Leibniz's "infinitesimal calculus." Leibniz's concept came from Kepler, who defined a "notion" of an "infinitesimal calculus" as the mathematical facility he recommended be developed by "future mathematicians," the calculus which Leibniz developed.³⁶

In all these and comparable cases, the notion of an efficient physical principle has the character of an efficient form of action of virtually (ontologically) no linear displacement in its

36. The Leibniz calculus's development had roots in his work prior to his arrival in Paris. Leibniz refers to the earlier work on that matter in his report on the origin of the calculus. However, the development which we would recognize as the Leibniz calculus today, was the outcome of additional developments which Leibniz conducted, under the patronage of Jean-Baptiste Colbert in Paris, during the interval 1672-1676. This produced the first design of the working calculus, which was developed, and delivered to a Paris printer in 1676, just prior to Leibniz's departure from that city. The later development, which featured the role of the principle of physical least-action, gave us the catenary-cued principle of physical least action developed in collaboration with Jean Bernoulli. This later development reflected the implications of Pierre de Fermat's discovery. The later development presented the basis for the general concept of the physical (as distinct from merely formal) complex domain.

existence as such, which encompasses the motivation of the action itself. From that vantage-point, the argument of de Moivre, D'Alembert, Euler, Lagrange, et al., was an infantile malpractice of science: in their cases, the exhibition of enraged, wild-eyed behavior, as by a very bad-tempered child.³⁷

All that which I have just stated, in opening this chapter, is elementary; I present it here not as something particularly profound for me to say, but only to clear the decks of possible confusion in the mind of some onlookers, so to speak, before presenting my own argument here. That said, we now pick up from a point which I outlined in the preceding chapter. To proceed accordingly, the best choice of pathway for presenting the important conception which I am introducing now, is to glance back in time, toward the implications of the great ancient tragedian Aeschylus' *Prometheus Bound*, for physical science today.

What I have identified, in this way, is the existence of a universal principle, of *true creativity*. That use of "principle" is allowable only when it means having discovered a universal kind of power in the universe which was previously unknown, or a man-made state which represents, or rediscovers a new implication of a universal principle of artistic composition or social order.

Now, I am prepared to say the following, a statement which I was committed to affirm, and clarify at the outset of this present report:

Creativity so defined, corresponds to a form of action in the universe which changes the state of that universe of reference in a way which can be named as *anti-entropy*, because it demonstrates a universal principle which has an effect directly opposite to that of entropy. The universe as a whole is *anti-entropic* in principle. Anti-entropic action by mankind is a reflection of *Genesis* 1, of man and woman, set aside from all beasts, as made in the likeness of the qualities of the Creator. That expresses, in fact, the highest moral law for mankind, and, therefore, the highest moral obligation of both individual, nation, and the nations as a whole.

That is what I, like Aeschylus, have intended, by *Promethean*, as in opposition to the pro-satanic, Nietzschean qualities of the Delphi cult's images of Apollo and Dionysus. *Al Gore's significance in this report, is that he is, like Vice-President Cheney, a dionysian: a thoroughly dionysian type by intention, as Adolf Hitler's devotion of eugenics was, in current neo-malthusian practice.*

I explain, through the following succession of stages:

Politics & Science

The root of what the Newtonian alliance of de Moivre, D'Alembert, Euler, Lagrange, et al., argued, as restated to the same effect by their notable followers Laplace and Cauchy later, was essentially political. The problem with Euler there,

is not that he had not known better earlier; the problem is that this former follower and admirer of Leibniz and Jean Bernouilli, now turned "Judas," so to speak, had been, in effect, "brainwashed" by the overlapping networks of circles of both the Paris-based Venetian rogue Abbé Antonio Conti and the even more despicable Voltaire. This wretched convert, Euler, had "gone over to the other side." In that process, he had lost the most precious part of his former intellectual faculties, as, in my experience, is the type of virtual "brain-damage" I have witnessed, as a pattern, in all of the comparable cases of terrorized, or simply opportunistic prominent or minor turncoats in the Talleyrand tradition, which I have been situated to examine.

This brings us to a lesson in the history of science which must be considered, if we are to understand the kind of interplay between science as such, and *the very dirty official politics which has been the commonplace curse of all modern European science*. Without taking this unifying factor of politics and science into account, it is impossible to understand how either ancient and modern European science, and also ancient science and politics, has actually worked.

The systematic attempts at brainwashing of associates of the world's leading scientific association, the Lazare Carnot-Gaspard Monge École Polytechnique, a pattern which emerged in the course of developments during the interval 1790-1815, came in two successive phases. The first phase was the attempt under the tyrant Napoleon Bonaparte, who had adopted Joseph Lagrange as his "state prophet" for science. The second phase was launched under the direction of the Duke of Wellington, London's official controller of defeated France. Wellington placed the wretched, London-backed claimant on the recreated throne of France, the Bourbon who then, in turn, ordered the systematic destruction of the curriculum of Gaspard Monge's École Polytechnique. Monge went to retire and, later, die, in retirement at home, in one of my favorite cities of France, Beaune. France's Author of Victory, Lazare Carnot, who had established himself in war as the leading military genius who made a revolution in military affairs, and who was a leading scientist of his time, fled, successively, into Germany, then Poland, then to work with distinction, in Magdeburg, where he died.³⁸

Alexander von Humboldt's association with the École Polytechnique had continued after 1815. Alexander spent about half each year from then, until about the time of the

37. See, for example, the shockingly infantile argument on this point by Leonhard Euler, in his 1761 *Letter to a German Princess*.

38. On the politics of the matter. Lazare Carnot, who had already served as one of the most accomplished military leaders and reformers of France, had been closely associated with Germany's Alexander von Humboldt, as fellow-members of the École Polytechnique. It had been those circles of von Humboldt which had officially rescued Carnot from an impossible situation in Poland, and ensconced him as a distinguished thinker in Magdeburg, where he died greatly honored. Later, when Sadi Carnot was President of France's Republic, the remains of Lazare Carnot were conveyed, with an impressive German military honor guard, to Paris, to be interred in the relevant place of honor as an immortal hero of France.

first appearance of the *Crelle's Journal*, the science journal of record which served France's and Prussia's science from that period, into later times when the *Journal* became one of a number which served a kindred function. Alexander took Lejeune Dirichlet back to Berlin with him, where Dirichlet, who became one of the principal teachers of Bernhard Riemann, emerged as a leading figure of Germany's science, and Riemann's predecessor in the distinguished post earlier occupied by Carl F. Gauss. Alexander's role in all of this, had been to assist in the effort to maintain as much as possible of the pre-1815 quality of the *École*, despite the wrecking of the institution at the hands of Laplace and Laplace's crony, the wretched plagiarist and hoaxster Augustin Cauchy. By the second half of the 1820s, especially after the failure of the late 1820s effort in which leading U.S. intelligence operatives of the Cincinnatus Society James Fenimore Cooper and Edgar Allan Poe assisted the Marquis de Lafayette, in what turned out to be a failed enterprise on behalf of France's honor, the *École* was slipping from its former status as the leader in world science, while that of Göttingen's still fragmented Germany was rising as the center of world-wide science.

That case from French history, is typical of the entirety of the chequered history of modern science. In fact, the body of leading scientific opinion has remained divided, often fiercely so, along the same lines as that division within Classical Greece, that between the Pythagoreans and the circles of Socrates and Plato, who were typical on the one side, and the sundry "front groups" of the Delphi Apollo-Dionysus cult, on the other. That same, traditional division, with ebbs and flows, within the body of science, has been continued to the present day. It is convenient to refer to this division within science, as between the Platonists and the reductionists, a well-defined division which has been continued, with ebbs and flows, one way or t'other, to the present time.

The understanding of that history is simplified by taking into account the fact, that, broadly speaking, there has been a great gap in the progress of civilization's science, from about the time of the close of Rome's Second Punic War, the time of the deaths of Eratosthenes and Archimedes, until the Fifteenth-Century Classical Renaissance. There have been particular episodes of achievements during what was predominantly seventeen centuries of the ebb and flow of a European dark age under the tyrannies of Rome, Byzantium, and the *ultramontane* imperium ruled by Venice's financier oligarchy and the Norman Chivalry. Excepting the most notable, temporary exception, of the rise of Augustinian Christianity under Charlemagne, European and related, ancient and medieval cultures, were times, with some intervening false dawns, amid what was otherwise a nightmare for humanity in general.

So, for science, the Fifteenth-Century Renaissance was the legacy of Classical Greek culture as if called forth from the grave. What we have retained as heirlooms from about

seventeen centuries of recurring epidemics of terror, since Rome's quest for imperial power throughout most of Europe and the Mediterranean region, in the aftermath of the Second Punic War, have been elements we have retained as building blocks for the work of resuming a work of progress in the human condition, as we have done with the Fifteenth-Century Renaissance centered on the image of Filippo Brunelleschi's dome placed upon the Florence Cathedral of Santa Maria del Fiore. The use of the principle of the catenary as the instrument without which the dome could not have been crafted, is, therefore, the ironically appropriate image for the consecration of not only the completed cathedral itself, but of the rebirth of European civilization, with its science, from centuries mostly dominated by recurring nightmares.³⁹

The issue of physical and mathematical science so posed between those two, mutually opposing currents of ancient through the modern history, within what has become now, globally extended European civilization, is primarily political, the same political issue between Prometheus and the Delphi Apollo-Dionysus cult depicted by Aeschylus' *Prometheus Bound*. It is only from this standpoint that the pure evil embodied as Bertrand Russell and his political devotees, including Al Gore, can be thoroughly understood.

The Oligarchical System

When the Apostle John wrote of "The Whore of Babylon," he meant imperial Rome. His language, in describing what was in fact the Roman Empire as a whore of ancient Babylon, was not symbolic; it was a scientifically precise statement of the principle of that which menaced Jewry and Christianity at the time that Jesus had been born, under the Emperor Caesar Augustus, through the time that Jesus Christ was crucified on the order of the Pontius Pilate serving as agent for the consummately evil Emperor Tiberius. That was the Tiberius residing on the truly capriolic Island of Capri, consecrated to evil at that time. In the eyes of the Apostles John and Paul, it was that Rome, the literal Whore of Babylon in historical fact, which had crucified the Apostle Peter, and then Paul, with a subsequently persisting slaughter of Christians on a relative scale unmatched in European civilization since, and comparable only to the butchery of Jews and Slavs by Adolf Hitler's regime since.

It happens to be the case, that the initial body of Christians were Jews, opposed, at that time, to both the tyranny of Herod's legacy and Rome; but, the enemy was actually the institution of the Roman Emperor. The Christian Jews, like most other Jews of that time, also knew that the enemy was

39. One should not be surprised by the inability of Sarpi's lackey, Galileo, to recognize the catenary's principle. It was the Fermat hated by the hoaxster Galileo who had discovered the principle of least action, whereas it was Leibniz, in concert with Jean Bernouilli, who placed the catenary as the key to the demonstration of a universal physical principle of least action, the true key to the Leibnizian foundation for what was to become recognized as the complex domain.

the Roman Empire. In that case, without changing the Roman Empire itself, no one could hope to escape the grip of that imperial tyranny. Imperial Rome understood this, and, from Nero onward, conducted its terror accordingly.

Diocletian was no virtuous man; he terminated the policy of indiscriminate ritual mass-murders of Christians, not for reason of decency, but because he had concluded that the practice of regular mass-murder of that type had backfired.⁴⁰ Rome in the West had been self-ruined, depopulated; the bastion of the remaining empire depended chiefly upon the population of the Greeks, notably among the Greeks either largely influenced, or converted to Christianity by the Platonic teachings of the Christian Apostles Paul and John. Diocletian divided the empire according to an ancient, earlier plan for the Mediterranean and adjoining regions, and one of his protégés, Constantine, continued the project.

That much said on that account, the Roman Empire was, in fact, a continuation of the cultural tradition of imperial Babylon, as Rembrandt's famous painting, and Heinrich Heine's poem (set to song by Robert Schumann) depicts its principled essence. Rome was what the relevant ancient Greeks of the time of Socrates, Plato, and others knew as what they recognized currently as the "Persian Model," or, generically, "The Oligarchical Model." Every empire in the history of European civilization, including the present British monarchy's associated, global financier oligarchy, has been an expression of that "oligarchical model." The essence of the matter is expressed, immortally, by Aeschylus' Prometheus Trilogy, his surviving *Prometheus Bound*, in particular.

What Aeschylus depicts is a two-fold division imposed upon the population of what we recall as "Greece" today, a division between the tradition of the Delphi cult's design of the Spartan code attributed to Lycurgus, and the legacy of Solon of Athens. In all historical times, down to the present day, the Delphi *Apollo-Dionysus* cult has represented what was known in Classical Greek times, interchangeably, as I have just stated, as "The Persian Model," or "The Oligarchical Model." The archetype for the tradition of Solon, was the Prometheus of Aeschylus' *Prometheus Bound*, who acted in defense of mankind, against the evil Olympian Zeus.

That is the key to all important differences of principle dividing science, since that time, into the two indicated camps, the division between such leading proponents as Cusa, Kepler, Fermat, Leibniz, Kästner, Gauss, Riemann, Vernadsky, and Einstein, as typical on the one side of the divide, against all of the reductionists on the other. The elementary issue dividing those two camps, has a twofold expression: the issue of the *oligarchical model*, and the related, but distinct issue, of *human individual creativity*. By creativity, we mean nothing but the act of discovery of a universal physical principle (indi-

vidual discovery of principles of nature), the latter including the expression of that same principle in the social form of Classical artistic composition (universal principles of types of social processes congruent with the creative nature which distinguishes the human individual person, and his, or her social relations, from the behavior of the beasts).

Aeschylus defines the issue neatly and simply.

The tale on which the play is premised, is consistent with an account reported by the Roman historian of Sicilian origins Diodorus Siculus, who locates the relevant events in a coastal region of North Africa inhabited by the ancient Berbers. A transoceanic culture had created a colony in that region. The time came, according to Diodorus, that the concubine of the ruler had incited her sons, led by her son Zeus, and involving support from an important local figure known as Prometheus, to kill the ruler and free the people. Kill the ruler they did, but did not free the people. According to Diodorus and other relevant sources, the triumphant party were known thereafter as the Olympians, who were to have settled in the relevant localities in Greece. This forms the background for Aeschylus' *Prometheus Bound*.

The drama speaks of Prometheus' taking pity on the people, on which account he imparted knowledge of the use of fire to them (today, it would be nuclear-fission technology). This enlightenment of the people, alleged Zeus and his crew, was a crime for which Prometheus must be tortured, more or less in perpetuity.

This story, as crafted into great art by the masterful and wise Aeschylus, defines a current in the history of the ancient Greeks and otherwise, which came to be known as "Promethean," committed to make the benefits of scientific and technological progress known to, and available to humanity generally. This Promethean spirit was thus defined as the enemy of the gods of the Delphi Apollo cult, as those would-be gods are typified by the Delphic images of Apollo and Dionysus. That story and plot succinctly defines the principled conflict between what Friedrich Schiller defines as the paradigmatic conflict between the slave-owning Sparta of Lycurgus (the oligarchical model of society) and the Athens of Solon, throughout European civilization, down to the present time.

The oligarchical model, which defines the mass of the population as "human cattle," usually divides such subjects into two types, tamed and wild. The tamed are herded as a kind of cattle; the wild are hunted down, to be killed, or to become herded cattle, just as the modern Spanish, Portuguese, Dutch, English, and others, hunted down Africans, and usually killed off the sturdy adult males and older women, while taming the young women and children for roles as human herded cattle. The same practices were upheld by the principal champions of Britain's slave-owning asset, the leaders of the Confederacy of our own Civil War. (If a slave becomes literate: Kill him!) Cull the herd when it is presumed that the subjects of oligarchical rule are becoming too numer-

40. So, the same migrants into the Balkans were divided, by Diocletian's arrangements, into Serbians on one side of the line drawn by Rome, and Croats on the other.



EIRNS/Will Mederski

Members of the LaRouche Youth Movement are currently embarked on a lengthy project of exploring the anti-Euclidean method of Kepler, Gauss, and Riemann. Here, Riana St. Classis, who participated in the investigation of Kepler's masterpiece The Harmony of the World, gives a class in Seattle, May 5-6, 2007, demonstrating the principles of planetary motion.

ous, as Al Gore argues, in fact, now.

Such and related practices are not arbitrary systems; there is a certain logic to it all. Put simply: If all men and women are treated equally as peers of the nation, then how can tyrants rule?! All oligarchical systems are based on an axiomatic-like principle of tyranny, like the financiers of the purely parasitical new barbarians, the "hedge fund" tribes of today. The action of such tyrants is not necessarily personal malice per se; it is always based on the belief in taking the actions needed "to save our system!" Such is the oligarchical motive for Tower of Babel (better said: "Tower of Babble," called "globalization" today). The relevant quarrel, therefore, is the struggle for human interests against the tyranny inherent in the systemic features of oligarchical interests.

What Terrifies the Oligarchs?

The great paradox which oligarchism represents, is that the ability of the human species to maintain a level of population above that of the great apes, depends absolutely on those creative powers unique to the human individual mind through which scientific and related discoveries produce the means for increase in both the potential size of population, and its life-expectancy. If the population were permitted to share, freely, the knowledge and freedom to employ such knowledge corresponding to presently knowable scientific and related skills, where would there be the inequality on which the oligarchical systems depend?

"When Adam delved and
Eve span
Who, then, was nobleman?"

Thus, to control society in the oligarchical interest, the oligarchy must regulate the generation and circulation of a certain kind of knowledge, especially scientific and related kinds of cultural knowledge. Above all else, it must control, and usually suppress knowledge of those practices which might lead to generation of uncontrolled knowledge, and use of new physical and related principles.

The case of Bertrand Russell follower Al Gore's current "Global Warming" swindle, is a pure, lying hoax, but one selected as intended to serve a specific, oligarchical self-interest at the expense of the cattle, the generality of the utterly contemptible Gore's own nation's population

and of others, especially Africans living inside or outside the U.S.A.

Thus, the capital irony of oligarchism:

If the capabilities for scientific and related discoveries, which advance the standard of life and power over adversities, make societies stronger, per capita and per square kilometer of territory, why hold back scientific and technological progress? Why insist on wildly hedonistic, irrational entertainments, rather than Classical culture which enhances the individual's power to think, and sweeten social relations with other persons? Simply, because the power which such means promote among the generality of the population would bring an end to the system of oligarchy.

There is another consideration to put upon the table.

I do not believe that there is presently a case which can be made for the finality of potential supernovae as threats to mankind's continued existence. The danger, if it is down the way, rather than presently, could only make our devotion to the practice of fundamental progress stronger. We would empty our gambling houses, tax the speculators more richly, as a form of amusement for the generality of our citizenry, and go full steam with the acceleration of scientific progress. If we failed to take that course, we would have no one to blame as much as ourselves for any unpleasantness we suffer down the way. If we free society from the poison of oligarchical forms of culture, and thus promote scientific and related progress, I, for one, am fairly persuaded that—barring a ter-

rible surprise event, supernovae are not the looming threat to humanity's continued existence.

However, oligarchism itself clearly is the motivating influence, and the immediate danger from which a potentially existential threat to all mankind might be posed by the passions of oligarchical rule itself.

That leaves us now, with one crucial point to be settled, before ending this day.

Experiencing Anti-Entropy?

Despite bad general education which employs the methods of sophistry which was intended as part of an effort to induce the victims to believe that there are no discoverable universal physical principles, for example: The fact is that all significant human progress in the power of mankind to exist, per capita and per square kilometer, has come from the effects of original discoveries of universal physical principles, like those to be planted in your own knowledge through really reliving the experience of Kepler's principal works. It is the same, whether classed as principles of physical science, or of Classical artistic composition. In some cases, the benefits of these discoveries of principle can be estimated by relevant calculations; in other cases, as in Classical artistic composition, the measurement is more trying, but the fact that a definite benefit occurs, is nonetheless evident.

Take Kepler's discovery of the principle of which Leibniz made the calculus, as a case in point, such as anti-entropy in action. For some, there is nothing there; there is no tangible object of the senses, and yet it moves the planets and the stars. It is not truly an "infinitesimal"; it is a touch by the power which moves the planets. We call it a principle, because we have proven it to be so; yet, we also know that our sense-organs, which show only the shadows, not the substance of reality, have no power with which to speak to us directly of such truths.

So, when you have personally had the raw experience of discovery of a universal principle, you must come to realize that the ambiguity of the situation lies in the fact that you have caught the shadow of an unseen power which controls you. It is there, but it is the cognitive powers of your mind, not your mere sense-perceptions, which are the organ with which to sense the presence of the principle directly. When you learn to use knowledge of what the mind, but not the senses, has seen, you can discover ways to impose effects which do impinge upon the senses, and by that means you have learned more than one thing of importance about physical science, or Classical art, or, both; the other thing you have just learned, is the essential truth about yourself, your true place in the universe at large.

Whether in physical science, or in Classical artistic composition, the crucial aspect of the discovery, the principle of the case, lies between the cracks of expressions based on previously established knowledge, or opinion. If the meaning of

your words lies in a dictionary, you have actually said nothing which adds to human knowledge. It is the meaningful, unspoken words between the words which are not found in dictionaries, but which speak a truth, uniquely, which you can prove, which affirm your human existence.

For example, in great Classical poetry, or Classical drama, the idea which makes the piece creative, is not an explicit element of the composition as such, but an irony, something which, so to speak, is a meaning which lies between the cracks separating some words and some phrases from others. Suddenly, when all parts are considered, as the whole comes together, as in John Keats's *Ode on a Grecian Urn*, or Percy Shelley's *Ode to the West Wind*, something comes together, which can not be located in any mere combination of explicit parts, but nonetheless stands like a ghostly figure, enveloping all the words within it, but no part of any among them, consuming them within a single image of itself. One mind has, thus, spoken to another, despite the lack of any evidence of the communication from among the explicit meanings attributed to the words between.

It is the same with the reenactment of Archytas' constructive doubling of the cube, Kepler's discoveries of gravitation, the discovery of least action by Fermat, the comprehension of the implications of that catenary function underlying the physical principle of universal least action, Gauss's discovery of the orbit of the asteroid Ceres, and Riemann's 1854 habilitation dissertation. These, like other among the greatest discoveries, have been delivered by the mind of the author through the cracks between the uttered words, and yet, for those who have listened to what is whispered by the wind of passing words, the truth itself is clearly there. Sense the truth, and find the practical expression which affirms that what you heard with what some have termed "the inner ear," was real.

These truths bespeak the fact that we are born to be immortal. Those aspects of us which correspond to the animal side of our existence, are not really us; they are like Cinderella's coach, which vanishes when we reach our intended goal. We live efficiently in that part of us which persists when the flesh is gone, in the effect we leave, hopefully as a blessing, to generations to come.

Then, let it be, that we were necessary; but, we were also something different, and therefore useful on that account. It is that aspect of our being, which, if developed, is the power to make those discoveries: those supernal words which may pass among the heavens, bending stars like reeds.

There is no greater source of personal contentment with one's own life, than to become the person who serves mankind through experiencing the evidence which might pass through the heavens, like a breeze, bending the stars as they flow.

I have enjoyed that kind of experience. Shouldn't you? If so, let us meet again, as we have done on this occasion. I have more to tell; but, this will be sufficient for today.