

## Truthful, or merely 'factual'?

by Lyndon H. LaRouche, Jr.

Christmas Day, December 25, 1997

First, as in all important matters for decision, we must summarize the situation: these are no ordinary times.

We are told by relevant agencies from various parts of this planet, that, during the recent two months of crisis, the intellectual influence of the present writer is fairly estimated to have increased among leading circles around the world, not less than five-fold or ten-fold, over the state of affairs at the beginning of October. Why be surprised by such reports? The internal characteristics of these October-December crisis-events serve as not only crucial, but also unignorable shocking evidence of the relatively unique validity of the writer's analysis and long-range forecasts, over those of all his sundry, earlier opponents and critics within the ranks of the world's economists and leading governmental circles. However, with greater influence, come new problems, new responsibilities.

That presently outstanding position among the ranks of the world's economists, is the result of nothing but a combination of the ever-legendary "hard, sustained work," over decades, and of scientific superiority of the methods of work employed. The former element, work, incurs invidious resentment from among the charlatans and other lazy fellows of the profession; among honest, performance-oriented peers, the success of one of their own profession often brings a sigh of relief, especially in such troubled times as these. The second source of this success, scientific superiority in methods used, poses a different sort of practical problem. In science, the validation of a revolutionary discovery by one member of the profession, inspires all reasonable members of the profession with the confidence to become, quickly, educated in those relevant scientific principles which they had variously overlooked or underrated earlier. Given the present circumstances,

of systemic, global crisis, that education must succeed, rapidly.

The time has come, in which no citizen has the right to demand any specific choice of general economic policy from his, or her nation, until that citizen has attended to, and mastered certain considerations which he or she had been content to ignore earlier. This also means, that the systemic nature of the present world financial crisis shows, that there has been a fundamental, potentially fatal error, in the way in which nearly all public officials, and, in the case of democracies, in the way in which the great majority among all citizens, have thought about the subject of economics until now.

Competence will not be achieved through limiting discussion to some bits of "information," topped by recipes festooned with "whereases." Successful results will not be won so cheaply. Competence requires effective re-education. Effective education, especially in matters of principle, means much repetition, much restatement, much review, until the student has been engaged in that all-sided view of the matter upon which comprehension depends. Each new facet of the matter presented must be situated with a certain, unavoidable amount of restatement of ground previously covered. Each new classroom or analogous session, must take into account those difficulties with significant portions of what that student population had failed to master adequately in the preceding sessions. How could it be otherwise? That has always been the nature of both scientific method and quality education, for as far back in history as we are able to trace the internal features of such thinking.

There are three classes of readers to which this urgent educational effort must be addressed. First, the professional economist who senses the need to bring himself, or herself, up to speed on the issues underlying the present crisis. Second, the statesman, who must now stake his life's reputation on his,

or her choice of economics counsel. Third, to that legendary, intellectual “top one-percent” of the citizenry, which is approximately the maximum size of the organic intellectual and moral leadership of the best republics until now.<sup>1</sup> On these accounts, the chosen audience for which *EIR*’s educational effort must be designed, is correspondingly broadly-based, and, yet, must be addressed without bowdlerizing any essential point of principle.

That said, we proceed, accordingly, continuing our earlier pieces on the subject of economic policy, to address here yet another crucial facet of this indispensable re-education of our republic’s currently small minority of leaders and thinking citizens. First, we situate the point to be made in this present lesson.

As stated above: Since late October, cascading explosions of a global systemic financial crisis continue to grip this planet. This relentless, downward plunge, has sent the world into the terminal phase of what events will soon force the most reluctant governments to recognize as the greatest crisis of this now-concluding century. It will be made clear, all too soon for most, that neither of two preceding World Wars, nor even the stunning, Autumn 1962 threat of global thermonuclear war, match, in ultimate perilousness, the unfolding of the present, terminal phase of global financial and monetary crisis.

1. The Classical Greeks had a word for the individual citizen who avoids serious politics: *idiot*. However, the fact that the majority of those in government, together with a majority of ordinary folk have preferred to live and act like “idiots” so defined, is no excuse for turning one’s back on society. It is the “Good Samaritans” who make history: a class of egregious, caring folk which has learned never to expect, and seldom to receive gratitude from those whom they rescue. If no more than a proverbial “one percent” of the citizenry is willing to engage in serious thinking, that humanity must, and will be rescued through the leadership of that precious “one percent.”

Already, it is now becoming terrifyingly clear to those who work behind the curtains of power, if not yet the general public, that, under such conditions of *systemic* crisis as these, the ordinary rules of behavior, of governments and other leading institutions, no longer succeed. A systemic crisis, such as this one, demonstrates that the cause of the breakdown is not

limited to some particular policy, or, a few policies, whose correction might be introduced as mere adjustments, which serve to patch up and continue the functioning of the existing system as a whole. The continued existence of a planetary civilization hangs on our success in overturning, and replacing, immediately, those entire systems of decision-making and popular opinion, the which have shaped the preceding thirty-odd years of both the world’s leading governments, and the leading monetary and financial institutions.

Thus, this entire civilization looks, once again, in the mirror of history, and, this time, is suddenly terrified to recognize the mocking face of a raving lunatic leering back at it. The mistake of the person

looking into that mirror, is not a mistake in his choice of a few policies; his, or her problem is, that, as long as he remains in his habituated mental condition of the past several decades, he is incapable of choosing a decision which would not have disastrous effects upon an already catastrophic situation. That is his recurring nightmare. Usually, only a great shock jolts the citizen out of his self-destructive, stubborn complacency toward his habituated follies of this sort.

In short, whoever says to you, “Give me the information, and your proposals, and I will make up my mind for myself,” is deceiving himself, or herself, as much as he is lying to you. What has ruined this global civilization, and the United States, was never a “lack of information.” What has ruined us, is the way in which leaders in government, and also the generality



*Whether in astrophysics or in physical economy, the investigator who believes the myth of “linearity in the small” will prove incompetent, every time.*

of ordinary citizens, have misinterpreted the readily available supply of so-called "information." This was starkly evident in the process leading into the 1989-1991 collapse of the Soviet system, and has been the persisting cause of the decline and presently ongoing collapse of the once great modern European civilization, world-wide, this during a period of the recent thirty-odd years. The essential thing, on which civilization's survival now depends, imminently and absolutely, is the willingness of some persons in power, and also many more modest folk, to change the way in which they themselves think. The need for such change is relatively the greatest among the overwhelming majority among those persons, in Europe, the Americas, and Japan, most notably, who were born, and miseducated, after the outbreak of the 1939-1945 world war, the members of that so-called "Baby Boomer" generation who have come recently to occupy leading policy-shaping positions in government, in educational institutions, in the professions, and in the private sector of national economy.<sup>2</sup>

In comparable past systemic crises, great empires have collapsed, like the Babylonian empire of the Biblical Belshazzar, more or less as suddenly as the world's financial and monetary systems are collapsing now. In such times of crisis, the established, generally accepted, implicit axioms of behavior, inside or outside of governments, no longer work. The lesson of all known or inferable history, is, that in such times, the pathway to survival is found solely within new axioms of policy-shaping, new axioms producing policies of a kind which would have been considered "unthinkable" in the preceding period of time.<sup>3</sup>

These axioms are to be found within the domain which Gottfried Leibniz identified as "*Analysis Situs*."<sup>4</sup>

In such times of crisis, previously reigning, axiomatic precepts of policy-shaping, have become a menace to the

continued existence of those nations which refuse to abandon them. The point may be therefore summed up: In such moments, living history demands fundamental changes in the axioms of analysis and of policy-shaping, changes which most governments, and populations tend to reject, reject stubbornly, that with the argument of Shakespeare's self-doomed Hamlet:<sup>5</sup> that, since these are ideas to which they are unaccustomed, they reject these ideas for reason of their strangeness, even though these ideas are indispensable for the survival of their nation. Only a series of great shocks, like those now descending upon every nation, could jolt leading circles and others into a long-overdue change in way of thinking.

The point just made is crucial; it must be understood. Let us reformulate our opening argument one more time, as follows:

In ordinary times, prior to the outbreak of the crucial phase of systemic crises, the general rule for changes in policy, is that one should respond to new challenges, with choices among those proposed theorems which are consistent with previously established sets of definitions, axioms, and postulates.<sup>6</sup> At crucial breaking-points in history, such as this present one, the only pathway to survival, in even the short term, is seeking a valid choice of shockingly revolutionary changes in axioms. Thus, for such crucial occasions, survival demands a higher standard of truthfulness, usually a standard which only the most shocking crisis has induced a population and its government to allow to be imposed upon it. Thus, today, the very terms, "truth" and "falsehood," acquire a deeper, more poignant, more efficient meaning, than had been acknowledged by almost anyone in the U.S.A., for example, either during the recent fifty years, or, more notably, during that recent descent, ever deeper, into the galloping intellectual and moral decadence, the which has dominated the recent thirty-odd years.

For the sake of sanity, in face of the awesome quality of decisions to be made under these conditions of crisis, we must

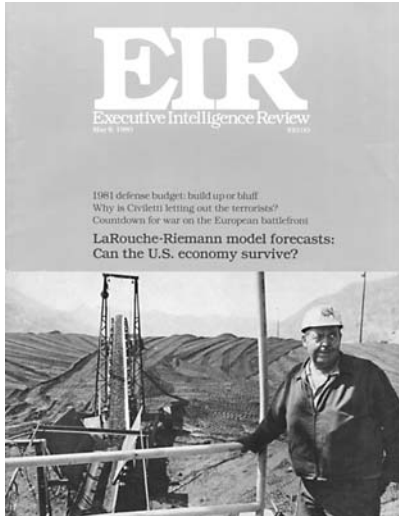
2. See the summary published accounts which this author has given of the principal, hegemonic shifts in generational cultural paradigms within world-wide European civilization since 1945. Most recent examples include the summary provided under the sub-heading of "Nuclei and geopolitics," within his Dec. 10, 1997 "Wells of Doom," *Executive Intelligence Review*, Dec. 19, 1997, and his Dec. 14, 1997 address to a Bad Schwalbach, Germany conference, "The Comet of Doom," *Executive Intelligence Review*, Jan. 2, 1998.

3. As in the author's other writings, the term "history" signifies the efficient history of ideas, in Plato's sense of *ideas*: i.e., the discovery of a valid physical principle is exemplary of the distinction between *ideas* and impassioned mere sense-perceptions. Thus, we are required to include archeological evidence to the degree that that evidence, as physical artifacts, corresponds to the acquisition of a discovered principle of nature, or of cognitive behavior itself. Thus, for example, the physical evidence of the work of Classical sculptors Scopas and Praxiteles is crucial evidence of the superiority of Classical Greek culture over the cultures represented by the earlier Archaic sculpture of Egypt and Greece itself.

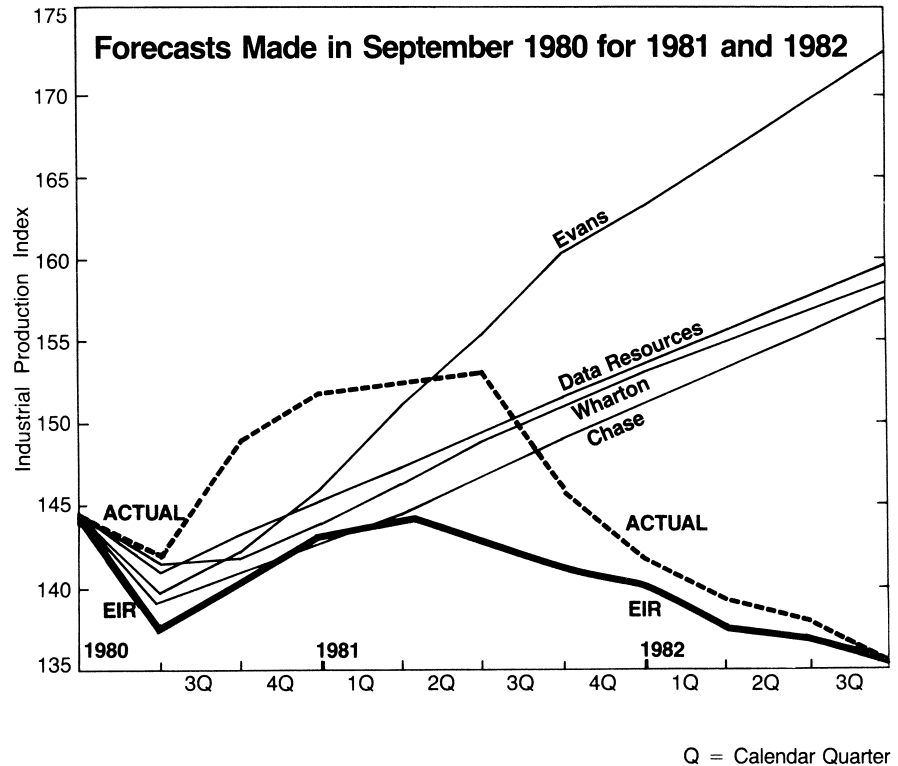
4. "Studies in a Geometry of Situation, With a Letter to Christian Huyghens (1679)," *Gottfried Wilhelm Leibniz: Philosophical Papers and Letters*, Leroy E. Loemker, ed. (Dodrecht/Boston/London: Kluwer Academic Publishers, 1989), pp. 248-258. On this significance of "*Analysis Situs*" for economic policy-making, see below.

5. Act III soliloquy: "To be, or not to be. . . ."

6. In the method of Plato, Leibniz, Riemann, and the present writer, a set of interacting definitions, axioms, and postulates, is identified as an *hypothesis*. E.g., Bernhard Riemann, *Über die Hypothesen, welche der Geometrie zu Grunde liegen*, *Bernhard Riemanns gesammelte mathematische Werke*, H. Weber, ed. (New York: Dover Publications reprint, 1953). Thus, *Euclid's Elements*, taken in its entirety, is an hypothesis specific to the sub-type of hypotheses associated with deductive method. There are also non-deductive types of hypothesis, which lie within the mathematical domain of what are called, interchangeably, "non-linear," "modular," or "hypergeometric" functions. Although the usage of "modular" and "hypergeometry" is specific to the pioneering work of Carl F. Gauss and Bernhard Riemann, the method employed by Gauss is derived from the astrophysics of Johannes Kepler. Leibniz's use of the term "*Analysis Situs*" references Kepler's method, and anticipates the relevant discoveries of Gauss and Riemann. The present writer has adopted this latter notion of modular mathematics from Kepler, Leibniz, Gauss, and Riemann, but has extended its usage into defining the underlying formalities of such ostensibly non-mathematical topics as Classical art-forms, economics, and statecraft generally. For more on this latter subject, see below.



During its nearly twenty-four years of existence, EIR has had an unmatched record in economic forecasting, while “the competition” has missed the boat.



supply the decision-shapers, and the thinking strata of the general population, a fixed point of reference: an historic bench-mark. It is the same in all competent educational practice. That needed bench-mark is supplied by the record accumulated by this international, English-language intelligence weekly. This is the relevant, internationally visible publication, the which, over nearly a quarter-century to date, has not only foreseen and portrayed the present issues of crisis as a certainty, but which has supplied the elaborated conceptual framework on which such forecasts depend.

When the historic quality of relevance of that foresight is recognized, this periodical has accumulated unique authorities, and coordinate responsibilities, for guiding its readers into the relevant, deeper meaning of that truth which the surging crisis now demands of us all: with the disintegration of this planetary civilization, the penalty for refusing to make those changes in axioms, is imminent collapse of an entire civilization, should authorities fail to accept, and act upon that truth. This provides the needed bench-mark. This publication has the responsibility, to continue and to improve upon its established record of relative excellence, especially for the immediate benefit of those readers who are influential in governments or other important institutions of policy-shaping around today’s world, but also, urgently, for that minority of our citizenry generally which is, currently, disposed to do some serious, trenchant rethinking of their heretofore accustomed beliefs.

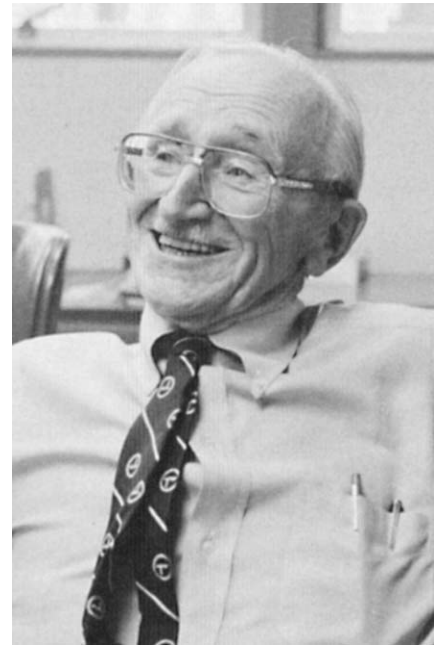
With that urgently practical point in view, summarize the economic and related forecasts conveyed by the pages of *EIR*,

during its nearly twenty-four years of existence, to date.<sup>7</sup> Study the lessons to be learned from that publishing record. Add those still earlier, long-range forecasts, since 1959-1960, by the weekly’s founder, the present writer.<sup>8</sup> Bring into focus, the several crucially relevant lessons of principle to be cognized from the distinctively consistent accuracy among these combined forecasts.

The first thing to be recognized, is the axiomatic difference in subject-matter between those long-range forecasts, and what passes for a “prediction” from those other quarters

7. The *Executive Intelligence Review* was founded, in fact, in March 1974, and established in weekly magazine-format that same year.

8. In his first long-range forecast, the writer formulated the following theses beginning 1959. That, on the assumption that the axiomatic assumptions of economic policy of practice underlying the Eisenhower administration were to persist, the U.S. economy would enter a period of successive international financial crises during the second half of the 1960s, leading into a breakdown of the Bretton Woods monetary system in its present form. He added, that if the response to the breakdown of the existing form of the Bretton Woods system were dictated by the same axiomatic assumptions, the result would be a downward-spiralling erosion of physical economy under the impact of tightening measures of austerity against wages-incomes, and so on. From 1959-1960 on, the present writer compared the austerity programs likely for a post-Bretton Woods System-breakdown to the philosophy of practice of such Weimar Germany figures as Hjalmar Schacht and Chancellor Brüning. The 1967 sterling crisis, the U.S. monetary crises of early 1968, the 1970 crisis of the dollar are representative of the state of affairs during “the second half of the 1960s;” the August 1971 wrong choice by the Nixon administration, and the accompanying introduction of increasingly radical austerity and monetarist measures, fully confirmed the 1959-1960 forecast as first given, and continued throughout the 1961-1971 interval.



The central problem facing the reader, is to escape from blind faith in the popular, ranting ideologies of such “economists” as (left to right) Alvin Toffler, Milton Friedman, and Friedrich von Hayek.

which have been widely, mistakenly regarded, until now, as leading authorities.

One should not misinterpret the fact, that this writer forecast, beginning April 1987, a probable mid-October 1987 stock-market “crash,” and, also, beginning February of this past year, forecast a series of August-October 1997 developments leading into the outbreak of a global systemic financial crisis. Putting those two forecasts against the background of the long-range forecasts more typical of his and *EIR*’s forecasts generally, all but a very few of the forecasts reported in that publication are of a different species than what had been the alternative, statistical “stock-market predictions” offered in other press, or public utterances of governments.<sup>9</sup> Behind

9. For the sake of precision, consider the single apparent exception to *EIR*’s distinction between forecasting and “predicting.” As a by-product of a friendly difference with Lawrence Livermore Laboratories at that time, the magazine, beginning December 1978, co-sponsored a forecasting project published under the rubric of “LaRouche-Riemann Quarterly Forecasts.” Using a set of inequalities supplied by the present author, the magazine employed a combination of official U.S. government and Federal Reserve System statistics (chiefly), to supply a “value-added” quarterly projection for the U.S. economy. While it lasted, from the publication of the first such report, of December 1979, showing why newly-appointed Federal Reserve Chairman Paul Volcker’s “controlled disintegration of the economy” must lead to an immediate, rather deep recession, until the close of 1983, these quarterly forecasts were the best available in the public domain. What these reports did, as the present writer designed them to do, was to extrapolate the estimated “curvature” to date into subsequent quarters. As the present writer explained in a half-hour nationwide TV report of his 1984 campaign for the Democratic Party’s Presidential nomination, these reports were discontinued because of the wildly fraudulent fabrication of false base data by the relevant U.S. government and Federal Reserve agencies.

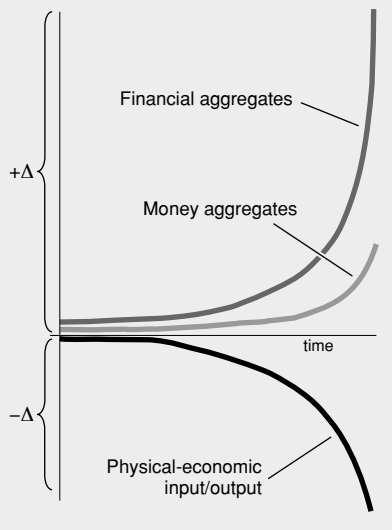
our qualitative advantage over this publication’s putative rivals, there was no “crystal ball,” no statistical pseudo-science, but only superior science: that of Johannes Kepler, Gottfried Leibniz, Carl Gauss, and Bernhard Riemann, most notably.

Unlike the usual statistical projections of future events found elsewhere, each of this publication’s long-range forecasts has identified the characteristic “curvature” of the presently ongoing economic process, that in the sense of “curvature” associated with the work of Carl Gauss and Bernhard Riemann: in the sense of Leibniz’s use of his term, “*Analysis Situs*,” a “non-constant curvature.”<sup>10</sup> This curvature shows us, that allowing the continuation of currently prevailing policies of practice by governments, and others among the more influential institutions, must lead toward certain economic and social results; it leads toward suffering, even historic catastrophes, *unless a specified choice of change in axiomatic assumptions of policy-making were introduced during a certain estimable range of time available*.<sup>11</sup>

10. Lyndon H. LaRouche, Jr., “What Economics Must Measure,” *Executive Intelligence Review*, Nov. 28, 1997. See also, the writer’s presentation to an international symposium in Bonn (Bad Godesberg), Germany on Nov. 5, 1997: “World Financial Crisis: Through the Eyes of Kepler and Gauss,” published in *EIR*, Nov. 21, 1997.

11. To quiet the protests this view of a principle of curvature prompts from among fastidious empiricists, we acknowledge that this principle is consistent with the scientific method of the putative founder of modern experimental physical science, Cardinal Nicolaus of Cusa [e.g., *De docta ignorantia* (A.D. 1441)], and such immediate followers of Cusa as Luca Pacioli and Leonardo da Vinci, and such among their immediate followers as William Gilbert, Johannes Kepler, and Gottfried Leibniz. Empiricism, derived from the medieval obscurantism of William of Ockham, was introduced as an anti-Kepler dogma, by Paolo Sarpi, using agents such as his personal lackey, Galileo

FIGURE 1  
**A typical collapse function**



*LaRouche's "triple curve" schematic shows the devolution of the U.S. economy since 1966.*

The reader should not be put off by the professional's terminology we are obliged to introduce now, from this point, onward. Although the central conceptions involved are profound, they are elementary, rather than complicated in nature; they can be assimilated by any literate reader, on the condition that that reader is willing to work through these conceptions, step by step. The problem we have to overcome in this case, does not require us to venture into some terribly exotic, highly reticulated tangle of algebraic deductions; the problem is escaping from the grip of what is readily proven to be blind faith in that outright stupidity otherwise recognized as popular, ranting ideologies, such as the voodoo babbling of Alvin Toffler's "Third Wave," or, the poisoned pabulum of Milton Friedman's and the late Friedrich von Hayek's Mont Pelerin Society, or of Ayn Rand and her devotees, or of the usual run of populist ideologues' direct-mail rant on the subjects of money and economy generally.

The relevant notion of a non-constant, modularly defined, higher curvature, is illustrated, for economics, by the now-familiar pedagogical figure which this writer first presented at the close of 1995, the so-called "Triple Curve." [Figure 1].

Galilei, Rosicrucian Robert Fludd, Francis Bacon, Thomas Hobbes, and France's René Descartes. If empiricists had been honest people, they would have folded their tents, and turned to honest labor, after Carl Gauss's stunning vindication of Kepler: his use of the principle of curvature to define the correct orbit for the asteroid Ceres. Alas, neither honesty nor anything as republican as honest labor, are inclinations of the feudal classes represented by the English oligarchy and its lackeys. The point is, as the present writer campaigned for this view a decade and a half ago, the well-defined solar orbits existed prior to the existence of any among the planets: Kepler's argument for the existence of a former, disintegrated planet in the dissonant, but required planetary orbit between Mars and Jupiter. We argued, a decade and a half ago, that we must consider the investigative hypothesis, that the production of the solar system's chemistry required a kind of polarized thermonuclear

This portrayal of the functional characteristics of the post-1966 U.S. economy's devolution, borrows the notion of measurability of physical-economic processes from the higher geometries introduced, successively, by Kepler, Leibniz, Gauss, and Riemann.<sup>12</sup> This form of a "Triple Curve" is specific to the 1966-1997 case, of the kind of vicious economic devolution of a decaying society, in which nominal profit is being extracted, entropically, by commitment to a neo-Malthusian model of "post-industrial" utopia. This triple curve typifies the only available, rational representation of the current U.S. and world economies; any different approach is a muddle which leads into useless obscurantism, great human suffering, and, within the immediate future, into historic global catastrophe.<sup>13</sup>

Thus, once again: *EIR* has provided, for each forward period considered, in each year's editions, not "stock-market predictions," but, rather, an estimated general order of magnitude of the likely time available for avoiding the crisis, an escape by means of an indicated change in axioms of policy-shaping.<sup>14</sup> There is no "prediction" of miraculously beneficial

fusion among the matter shed by a faster-rotating Sun, producing the elements distributed, as if by "fractional distillation," into preestablished orbits. For other considerations bearing upon the Kepler-Gauss-Riemann principle of curvature, see the present writer's "The Essential Role of 'Time-Reversal' in Mathematical Economics," *Executive Intelligence Review*, Oct. 11, 1996.

12. Leibniz's 1714 "Monadology." [See Loemker, op. cit., pp. 643-660, 666-674, for the series of Leibniz's writings bearing on this aspect of the matter.] Note, that, in an economy in this functional state, the upward curvature of the middle, monetary-expansion curve, depends upon the downward curvature of the lower, per-capita physical-economy curve, and that the top-most curve, the growth of financial aggregates, depends upon (is "leveraged" upon) the rate of increase of monetary aggregate. Compare this with the Gaussian model for non-linearity in the infinitesimally small supplied by Jonathan Tennenbaum's lectures on the pedagogical principle. Plot the relative apparent movement of the Sun, as observed from a fixed place on the Earth, taking into account the fact, that the apparently circular rotation of the Earth occurs within numerous larger cycles; take into account two of these many larger astrophysical cycles: the Earth's elliptical orbiting of the Sun, and the continuing shift of the Earth according to its equinoctial cycle. Plot the curve of relative motion in the very small (e.g., by superimposing the epicycloidal cycle of the Sun's apparent orbit about the Earth, and the Earth's elliptic solar cycle upon the equinoctial), resulting from the interaction of these three curvatures. In other words, the "linearity in the small" of Augustin Cauchy's "limit theorem" exists nowhere, in any process, which exists within the real universe. Linearity in the small, exists only as a useful approximation for those engineering applications in which no issue of physical principle is offended by the application into which such pragmatically convenient crudities of calculation have been introduced. Look at the successive development of modular functions by Gauss and Riemann from this vantage-point in astrophysics and physical economy.

13. In this case, the actual "free energy" of the system is negative. Thus, the thrust of an economy dominated by the influence of neo-Malthusianism, is to extract financial profit, as "leveraged" financial capital-gains from the use of austerity against the real economy, as a basis for increasing the supply of monetary aggregate.

14. Two examples of this from 1982-1983, are the present writer's provision of measures for responding effectively to the anticipated August 1982 Mexico debt crisis (*Operation Juárez*), and the global economic impact of the proposal behind President Ronald Reagan's March 23, 1983 announcement of a "Strategic Defense Initiative (SDI)," which he proposed as a joint effort

intervention by “flying saucers,” by Professor Milton Friedman, or by other, strange, exogenous creatures or events. Nothing was forecast, other than the necessary, lawful unfolding of developments within the economy: outcomes which were virtually inevitable, *unless specified kinds of necessary, timely, axiomatic changes in underlying policy-shaping, were introduced to prevent such outcomes*. That “unless” is the difference between a scientific forecast and the practice of stock-market and race-track touts.

Taking into account the fresh developments of the recent three months, those forecasts, so specified, and so to be read, have represented more than forty-five years of the most consistently effective, public economic forecasting in modern history.<sup>15</sup> Certain conclusions must be drawn respecting the claims of those economists, of all known, self-confessed, “left to right” shadings, who have rejected, or willfully evaded, these forecasts and analyses. The consequent, urgent, practical issue now, is the fact that those economists who have either simply willfully ignored, or opposed *EIR*’s forecasting function, and, worse, influential policy-shapers who continue to react similarly today, have thus demonstrated their incompetence to judge the *functional* nature of, and appropriate responses to the presently unfolding, global, terminal, systemic financial and monetary crisis. In other words, they are not qualified to judge what the consequences might be of either their own recommendations, or those of others.

This is not a matter of our legitimate, and functionally useful pride in *EIR*’s outstanding accomplishment; this is the crucial issue upon which the survival of the U.S.A., and of

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of the U.S., its allies, and the Soviet Union. During the Spring of 1982, the present writer had met with Mexico’s President López Portillo, and other relevant persons, warning of a Mexico debt-crisis (the Ibero-American “Debt Bomb”) to be expected by September 1982. He was asked to put his proposals for remedial action into a composite reference-text; that text was delivered to the governments of Mexico and the U.S.A. days prior to the August outbreak of the crisis. Had the U.S. acted in support of that proposal, then, the presently exploding, global systemic financial and monetary crisis would not have occurred. Although what became known as the March 23, 1983 “SDI” proposal, had been an August 1979 plank of this writer’s 1980 campaign for the Democratic U.S. Presidential nomination, it was introduced to the Reagan administration, both through a widely attended, two-day Washington, D.C. event, during mid-February 1982, by a published report issued during March 1982, and by way of a back-channel exploratory discussion with the Soviet government which this writer conducted on behalf of the U.S., during the interval February 1982-February 1983. During those discussions, the writer used his own design for adversarial cooperation in strategic ballistic-missile defense based upon “new physical principles,” as addressing the nuclear dangers inherent in the Wells-Russell-Szilard “détente” agreements then in force. As this writer warned, during February 1983, if the President of the U.S. offered such adversarial cooperation, and if Soviet General Secretary Yuri Andropov clung to his present opposition to such an offer, the Soviet economy must be expected to collapse within about five years (e.g., 1988). In both cases, *Operation Juárez* and the initial proposal of what became “SDI,” the economic principle was the same.

15. We can offer no claim to know what was not published, especially from certain powerful circles which had strong motives not to share their intentions with the public. We must never underestimate our powerful enemies.

this global civilization now depend. If governments and other relevant institutions continue to act on behalf of those same mind-sets which have characterized our publication’s deprecators and opponents during recent decades, those governments, those nations, this global civilization, were doomed to plunge, very soon, into a planet-wide “new dark age,” a dismal period of future history as prefigured by the famous “New Dark Age” coinciding with the general financial and monetary collapse of Europe’s mid-Fourteenth Century. Such a “new dark age” would drop world population levels, to not more than several hundred millions miserably living persons, of short life-expectancies and fantastic infant-mortality rates, during approximately the time of the first two generations of the next century.

Here, attention is focussed upon a crucial feature of the related special challenge of “truthfulness in policy-shaping” under conditions of systemic crisis. Here, we examine a crucial issue of today’s policy-shaping, a specific relationship between the principles of physical science and political economy, as these principles bear on the existential challenge just described.

### **Return to telling the truth, instead**

The time has come to bring to an end the influence of Orwellian “political correctness” over politics; it is time to abandon the post-modernist obsession with the London Tavistock Clinic’s widespread practice of “encounter-group/support-group” voodoo, to return to reality. It is time to cease measuring performance by its imputed psychological impact upon the cultural relativist’s notion of “sensitivities,” and to judge the sanity, or madness, of perceived sensitivities themselves, by the changes in physical performance toward which they tend to lead. We have, under today’s conditions of systemic crisis, no remaining, safe margin of error, which allows us to be ruled by a perception of how some “people will feel” about a policy; we must, instead, judge “feelings” by their tendency to foster or lessen the likelihood of survival of the entirety of our population and its posterity.

In this circumstance, the leading question must be, “Which proposed policies truthfully anticipate the effects of their adoption, and which do not?” Whence do we obtain the special quality of truthfulness demanded by the present circumstances of crisis? How might we judge those types of untruthfulness, such as current policies of the International Monetary Fund (IMF), or the Heritage Foundation’s and former Prime Minister Margaret Thatcher’s Mont Pelerin Society, which were poisons still being prescribed, even during the most recent weeks, as remedies for the world economy’s present afflictions?

Put to one side the cases of that outright liar, who premises his falsehood simply upon assertions which he, or she, either believes privately to be contrary to fact, or which are spoken without his caring whether contrary facts actually exist or not. Consider, instead, a second, commonplace, type of falsehood.

Some of the most dangerous lies are premised on what are apparently nothing but actual facts. To wit: *conclusions deduced from eyewitness and kindred kinds of individually truthful statements of fact, are seldom truthful inferences, and often even outright lies.* The facts might be truthful, or not, but the inference implied by that *selection* of facts is fraudulent.

In economics, the preferable name for this latter class of lies, and apparent paradoxes, is “fallacy of composition.” Virtually all recent governmental and other popularly referenced statistical and kindred “factual” analysis of economic and related processes, base their intrinsic incompetence on the magician’s trick, of lying by “fallacy of composition.” For example: Whereas, in fact, the physical performance of the U.S. economy per capita has been declining for more than a quarter-century,<sup>16</sup> fraudulent selections of true facts (in addition to the usual kind of statistical lying otherwise relied upon by the so-called “ecologists”) have been used to portray the U.S. economy falsely, as in a long-term growth, or experiencing other kinds of actually non-existent “improvements,” over this same period.

Contrast these two, distinct, commonplace types<sup>17</sup> of lying, and then let us focus our attention entirely on the crucial problem for scientific method generally, and for policy-shaping under present conditions of crisis, which is posed by a certain sub-type of false statements classed under the second type.

The first, relatively more superficial type of lies, is divided among the sub-types fairly identified, respectively, as “individual” and “popular” types of simply lying. In the first such

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16. E.g., two or three incomes are required to accomplish the effect of a comparable single income a quarter-century ago.

17. From this point on, our usage of the word “type” conforms to the general notion of a theory of types introduced by mathematician Georg Cantor. Cantor, whose mid-1880s work traces his principal contributions to mathematics from Plato as the original source, introduced the notion of functional types by reference to classes of number-types: counting, rational, irrational, transcendental, transfinite, a notion of functional distinctions which he introduced by use of the reworking the notion of the number-sieve from the work of the leading, Third Century B.C. representative of Plato’s Academy of Athens, Eratosthenes. During early 1952, Cantor’s work contributed the beginnings of breakthrough in the present writer’s effort to define the appropriate standard of measurement for applying his own discoveries of the immediately preceding years. However, certain problematical features of Cantor’s last major work, his *Beiträge zur Begründung der transfiniten Mengenlehre* [in Ernst Zermelo, ed., *Georg Cantors gesammelte Abhandlungen* (Hildesheim: Georg Olms Verlag, 1962)], prompted this writer to reread Riemann’s habilitation dissertation, to provide a sounder epistemological, physical basis for a general notion of a “theory of types.” In the present writer’s usage, “type” signifies a distinguishing, functional characteristic of action specific to one modular geometry among an array of Riemannian manifolds. It has the connotation of a type of “curvature,” as Riemann specifies notions of this Leibnizian type within his habilitation dissertation. As a matter of approximations, it is permissible to equate our use of “type” here, to designate functional distinctions among the *genera* of a class/order, and “sub-types” as species within such *genera*. For example, simple lies might be compared with the class of reptiles, and the editors and journalists of the popular mass-media as usually belonging to the category of poisonous snakes.

sub-type of case, the individual, or popular news medium, such as *The Washington Post*, NBC-TV News, or *The New York Times*, fabricates the falsehood, either by intent to mislead, or as the effect of evasion of reasonable standards for truthfulness.<sup>18</sup> In the second sub-type, the prevaricator, rather than making up his lie from scratch, hides behind the putative authority of a preestablished popular lie, such as a report circulated by the leading mass news media (such as the British-controlled *New York Post*’s insistence that Princess Diana died simply as an “open and shut” case of “drunken driving”),<sup>19</sup> or kindred other sources of such commonplace, lying gossip. For an example of the second sub-type of “popular lying,” consider the not-uncommon paralogsms: “You will discover, that all my friends will agree with me, not with you,” or, “I was always taught that . . .,” “I talked with my stock-broker yesterday, and he told me . . .,” or, the somewhat archaic sophistry, still representative of the sub-type, “Until her dying day, my sainted mother always taught me, that. . .” Belonging to the second sub-type, is the pathetic case of the populist, who speaks words to the effect: “You can’t fool me; I know what is going on. I have read a lot, and I follow the news media and TV.”

In the second type of cases, “fallacy of composition,” considered here, the type of prevaricator being considered here, appears, at least, to claim no fact which is not, by itself, a truthful fact; however, what he, or she, says by use of his selection of facts, is a falsehood; whatever the utterer’s intention, it is, in effect, as much a lie, in fact, as the falsehoods spoken by the kind of liar who is more simply and directly shown and understood to be such. The simplest example of cases of this more challenging, second type, is: *conclusions drawn, or implied by statements which place represented facts “out of context.”*<sup>20</sup> Here, our attention is focussed upon

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18. For the sake of the reader not familiar with the relevant evidence, *EIR* possesses evidence of the actual malicious intent to lie about Lyndon H. LaRouche, Jr. stated and practiced by the *Washington Post*, NBC-TV News, and *The New York Times*. In that connection, the lying is almost without exception, invariably violence-prone, and extensive. By aid of degeneration of libel law in the U.S.A., especially since relevant 1984 and subsequent Federal Court decisions, there can be no presumption of truthfulness in any utterance, on any subject, by Associated Press, nor daily print, TV, and radio news and entertainment media generally. Any scholar of Classical Greek would be compelled to accept the appellation, *idiot*, for any citizen who argues, “I know it must be true, because I read it in the newspapers and heard it on TV.”

19. Jeffrey Steinberg, Scott Thompson, et al., “Princess Diana: The Cover-Up of Her Murder Crumbles,” *Executive Intelligence Review*, Sept. 26, 1997.

20. This is illustrated by the malicious legal litigator or immoral judge, who perpetrates a fraud upon the record, jury, general public, et al., by delimiting the scope of the factual evidence to the purpose of creating an impression directly contrary to reality, by means of an artifice fallacy of composition of the evidence allowed to be submitted. Conclusive proof of such fraudulent behavior is known from two cases from the record of the Fourth Federal Circuit’s Alexandria division: First, the 1984 civil case of *LaRouche v. NBC-TV et al.*, where Judge James Cacheris fixed the trial by denying the plaintiff any possible *voir dire* of the crucial evidence in the case. In the second



a narrower, and higher definition of “context,” the notion of context associated with Gottfried Leibniz’s use of the term “*Analysis Situs*,” as this has come to be employed in strict scientific method.

We intervene, to remind the reader, that the kind of mathematical difficulties he, or she may anticipate at the mention of the word “science,” are not to be feared here. It is not necessary to plunge into the swamp-muck of those formal-

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*This Gauss-Riemann, modular approach to Analysis Situs is not only indispensable for locating the source of profit. There could be no competence in economic policy-shaping under today’s conditions of global crisis, unless the same approach is employed for analysis of the continuing causes of, and remedies for the present crisis.*

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algebraic complexities which most readers will associate with today’s university-classroom instruction. Indeed, as an adolescent’s capability for mastering of Carl Gauss’s *Disquisitiones Arithmeticae* illustrates the point, much of the complexity of taught mathematics is more the product of malicious traditions in design of textbooks, and the efforts of an instructor to appear plausible while uttering a doctrine he himself does not fully comprehend, than mathematics itself.<sup>21</sup> The

case in the same Circuit, a criminal trial, *U.S. v. LaRouche et al.* (1988), a prominent Federal judge, Albert V. Bryan, Jr., rigged a trial to hide from the jury the fact, that it was he, and the intentionally fraudulent actions of the prosecution, rather than intent or negligence by the accused, whose actions led to the injury at issue in the case before him. The fraud so crafted by that judge, was a ruling *in limine* which banned from the jury those relevant matters in which the prosecution had crafted the relevant fraudulent action, and in which the judge had allowed the continuation of the prosecution’s crafted fraud. On a number of post-trial occasions, that same judge engaged in repeated acts of “red-handed” simple lying, on the record, in efforts to cover over his wrong-doing in that case. Apart from the substantial amount of perjury variously suborned or otherwise relied upon by the prosecution and also some jurors in the case, these *in limine* motions sought by the prosecution and granted by Judge Bryan, defined the essentially fraudulent character of the indictment, prosecution, and trial as a whole.

21. The principal such source of difficulty, is the effort to build up a mathematics from the standpoint of René Descartes’ and the English empiricists’ reliance on Paolo Sarpi’s revival of the medieval obscurantism (i.e., “gnosticism”) of William of Ockham. These empiricists (also known as “positivists”) have made a frenzy of insisting upon algebraic methods consistent with the axiomatic presumption of the infinite divisibility of straight lines, a commonplace fanaticism otherwise known as the dogma of “linearity

difficulties the reader encounters within this present report are essentially conceptual, rather than algebraic in nature; the conceptual approach, as employed by such as Kepler, Leibniz, Gauss, and Riemann, eliminates most of those purely formal, and, in fact, gratuitous difficulties, which have been inserted into mathematics instruction by defective — Aristotelean, empiricist, Cartesian, positivist—pedagogy, and by worse theory.

The branch of scientific method which must be borrowed for serious work in the field of intelligence and related editorial work, is, as we have noted, what Gottfried Leibniz named “*Analysis Situs*.” In its more frequent usage, *Analysis Situs* signifies *the physical geometry of situation, as opposed to, and outside the realm of mere deductive method*. No competent discussion of the origins of sustainable profit in a national economy can occur without previously situating the discussion within this domain of *Analysis Situs*. As we shall show, in the following pages: If the reader fails to discover reference to notions of the type associated with Leibniz’s use of *Analysis Situs*, within any publication which pretends to define the generation of economic profit, the proof of that offending publication’s incompetence is sufficiently demonstrated by that omission itself.

Leibniz’s notion of *Analysis Situs* was prompted by the methods successfully employed by Kepler for astrophysics; after Leibniz, this Kepler-Leibniz concept is also expressed in mathematics, and mathematical physics, by what are named, interchangeably, either “modular” or “hypergeometric” functions. Do not be affrighted by the technical terminology; the easy-to-read, relevant definitions of such functions are illustrated below. Here, unless another reference is explicitly identified, we refer to the successive definitions of such modular functions supplied, either, first, by Carl Friedrich Gauss, or, as modified by his protégé, and successor Bernhard Riemann.<sup>22</sup>

This Gauss-Riemann, modular approach to *Analysis Situs* is not only indispensable for locating the source of profit. There could be no competence in economic policy-shaping under today’s conditions of global crisis, unless the same approach is employed for analysis of the continuing causes of, and remedies for the present crisis. This needed, improved approach to economics, was initially developed entirely by the present writer, and has supplied the basis in method for each and all of his long-range forecasts presented during the recent forty-odd years. Although these original, 1948-1951

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in the infinitesimally small,” as encountered in the *petitio principii* fallacy of Augustin Cauchy’s “limit theorem.”

22. Riemann was a protégé of both Gauss and of Alexander von Humboldt’s famous protégé Lejeune Dirichlet. After Gauss’s death, it was Dirichlet who filled Gauss’s position at Göttingen University, and Riemann who succeeded Dirichlet. It was under Gauss’s sponsorship that Riemann was habilitated at Göttingen, and it was Gauss’s work on biquadratic residues, general theory of curved surfaces, and hypergeometry, which defined the starting-point of Riemann’s 1854 habilitation dissertation and work on *Analysis Situs*-hypergeometry.

discoveries within the domain of Leibniz's science of physical economy, stemmed almost entirely from inspiration provided by Leibniz himself, it was subsequent, 1952 attention to Riemann's work, especially the axiomatic issues featured in his 1854 habilitation dissertation, which provided the key to expressing those discovered principles of the 1948-1951 interval in terms of a notion of measurement<sup>23</sup> which was not merely an arbitrary one.<sup>24</sup>

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23. Hence, "LaRouche-Riemann Method," as supplied in qualifying *EIR*'s 1979-1983 Quarterly Economic Forecasts. Contrary to certain thoughtless grammarians, who insisted that the term should have been "Riemann-LaRouche Method," the application of Riemann's work occurred after the preceding discoveries of the principles which required a functional standard for measurement of their application. In other words, in terms of the four-step elaboration of the principle of cognition, as this is viewed from the practical vantage-point of the principle of machine-tool design, the present writer's 1948-1951 discoveries represent steps one through three; the modification of the results of these first three steps by introduction of Riemann's work, occurred within the precincts of step four. In scientific discovery generally, the hyphenation should inform the reader of the place of the respective contributions within the ordering of the cognitive process. Most frequently, of course, a new discovery is prompted by recognition of the need to resolve an ontological paradox posed by application of some preceding discovery. The new discovery so prompted, leads to measurement corroborating the additional principle. From this vantage-point, for example, the common pedantic usage of "Cauchy-Riemann" principle is an absurdity. Riemann, an exemplary spokesman of the Leibniz-Carnot-Monge tradition of Alexander von Humboldt's Lejeune Dirichlet, as of Gauss, was, from the outset of his work, determined not to improve upon plagiarist Cauchy's conception of mathematics, but to destroy it. Anyone who can find agreement between the mentality of Cauchy's "limit theorem" and the Leibniz-Gauss-Riemann rejection of "linearization in the small," must be either a hopeless neurotic, or otherwise mentally undeveloped or impaired respecting such subject-matters.

24. E.g., it ought to be immediately obvious to any well-balanced mind, that it is absurd to presume the notion that the phenomenon of "market price" is in correspondence to economic "value." To summarize what many *EIR* readers will recognize as the often-reported account of this matter: The present writer's original scientific discoveries were prompted, initially, by the obviously fraudulent assumption underlying Norbert Wiener's "information theory" hoax, and, also, by the related "systems analysis" hoax of John von Neumann. The writer recognized the hoaxes of Wiener and von Neumann as expressing the same, anti-Leibniz, absurdity, of linearity in the very small, which is central to the three celebrated *Critiques* of Immanuel Kant, as to the hoaxes permeating the most influential work of both Laplace and the celebrated plagiarist Augustin Cauchy. Such hoaxes are to be recognized as typical of the axiomatic fallacies central to the work of Aristotle, and, more emphatically, such modern neo-Aristoteleans as the empiricists, Cartesians, and positivists. Both Wiener and von Neumann were life-long devotees of the notorious Bertrand Russell. Russell's work, including his part in authorship of the *Principia Mathematica*, is among the most influential of those hoaxes which carry the absurdity of the modern positivists to the worst extreme. The author's response to the hoaxes of Wiener and von Neumann, was to derive the anti-entropic characteristics of successful phases of modern economies from the role of cognition in the discovery and application of valid, newly discovered physical and related principles. The mediating role of the machine-tool-design principle in bringing such discoveries into play in qualitative advances in design of products and productive processes, was the central topic of the author's original discoveries of the 1948-1951 interval. The problem of correlating cognitive functions with measurable increases in the anti-entropy of physical processes, was solved, in conception, by bringing Riemann's 1854 habilitation dissertation into consideration, during 1952.

## The definition of 'profit'

Two examples of this notion of "*Analysis Situs*" are crucial conceptually for the subject-matter of truthfulness in policy-shaping. The first example, already familiar to a significant number of readers, to which we turn now, is specifically economic: how "anti-entropy" in economic processes must be situated and conceived. The second, to which we turn thereafter, is a related notion, as originally developed by Kepler for astrophysics. This notion underlies the leading work of Leibniz and the present writer, as also the entirety of the leading work, in all fields of application, of Gauss and Riemann.<sup>25</sup>

The first example is supplied as a mere summary restatement of the central principle into which all of the present writer's original discoveries in, and related development of, Leibniz's science of physical economy are concentrated, a statement which has been the central feature of all the present author's principal writings and lectures on this matter during more than thirty-five years to date. The second, is a fresh choice of exposition of that fundamental principle of modern experimental science, first defined by Leibniz, the which is best identified by the generic name of "universal non-constancy of physical curvature in the very small."<sup>26</sup> The latter construction relies pedagogically upon the recently expanded population of readers engaged in a program of studies of the principles of Kepler-Gauss curvature as applied to astrophysics.

So, we now summarize the notion of physical-economic

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25. *EIR*, working in collaboration with persons associated with both *21st Century* magazine and Dr. Jonathan Tennenbaum of Germany's Fusions-Energie-Forum e.V., has in development currently a pedagogical project, intended to provide secondary level, and adult mathematical-physics education with a grounding in the principles of scientific method from the benchmark point of reference of Carl Gauss's *Disquisitiones Arithmeticae*. The pivot of the program is Gauss's original contributions, by means of which he reestablished Kepler's approach to astrophysics. This project in progress grounds the presentation of the Kepler-Leibniz-Gauss-Riemann material in such included prerequisites as exemplary cases of discovery of principle in Classical Greek literature, and the work of the opponents of Laplace and Cauchy, the Leibnizians associated with Lazare Carnot and Gaspard Monge in France's Ecole Polytechnique. The example supplied here reflects those concerns.

26. Modern experimental science, which originates with Cardinal Nicolaus of Cusa's A.D. 1440 *De docta ignorantia*, rests upon two principles which are central to that writing. The first principle is the general principle of measurement which separates physical science from merely formalist mathematical speculation. The second is that addressed in this writer's "On The Subject of Metaphor" [*Fidelio*, Fall 1992]: Cusa's discovery that circular action is "transcendental," his correction of Archimedes' work on the quadrature of the circle. The corollary of Cusa's proof (and this writer's reconstruction of it in that referenced location) is the proof of the universality of perfect non-linearity in the very small. As noted, the leading exposition of Cusa's several works founding modern physical science, was the development of this by the leading Fifteenth-Century students of Cusa's science writings, Luca Pacioli and Leonardo da Vinci. Kepler, Gilbert [of *De magnete* fame], Christiaan Huyghens, and Gottfried Leibniz precede Carnot, Monge, Gauss, and Riemann, among the principal exponents of this scientific method.

“anti-entropy,” a notion, not of algebraic mathematics, but, rather, existing solely within the hypergeometric domain of Leibniz’s *Analysis Situs*.<sup>27</sup> As we have shown in earlier published reports, the simplest effective approach to this subject is the Socratic method.<sup>28</sup>

The idea of “profit” can not be separated from the notion of “more.” “More” work (e.g., “energy”) is gained in the form of product produced, than is represented by the effort required (e.g., “energy expended”) to effect that production. In other words, “profit” must be compared with “free energy,” and the “rate of profit” must be compared with the ratio of “free energy” to “energy of the system.”

On this point, the “value added” method of national product- and income-accounting, as developed by aid of the work of Professor Wassily Leontief et al., can not be trusted in such matters. For example: What is the meaning of the state of affairs, in which one-third of the population has increased incomes, while two-thirds either does not, or is subjected to increasing deprivation?<sup>29</sup> Can we base measurement of national income on the marginal gains in the upper stratum, while treating the below-standard incomes of the lower as representing, in effect, simply “zero value added”?

This problem was addressed, during the 1850s, by the world’s leading economist of that time, Henry C. Carey, who showed that the toleration of the system of slavery dragged

down the incomes and economic productivity of the population as a whole. Although the slave-owners, and the British and New England textile magnates, such as Karl Marx’s Frederick Engels, luxuriated in profits of slave-produced cheap cotton, the U.S. economy itself had no economic benefit from slavery: as Carey showed, directly the contrary. As in the imperial Rome of Augustus Caesar and his successors, or in the self-doomed, zero-technological growth society of Byzantium under Diocletian’s code, the labor of slaves and other neo-Malthusian forms of labor, did not increase net U.S. national wealth; it decreased it. Carey’s proof of this point, was reflected, among other considerations, in the policy of one of his economics students, Abraham Lincoln, who argued against his Democratic Party opponents, that the U.S.A. could not continue to exist as “half-slave and half-free.”

Indeed, once freed from the burden of the feudal-minded, pro-Confederacy traitors in the U.S. Congress, President Lincoln’s U.S. economy soared, beginning 1861, to become, by 1876, the world’s most powerful, and technologically most advanced nation-state economy.<sup>30</sup>

To resolve the paradoxes lodged in those considerations, look at economy in global, and physical, rather than monetary terms. The increase of mankind’s power over nature, is expressed as potential relative population-density, a variable magnitude which includes the notion of necessarily correlated improvements in demographic characteristics of life-expec-

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27. One could not understand how the present writer, already in 1948, was able to recognize immediately the fraudulent character of Norbert Wiener’s definition of “information theory,” and, slightly later, the kindred, axiomatic absurdity of John von Neumann’s “systems analysis,” unless one recognized how savagely incompetent was the mathematics practice of this pair of Bertrand Russell acolytes. Relevant is the nature of the conflicts, with Hilbert and Courant, which sent Wiener from Göttingen University, under a cloud of suspicion, as well as mere controversy. The barest comprehension of the implications of the work of Plato and of Books 10-13 of *Euclid’s Elements* is sufficient to alert one to the absurdity of Wiener’s locating his definition of “negative entropy” within the framework of Ludwig Boltzmann’s mechanistic-statistical H-theorem. As in the simpler case of distinguishing functionally between left-handedness and right-handedness, the issues of ordering which distinguish non-entropic from entropic processes do not lie within the domain of algebraic mathematics, but only within those higher geometries to which Leibniz assigned the title “*Analysis Situs*,” and which are recognized under the rubrics of “modular” and “hypergeometric” functions in the work of Gauss and Riemann. Both Wiener and von Neumann were aware of the existence of this elementary distinction; thus, their referenced work was, like the related hysterias of Bertrand Russell, purely and simply an ideologically motivated fraud. The development of hypergeometry by Gauss and Riemann is based directly upon Leibniz’s approach to the universality of non-constant curvature in the infinitesimally small, a key feature of his further development of the calculus, after his initial 1676 written report of his discovery.

28. For a summary of the basis in Plato for Riemann’s 1854 habilitation dissertation, see Lyndon H. LaRouche, Jr., “The Essential Role of ‘Time-Reversal’ in Mathematical Economics,” op. cit.

29. Compare the “two hump” model upon which “post-industrial,” “information society” economies converge, as presented by *EIR*’s economics staff during the proceedings of the recent Dec. 13-16 conference and seminar at Bad Schwalbach and Walluf, Germany. See article by Jonathan Tennenbaum in this issue.

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30. The generation of Americans who went into military service during World War II were, predominantly, at least, patriots in the explicitly stated tradition of President Abraham Lincoln. Prior to the Anglophile degeneration of both U.S. education and the morals of the U.S. population, which took over under Presidents Truman and Eisenhower, in the more literate parts of the U.S., pre-1946 school-children memorized Lincoln’s “Gettysburg Address.” Similarly, the tradition of the soaring of U.S. economic development, from 1861 through the crisis-ridden late 1870s, was a deeply embedded tradition among all those U.S. adolescents and adults who would not fall into the Classical-Greek classification of *idiots*. World War II was fought by U.S. servicemen and women, who predominantly called up the patriotic sentiments of the Lincoln heritage within themselves. Among those who might be reasonably termed patriotic U.S. economists, even leftist ones, this political-economic tradition of the Lincoln legacy, was to be taken for granted until the mid-1960s. The strength of the Civil Rights movement under the leadership of the Rev. Martin Luther King, Jr., lay in King’s successful appeal to the Lincoln legacy residing within much of the young-adult generation of the mid-1960s. President John F. Kennedy’s popularity in his fight against Wall Street expresses this. The general economic history of the U.S. was fairly well known among patriotic portions of our literate population. Our national memory of such realities began to be washed out of our nation’s life as the “Baby Boomers” of the 1960s continued their post-1968 upward “march through the institutions.” Thus, it was possible for us, in 1978, to publish Allen Salisbury’s *The Civil War and the American System* (New York: Campaigner Publications, 1978), without being obliged to document the fact of the Lincoln legacy expressed as U.S. political and economic tradition. Nearly twenty years later, these facts, more or less well known to literate members of this writer’s own generation, had to be resurrected by the archeological expeditions of historian Anton Chaitkin. On the 1861-1876 surge of the U.S. economy to a leading position in the world, see, Anton Chaitkin, “Leibniz, Gauss Shaped America’s Science Successes,” *Executive Intelligence Review*, Feb. 9, 1996, pp. 22-57.

tancy, physical well-being, and cultural division of activities within personal and household life. The increase of this magnitude, is the principal characteristic of all known human existence, the latter taken as a general phenomenon.

In archeological and historical evidence, the improvement of potential relative population-density depends upon two leading considerations. First, technological progress as such. Second, the relative rate of participation in application of such technological progress by the population considered as a whole. This notion of technological progress, locates the distinction between mankind (human society) and beasts, in the determining role of ideas, as Plato defines “ideas,” in defining the distinctive characteristics of performance by the human species as a whole. *It is the advancement and spread of such technological progress, in idea and application, which defines the area for investigating the functional interrelationships which, in turn, define the characteristics of any definable culture, any definable society as a whole.*<sup>31</sup>

In other words, the real income of a society is not the sum-total of the accountable nominal incomes of the individual members of that society, nor are costs of production limited to what employers consider themselves obliged, however reluctantly, to pay to bring that production and distribution about.

The type of idiot referenced earlier, assumes that the cost of production is located within the expenditures which employers make on behalf of production and related administrative and distribution functions. That is a popular lie, and a great one. The cost of production is located in all things which must be developed and maintained, to create the preconditions for not only production and distribution, but also the further advances in the quality of that production and distribution. Above all, this includes the development of all of those family households which supply labor to the process. This includes the public expenditure for basic economic infrastructure, which is as essential to production as a whole, as preparing the farmer’s land is essential for the production of crops.

The productivity expressed, as quality and quantity of product per capita and per square kilometer, reflects the cost of production. This is essentially the expenditure, by the society as a whole, which must be made to maintain and improve that same productivity. This expenditure, and nothing less, corresponds to an economy’s “energy of the system.” It is the production of healthy, well-educated, richly cultured individual persons, and of the households which produce them, combined with the development of the basic economic infrastructure of the entirety of the land- and water-areas of the national economy, which is the object of economic activity. In other

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31. Lyndon H. LaRouche, Jr., “What Economics Must Measure,” *Executive Intelligence Review*, Nov. 28, 1997. Note the treatment there, of the subject of the interrelationship between determining economic policies of practice and the ostensibly non-economic forms of the decisions behind the selection of such policies.

words: the production of the individual personality, an accomplishment which depends upon all the things which bear upon that result. It is increasing the average power of that individual over nature, and over the catastrophes and other problems which mankind suffers, and often brings upon itself, which is the standard of measure for real performance of economies.

Contrary to those voodoo economists who rely upon the witchcraft of “free trade,” such as Professor Milton Friedman of “free to chisel” notoriety, and other deranged followers of Bernard Mandeville, François Quesnay, Adam Smith, and Jeremy Bentham, a sane economy is not a collection of piratical individual entrepreneurial egos. A sane economy, notably that of Benjamin Franklin, Alexander Hamilton, Abraham Lincoln, and Henry C. Carey, is a *national economy* consistent with the intent of our 1789 Federal Constitution, and with the constitutional intent expressed by U.S. Treasury Secretary Hamilton’s celebrated reports to the U.S. Congress on the subjects of public credit, a national bank, and manufactures.

Maintaining nominal profits of politicians’ election-campaign contributors on Wall Street and elsewhere, by cheating wage-earner households, looting pension, education, and health-care systems, and neglecting decaying public infrastructure, all for the sake of nominal business profits, is not a measure of efficiency; plainly said, it is nothing but looting and stealing from the economy itself, just as much as the individual employer who embezzles from his own firm to support a mistress and/or a gambling habit. Such outright stealing is the leading feature of austerity policies among U.S. government and supranational institutions during the recent thirty-odd years, especially since the 1971-1972 introduction of that piece of globalist lunacy called a “floating exchange-rate monetary system.”

Technological progress is associated, by necessity, with an increase of the complexity of the division of labor, within, and contiguous to the productive processes of the society as a whole. This signifies increases in the inventories of goods-in-process per capita of total labor-force, and per square kilometer of relevant surface area of the planet. In other words, the “energy of the system” of society increases, per capita, and per square kilometer, in correlation with realized technological progress.

This also brings into play an apparent “frictional,” entropic element: marginal depletion of the types of man-improved, man-depleted natural resources in current use. This latter, entropic feature was always present, in all known cultures. So, since ape-like man would have a maximum potential relative population-density of no more than several millions, world-wide, under the optimal phases of cyclically-ordered, “Ice Age”-dominated ecological conditions, throughout the approximate two millions recent years, why has mankind’s potential increased, to more than 100 millions individuals by Hellenistic times, reached several hundred millions, world-wide, during Europe’s Fourteenth Century, and has zoomed, under the impact of the Fifteenth-Century emer-

gence of the European sovereign nation-state economy, to more than five billions today?

*Then, how do we maintain a constant or increasing ratio of “free energy” to “energy of the system,” in an economy, since the increase of the productive powers of labor depends upon that technological progress, which, in turn, requires an increase in the amount of relative energy of the system per capita and per square kilometer?*

The short version of the answer is: *We offset the “frictional” costs associated with relative depletion of resources, by rates of technological progress which effectively exceed the required absorption of those frictional costs.*

Thus, the ratio of “free energy” to “energy of the system” is maintained at constant or rising levels, despite the fact, that increase of realized technological progress incurs increased density of “energy of the system,” both per capita, and per square kilometer. This relationship defines “anti-entropy:” *The ratio of “free energy” to “energy of the system” must remain constant, or rise, although this can be achieved only by increasing the per-capita density of “energy of the system.”*<sup>32</sup>

No mathematics, or similarly linear, formal deductive logic, could represent a process characterized by such anti-entropic orderings. No mathematics which is congruent with the use of the castrating Cauchy “fraction” for the differential calculus, could represent such orderings. No system of simultaneous linear inequalities, could represent such a process. No method of national-income accounting consistent with accepted standards of accounting practice, could competently represent a real economy. No thinking which accepts the presumption of the existence of physical linearity in the infinitesimally small, could comprehend such a process. The answer lies outside algebraic and other forms of linear thinking, within the domain of Leibniz’s *Analysis Situs*.

The possibility of organizing a recovery of the world’s economy from the catastrophic, systemic collapse now in process globally, depends upon policies consistent with the considerations we have just summarized.

We shall return to the issue of physical-economic profit, after presenting the second example.

### **Empiricist racism versus creativity**

Whence the “not-entropy,” as we have just identified it, which characterizes truly profitable economies? To understand the ugly truths embedded within any culture, look into the causes of those conditions which the society either imposes, or tolerates as the conditions of life among what are sometimes loosely termed its “disadvantaged” social strata. When we examine the fate of these “disadvantaged,” must we not ask ourselves, “Whence the source of true profit,” true

32. For presentation of this from the standpoint of simultaneous systems of inequalities, see Lyndon H. LaRouche, Jr., *So, You Wish To Learn All About Economics?* 2nd ed., (Washington, D.C.: Executive Intelligence Review News Service, Inc., 1995).

“not-entropy,” as distinct from stealing?

We have given the answer repeatedly; it is the foundation of all of the writer’s work on economics during the recent fifty years: The only source of true profit, is that developable quality of the individual person which otherwise sets the human species absolutely apart from, and above, all the mere beasts. That distinguishing quality is known as *cognition*, a power of the mind expressed solely by the production and replication of what Plato classes as “ideas.” These ideas are of a quality typified by the validated discovery of those new physical principles, by means of which true productivity — man’s per-capita power over nature — is increased.

Since this “not-entropy” is a product of individual human creativity, we can not competently separate economic policies from the question of the inappropriateness to human beings of the kind of pedagogy presently fostered in today’s preschool, primary, and secondary educational institutions, especially the worsening of education, at an accelerating rate, during the recent thirty-odd years. We must give special attention, on this account, to critical investigation of the brutality of those policies of educational practice which are directed toward, and against, the relatively “disadvantaged” strata of the population.

On this account, one of the leading correlatives of the present systemic economic crisis, is the past thirty-odd years’ resurgence of racist educational practices in the United States, especially the increasing takeover of educational institutions by the kinds of perverted representations of the human mind which are axiomatically racist. Look briefly at this issue from the standpoint of the principles of cognition central to the work of Kepler and Gauss.

In this latter connection, one is directed to focus attention upon one of the great lies polluting popular opinion in the U.S. today. That falsehood is the assertion that progress in civil rights in the U.S. was of the making of the so-called “Golden Generation,” those who were university students of the 1964-1972 interval; that is typical of falsehoods based upon a selection of facts taken out of context. Look at this lie from the vantage-point of the changes in educational policy, affecting African-Americans and comparable strata, increasingly, under the growing political influence of that so-called “Golden Generation.” See in this, the axiomatic basis for the galloping collapse of the U.S. and most other economies of the world today.

Although there were some notable, isolable institutional changes for the better in civil rights, after 1964, the fragmentation and degeneration of the civil-rights movement after the assassination of the Rev. Martin Luther King, Jr., reflected pernicious, worsening influences which had been already increasing, and that at rapid rates, since about 1964. After Martin’s murder, the forward motion of the movement ended; some of us are still trying to revive it, without yet gaining what decency would claim as “significant success.”

Within the civil rights movement itself, this degeneration

reflected two principal influences. One was a foundation-backed insurgency of an existentialist form of racism inserted under the protective cloak of a misleading, catch-all rubric, “black nationalism.” Under this rubric, there was spread a kind of axiomatic racism whose most hate-filled expression of violence was the influence of degenerate Jean-Paul Sartre’s protégé, Frantz Fanon, the same Fanon kind of “black nationalism” deployed from Dar es Salaam University, and responsible for the recent several years’ conduct of Britain’s “black-on-black” genocide and perpetual warfare in Central Africa, conducted by Uganda’s Yoweri Museveni and his Dar es Salaam-referenced cronies in Eritrea, Ethiopia, Rwanda, Burundi, and former Zaire. The second, was the kindred disguise for racism, axiomatically intrinsic to the ideology of the so-called “New Left.”<sup>33</sup>

In direct contrast to such wretches, Martin Luther King typified the tradition of Civil Rights since before Abraham Lincoln and Frederick Douglass: rebuilding the United States, both physically and morally, according to the principle of equality as understood by Lincoln and Douglass. The African-American civil rights movement is fairly described as being as old as African-American slavery. The Confederacy’s slaveowning aristocracy understood the crucial issue of that struggle, as expressed by their treating a slave’s literacy as proof of a capital crime by his master. Literacy in the best features of European culture was the first step to striking away the shackles of slavery — from the mind of the slave. Frederick Douglass, in nearly every imaginable way, epitomizes the true African-American tradition of civil rights struggle, the tradition which the Rev. Martin Luther King, in his time, was called to serve.

Then, emerging approximately 1964, under either Dr. Kenneth Clark’s, and, slightly later, McGeorge Bundy’s Ford Foundation, or kindred subsidies, these existentialist varieties of self-styled “black nationalists” were deployed in aggressive, violence-oriented opposition to the Rev. Martin Luther King, notably including such periods as the Selma march. Confederacy nostalgists of the Nashville Agrarian/Fugitive type, such as Robert Penn Warren and Kissinger’s William Yandell Elliott, inspired a genteel form of racism spawned by certifiably liberal establishment covens: “Don’t oppress them, but, rather, induce them to desire to stay in their proper, separate place.” Induce them to deploy under the cover of such slogans as “integration is submission,” and “separation is freedom.” It is an old game: induce the targetted class of

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33. During a relevant period, near the close of the 1960s and during the early 1970s, experience showed that the fellow asking, “What about Fanon?,” often turned out to be a police-agent, an *agent-provocateur*, with or without an actual badge. Otherwise, those pushing the anarchist-fascist tradition of “liberating violence” during that period, were, if not actual police agents, protégés of certain foundation programs, which, experience tells us, is about the same thing, or worse. One could not discover who was whose agent, without first checking the foundation grants on which they depended. That is still good advice, today.

victims to shackle and corrupt themselves.

King’s leadership kept these notions somewhat in check, through astute definitions of the unity of the movement around its purposes, especially unity against the use of the kind of violence which had been proposed by both anarchists and Sorel, and used as an ideological organizing tool by Mussolini-

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*The only source of true profit, is that developable quality of the individual person which otherwise sets the human species absolutely apart from, and above, all the mere beasts. That distinguishing quality is known as cognition, a power of the mind expressed solely by the production and replication of what Plato classes as “ideas.” These ideas are of a quality typified by the validated discovery of those new physical principles, by means of which true productivity—man’s per-capita power over nature—is increased.*

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ni’s fascists. The concern of the U.S. “establishment” to bring the spread of King’s now-deemed-inconvenient philosophy to an end, was the key issue of investigations into the causes for the murder of Minister Malcolm X. After King’s death, this Pandora’s box of poorly disguised racism, which his leadership had kept somewhat in check, opened wide, and virtually ruined the national effectiveness of the civil rights movement from within.

The axiomatic characteristic of such “New Left” and black existentialist influences, was a view directly opposed to the principle of equality: irrationalist *cultural relativism*. Look at the way in which this “New Leftish” form of anti-African-American racism works. Consider this, first, more narrowly, as directed against specifically African-American and Hispanic-American targets. Then, view it in full plumage, in the “New Era” context, under whose reign virtually all Americans are converging upon the same, virtually homogenized state of economic and cultural degradation.

The centerpiece of this conflict is the same issue, of development of the cognitive potentials of the individual mind, upon which we rely absolutely for “not-entropy” in economy.

In today’s most flagrant expressions of the post-1963

trends in moral depravity, we are confronted by a new disguise for the “Separate but Equal” filth of President Teddy Roosevelt’s time. Some influential, racist ideologues of educational policy, now as then, insist that African-Americans are better suited to irrationalist, emotional-associative thinking, while poorly qualified for the cognitive processes preferred by “Caucasians.” Obviously, those who advocate such distinctions are poorly suited for cognitive thinking themselves. Their stupidity is no excuse for our tolerating their racism.

Mediterranean civilization’s notion of the sacrosanct, universal equality of persons, originates with Christianity, appearing first as distinct from the different position of those Jewish particularists who denounced the Apostles John and Paul on this account. This Christian conception of natural equality of all persons, finds its scientific affirmation in the fact that it is culture, not racial origin, which determines the relative ability of the individual, of whatever “ethnic” origin, to replicate those acts of discovery of valid physical and related principles of the universe, upon which the previous existence and continuation of civilization depend. This capability is located within cognition, of which persons of all “ethnic origins” are equally capable biologically.

This equality is located essentially in the development of those natural, cognitive powers of the individual human mind, by means of which individuals either generate valid new discoveries of physical principle, or, as students must do, replicate within their own individual minds, the same emotional and intellectual experience as an original discoverer. The development of those mental processes, through which such generation and replication of what Plato termed “ideas” occurs in respect to science and Classical art-forms, is the proper definition of the term “cognition.” It is this cognition, which identifies each person as born to be a good and noble creature, “made in the image of God,” and “beloved by God.” It is this quality of cognition, which distinguishes persons from mere beasts. All learning, including opinion, which is generated by any means other than such cognitive processes, is merely “learning,” in the sense we may employ “learning” to describe the qualities we might desire among beasts, or concentration-camp administrators might desire among their slave-labor charges.

In other words, those who insisted that African-Americans naturally preferred emotional-associative learning to cognition, were, simply and plainly stated, referring to African-Americans as sub-human beasts. Authentic “world-class” African-American geniuses, such as Frederick Douglass and George Washington Carver, had their humanity thrown into the mud by these self-inflicting, “the freedom-to-stay-in-your-own-place” racists. Not nice. Worse, these establishment-class philosophical liberals were proposing that the educational policies for instruction of African-Americans, be adapted to the presumption that these young belonged to a non-human species. These were the same racists, who, at

certain universities, prescribed a doctrine based on this same racist prescription, demanding that non-Caucasians, among others, not be obliged to visit the cognitive experience of the work of “Dead White European Males (DWEMs).”

Did someone in the back row just suggest comparing this to “Keep them barefoot and pregnant”?

The mind-sets of those who author such racist varieties of “cultural relativist” social and educational dogma, are obviously correlated with the referenced Nashville Confederacy-nostalgia types. However, the truth of the matter is situated somewhat differently.

It is not accidental, that the same ideology proposed by such racists in educational policy, should be found in the “Third Wave” dogma of Alvin Toffler and Speaker of the House Newt Gingrich. The larger truth is to be read in such locations as the pages of Rupert Murdoch’s London *Times*, a publication formerly edited by an admirer of Toffler’s and Gingrich’s “Third Wave,” Lord William Rees-Mogg. Rees-Mogg foresees the “information society” of Toffler’s “Third Wave” as leading toward a glorious utopia, in which the economic output of the world, “information,” is supplied by about five percent of the world’s population, possibly living in locations such as England’s Channel Islands, while the remaining ninety-five percent of the population live as the Yahoos of Jonathan Swift’s Gulliver’s voyage to the domain of the “houyhnhnms,” allowed no education at all.<sup>34</sup>

However perversely, Rees-Mogg’s remarks perform the service of exposing the true political character of the Toffler-Gingrich and related rant. The purpose of “Third Wave” thinking, like that of Prince Philip’s closely related doctrine of “ecologism,” is to restore, globally, that kind of feudalistic society of Britain under George I, whose essence Jonathan Swift captured so aptly in that story. This is the “mint julep” Confederacy of Robert Penn Warren’s and William Yandell Elliott’s Agrarians, a parody of old financier-oligarchical Venice, a society free of industry, in which the numbers and the intellectual development of the lower classes are kept agreeably low.

Exemplary of all such anti-cognition tendencies in recent and current educational policy, is the emphasis on the use of “information” as a substitute for cognitive development of the individual mind. The notion of replacing the classroom teacher, more or less, by the “wired classroom,” all in the name of “information society,” is the most general expression of this process of virtual intellectual, and also emotional “pre-decortication” of the coming generations of adults. When the mere learning (e.g., emotional-associative learning) of a “wired society” is substituted intensively for the traditional,

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34. William Rees-Mogg, London *Times*, Jan. 4, 1995. See discussion of this present utopian trend in London-centered social policy, in Lyndon H. LaRouche, Jr., “The Wells of Doom,” *Executive Intelligence Review*, Dec. 21, 1997.

Classical-humanist cognitive program of education, two related kinds of crippling effects are imposed upon the victims, the children. First, there is the intellectual damage: the lack of ability to form problem-solving conceptions, for reason of lack of cognitive development. Second, emotional disturbances, including as one marker of this, apparent tendencies toward "autism." A Classical mode of education is in large degree a cognitive education of emotional responses to ideas; without a cognitive approach, a kind of emotional disassociation from actual ideas occurs. Such latter tendencies are actually found among young persons who suffer such effects from "overdosing" on the Internet.

The intent behind the sundry anti-cognition movements, such as those of the foundation-granted African-American existentialists, the "Third Wave," and so on, is that expressed by such spokesmen for the British oligarchy as Rees-Mogg. In brief, it is fairly described "Forward to post-modernist neo-feudalism!"

How does this function? The answer lies within the implications of cognition itself.

There is true metaphor expressed in the advocacy of Rees-Mogg, et al. It is a true ontological paradox of the type expressed by Plato's *Parmenides*.

The actual individual person, by his, or her nature, is set apart from, and above, all mere beasts, by the distinction between cognition and emotional-associative learning and prejudices. However, in order to preserve an oligarchic form of society, in the sense the Greeks of rhetorician Isocrates' and King Alexander the Great's time used the terms "Persian model" and "oligarchical model" interchangeably, it is necessary to falsify man's individual nature, at least in practice, by suppressing, even bestializing, the development of the cognitive functions of those relegated to the most numerous, "lower classes" of society. Yet, despite that suppression, the individual usually remains human in nature, a person whose crushed, but not destroyed cognitive potentials, yearn toward the very humanity he, or she, is being denied. Thus, out of the worst cultures, something good has revolted, to make necessary changes in the direction of humanity. Current trends in public and private education in the U.S., as in practiced cultural policy generally, reflect the intent to bestialize the great mass of individual persons to an effect consistent with the "Agrarian" perversions of Robert Penn Warren et al., and the financier-oligarchical sentiments of the ruling financier oligarchy of the Anglo-Dutch, British Empire of today.

Thus, at the same time that such imposed cultural depravity brutalizes the targetted population (evil), individual human nature remains rooted in the principle of cognition (good). Rees-Mogg may appear to be a variety of modern Manichean (or, Bogomil), but this is not a Manichean universe. When we consider the record of mankind's existence on this planet, the long wave of human existence is upward, even if we must leave the relics of abandoned, bad cultures, crumbling into dust by

the side of history's road. Often, this upward movement occurs under abominable physical and cultural conditions of social life, yet progress persists. Ultimately, the good, as typified by cognition, will prevail over the bestiality of emotional-associative forms of behavior. Yet, the parents and grandparents of both today's children and unborn posterity, ask, with a tear in their eye, "Why should it not prevail now, in this crisis, while there is still time for these little ones?"

Yet, that said, the fact remains, that it is precisely this struggle between the good we are defending, against the evil defended by Rees-Mogg's praise of Alvin Toffler's babbling, which is the characteristic feature of the human social situation. This is the root of the historic conflict which defines the British monarchy as the principal, continuing adversary of the United States, from the opening struggles toward our national liberty, during the early Eighteenth Century, continuing down to the present day.

From the beginning, in the struggles of Jonathan Swift and his Tory allies, against the financier-oligarchical philosophical (i.e., empiricist) liberalism of William of Orange and George I, the essential issue of conflict between U.S. patriots and the slobbering slaveowners and other Anglophiles of our treasonously inclined oligarchical faction, has been nothing less than this paradoxical conflict between actual human nature, as expressed by the development of the individual's cognitive powers, and the attempt to suppress that human nature in those intended for the managed populations of the "lower classes." This was the issue of our War of Independence, the issue of the treasonous "Hartford Convention" plot of 1814-1815, our Civil War against London's pawn, the treasonous slave-owners' Confederacy, and the war-time conflict between the beastly Winston Churchill and President Franklin Roosevelt. This is the issue of the British monarchy's, and Labour Party's, presently ongoing, openly conducted strategic cultural, financial, and economic warfare against the United States, and the British-controlled press's libellous, lying propaganda campaigns upon President William Clinton, today. This is the essential difference between republicans, in the tradition of Solon of Athens, and the opposing landed aristocracy, financier oligarchy, and the lackeys of those two morally degenerate classes, down to the present day.

The entire existence, from their beginnings, more than thirty years ago, of the organizations associated with the present writer today, has been premised on that central issue: cognition versus the bestiality of mere emotional-associative opinion, republicanism so defined, against oligarchism so defined. The issue is expressed as the right of each and every person to enjoy an education, and related cultural nurture of the individual cognitive powers, and the right of that same individual to live as a person of such qualities and potentialities. That is the fighting line, the only issue worth the blood of killing and dying in battle. That is the issue, respecting the



nature of the individual person, whose importance outshines and overwhelms all other political questions.

The “New Left,” like their degenerate cousins, the Nashville “mint-julep set,” landed on the bad side of that defining issue. (One might say, “They arose, one morning, from the wrong side of someone else’s bed.”) That disgusting result was intended by the forces associated with institutions such as Prince Philip’s World Wildlife Fund, by the orchestrated brainwashing of victims in Fanonist varieties of “black nationalism,” and the countercultural, neo-Malthusian characteristics of the “New Left” indoctrination of 1964-1972.

This same issue, is central to understanding the high rates of increase of potential relative population-density set into motion within the spread of the modern European nation-state, by the Golden Renaissance’s 1439-1440 sessions of the great ecumenical Council of Florence, relative to all previous and rival cultures. The crux of the matter, is the role of the modern nation-state, in imposing its superior will upon the feudal forces of combined landed-aristocratic and financier oligarchies, and the accompanying fostering, by the nation-state, of an increasing generalized education and opportunity for participation in scientific and technological progress.

The essential thing here, is that which makes the referenced educational policies toward African-Americans so purely evil: by denying the function which makes persons human, cognition, these educational and related social policies seek to destroy that which makes the intended victim human. In so doing, they also neutralize that quality within the population without which economies can not prosper. Without that source of wealth-creation, the scientific and technological progress which depends absolutely upon the development of such cognitive potentials, those sections of the population induced to accept the substitution of “emotional-associative” for cognitive functions, will be greatly self-reduced, both in numbers, and in capacity for resisting the cruel brutalization imposed upon them. The effect is the same demanded by the Emperor Diocletian’s Code: technological stagnation of a form which led to the depopulation, and self-induced doom of the Byzantine society, as a culture which died because it lacked the moral fitness to survive.

That said, look again at the principle of cognition, this time in a fresh way. That will provide the precondition for our conclusion here: the nature of truthfulness under conditions of systemic crisis of civilizations.

## Cognition and ‘not-entropy’

As was elaborated in “The LaRouche Method: What Economics Must Measure,”<sup>35</sup> the sole source of the “anti-entropy” underlying physical-economic profitability, is the “anti-entropic” change in Gaussian curvature supplied to the physical economic process by the activation, development, and real-

ization of the kind of creative mental activity typified by new discovery of valid physical principles (and valid Classical art-form). The effect of such change follows the pathway described by Riemann, in his “The Hypotheses Which Underlie Geometry,”<sup>36</sup> a change in the characteristic of the new manifold generated, as compared with the manifold typical of the time before this change. It is the effect of this which we are measuring, when we observe that the ratio of “free energy” to “energy of the system” remains constant, or even increases, despite the integral requirement of an increase in the per-capita density of the “energy of the system.” [Figure 2] It is in terms of those four steps of cognition depicted in that figure, that the metrical characteristics of the act of discovery (Step Two) become rigorously definable.

Hence, because of this role of the spreading of scientific progress into broader aspects of production, since the “dirigist” programs of France’s Minister Jean-Baptiste Colbert and the pioneering work toward the founding of a modern machine-tool-design-driven model of economy, by Lazare Carnot and Gaspard Monge, the highest rates of economic growth have tended to occur under the fruitful impact of so-called “science-driver” programs upon the economy, such as in that form of technological spill-overs from war-time mobilizations which emphasizes revolutionary rates of technological progress, or the pre-1967, “Kennedy Round” of the U.S. space-exploration program.<sup>37</sup> The soaring of the U.S., over the interval 1861-1876, to world leadership in economy, and in technological advancement over all other economies of the world, is a crucial example of this principle.

This describes the relationship between technological progress, which originates only within the cognitive processes of individual human minds, and technology-driven increases in the per-capita, and per-square-kilometer productive powers of labor. This is a causal relationship which can not be represented, in any way, by conventional mathematical methods, such as methods of “solutions to simultaneous linear inequalities.” On this same account, all conventionally taught theories of profit in textbook, classroom, etc., are obscurantist bunk. We are in the domain of *Analysis Situs*.

Cumulatively, as measured in increase of mankind’s power in the universe, the effect of this technological progress is awesome. It is the more awesome, because, as for the physical scientist, such as the biologist, looking into the matter, the amount of effort (“energy”) involved in the cognitive processes’ reshaping the action of the human hand, is infinitesi-

36. *Über die Hypothesen, welche der Geometrie zu Grunde liegen*, op. cit.

37. There were heavy, crucially destructive cut-backs in the space program during approximately the calendar year 1967, from which the U.S. space program never fully recovered, to the present day. Beginning approximately the same period, there were successive waves of cut-backs in the U.S. machine-tool capability generally. The Moon landing was the realization of ground-work done earlier; by the end of the 1970s, the U.S. had lost numerous elements of the technology which had been essential to the manned Moon landing program.

35. *Executive Intelligence Review*, Nov. 28, 1997.

## The four steps of cognition

*The following description of the process of creative discovery is excerpted from Lyndon H. LaRouche, Jr., "Whose God Does Pat Robertson Serve?," EIR, Nov. 14, 1997, p. 27.*

### Step 1: Posing an ontological paradox (metaphor)

Given, for example, an established mathematical physics. Some newly considered array of physical evidence is shown to exist, but which should not exist if the established mathematical physics did not contain some crucial falsehood. Since, in the normative case, both the established old mathematical physics and that newly considered evidence which refutes the old physics, are equally well premised in the faculties by which we determine empirical evidence, the contradiction between the old physics and newly considered evidence represents what we term an *ontological paradox*.

In the domain of Classical art-forms, the same quality of paradox is identified as a Classical *metaphor*.

*This first step of the process is representable to relevant onlookers.*

### Step 2: The discovery of a validatable solution

Through intense concentration, the mind of some individual who has been confronted with the ontological paradox, generates a newly discovered idea of a principle of nature, together with an ensuing preview of the means by which this newly discovered principle might be validated.

This second step of the process occurs behind those opaque screens which hide the cognitive processes of the individual from the sense-perceptions of onlookers. *The efficient action within this step of the process is not directly representable to the onlookers.*

### Step 3: The argument for the principle

On the basis of completing Step 2, the individual who has discovered a validatable quality of new principle identifies that principle in terms of both the ontological paradox referenced, and the proposed tests by means of which the notion of the principle might be validated or needed corrections indicated.

*This third step is representable.*

### Step 4: The design of the validating experiment

Step 3 leads toward the process of successive designs, as if recursively, of experiments, or equivalent forms of observation, by means of which: (a) the proposed new principle is demonstrated to be an efficient one in the universe, and (b) additional characteristics of the new principle's relations to other principles may be adduced, and, hopefully measured to the desired degree of refinement.

*This Step 4 is representable.*

mally small, relative to the magnitude of the forces already represented by the physical processes to which this change in the "shaping" of human action is applied. Rather than choose the term "awesome," let us say "astronomical."

During the past year, the present writer has sponsored a special pedagogical program, centered around reliving some crucial discoveries of principle by Carl Gauss, in mathematics, especially as these proved to be, from 1801 forward, of decisive importance for the development of astrophysics. The principal motive for this program is to supply a task-oriented series of highly relevant cognitive exercises, by aid of which to make the students aware, within themselves, of the existence of a distinct species of mental processes named "cognition." This program is conducted as a pilot-project, out of which it is our intention to produce a new book aimed at rehabilitating mathematics instruction, both for adolescents and adult-education programs.

The reason for the choice of this work of Gauss, to serve as the pivot of such a program of cognitive education, is that his work lies at the most heavily trafficked crossroads in the history of development of science, from Classical Greece, to the most recent times. Gauss incorporates Kepler and Leibniz, for example, and, in collaboration with Alexander von Humboldt, the contributions of that French science of Lazare Carnot and Gaspard Monge, which fled into Germany under the persecution it suffered at the hands of the Bourbon Restoration in France. Thus, although, until 1814, the scientific tradition in Benjamin Franklin's North America was chiefly a combination of the influence of Gottfried Leibniz and French science; toward the middle of the Nineteenth Century, until World War I, the principal new feature of scientific progress in the U.S. was the science imported from the Germany of Carl Gauss and Alexander von Humboldt.<sup>38</sup> Thus, the U.S. assimilated the science of Leibniz, of Monge's Ecole Polytechnique, and of Gauss's Germany, and repaid Europe—and the world—for this, by developing, during 1861-1876, the world's most advanced form of national economy, which was more or less promptly adopted, from the U.S.A. directly, by Japan, Germany, Czar Alexander II's Russia, and many others.

Let us look at the problem we have just identified from this pedagogical vantage-point: the infinitesimal magnitude of the physical effort of change associated with cognition, as compared with the manifest, cumulative effects which can be traced to no other source than this cognitive action. To illustrate the kind of principle at issue, we use a relevant, elementary example from Kepler-Gauss astrophysics. This illustration reflects the work of Dr. Jonathan Tennenbaum and Bruce M. Director, in developing the weekly sessions of the pedagogical program referenced.

The most significant natural effects upon the Earth and its

38. The role of Benjamin Franklin's great-grandson, West Point graduate Alexander Dallas Bache, in coordinating the U.S. connections to both Gauss and von Humboldt, is exemplary of this.

processes, including the original existence of this planet, are generated in the astrophysical domain. The coming and going of “ice ages,” the weather generally, and so on, have been more strongly determined by astrophysical environment, than anything local to Earth itself, and, thus far, very little by human activity.<sup>39</sup> Among these astrophysical effects, are the impact of long astrophysical cycles, within the range of periodicity of tens to hundreds of thousands of years, such as those which determine the coming and going of “ice ages.” This is prominent among the numerous reasons it is urgent that Earthlings get out into space, to discover how these astrophysical effects might be managed. To make the relevant series of connections for our subject here, economics, let us begin with a focus on a type of problem posed to his students, by Dr. Tennenbaum.

For our purposes here, we limit ourselves to examining the implications of the interaction among three of the many, interacting layers of astrophysical cycles affecting conditions of life on Earth: 1) the daily, essentially circular rotation of the Earth; 2) the elliptical orbit of the Earth around the Sun; 3) the long equinoctial cycle, as first measured about 6,000, or more years ago, by a civilization inhabiting Central Asia. We are leaving out, more obviously, other important cycles, including the lunar cycle, the periodicity of the separate and combined wobbles of the geodetic and geomagnetic poles, and the implications of the solar-sidereal years. The three interacting cycles chosen, suffice to make the relevant point. Bruce Director et al., have supplied the accompanying, requested diagrams [Figure 3].

Imagine you are located at some fixed geographic point on Earth, from which you observe part of the daily east-to-west movement of the observed Sun: an apparently circular orbit. With no more than similar means, ancient cultures, including Classical Greeks, discovered the orbit of the Earth about the Sun, long before the existence of the celebrated hoaxster, Claudius Ptolemy, and estimated, however crudely, the distance from Earth to Sun, and Earth to Moon. Kepler showed that these solar orbits of the planets are elliptical, and introduced elliptical harmonics into astrophysics. In other words, while you, as the conjectured observer, are observing the apparent motion of the Sun, the place on which you stand is being moved. Among the other movements of that place, we have the annual, elliptical orbit of the Sun, and the long equinoctial cycle. Each second—or one-millionth of a second—you might record an apparent movement of the Sun, the place from which you observe is being moved by a knowable amount. That place is being moved along the Earth’s elliptical orbit; it is also being moved in the manner corresponding to the equinoctial cycle [Figure 3]. This, by the way, a kind of introduction to the subject of “modular” or “hypergeomet-

39. For this reason most of the ecological models, including weather modeling, currently used simply do not work; they ignore, flagrantly, the well-known fact of astrophysical determinants in the Earth’s climate.

TABLE 1

### Mean angular change of three astronomical cycles of rotation

Cycle	Total period (years)	Mean angular change per microsecond (seconds of arc)
Earth’s daily rotation	0.0027	$1.5 \times 10^{15}$
Earth’s yearly orbit of Sun	1	$4.10675 \times 10^{18}$
Equinoctial	26,000	$1.57952 \times 10^{12}$

ric” functions.<sup>40</sup>

In all cases, we are not directly observing the actual distance of the observed motion; we are observing an angular change in relative position. Hence, the crucial role of the “area” rule, and the correlation with rate of change of observed angular motion within an orbital trajectory, in Kepler’s founding of astrophysics. See Table 1, for the mean angular change in the three cycles (Earth rotation, Earth orbit of the Sun, and equinoctial) during one-millionth of a second of observation. We might add the much longer astrophysical cycle which determines the pulsation of “ice ages.” Compare the detail in Figure 3 with the data in Table 1. What might appear to be eminently ignorable small effects, are reflections of longer-term cycles which, in the longer term, determine the astrophysical “history” of life on our planet. As Riemann warned, in his habilitation dissertation, there is no good reason for tolerating the fiction of assumed linearity in the infinitesimally small—or, the astrophysically large.

Indeed, the essence of modern physical science, has become the challenge of measuring ever new types of occurrence of those kinds of infinitesimally small differences which, in the longer term, determine crucial changes of state in processes observable on the “macro” scale. The work of Gauss’s collaborator, Wilhelm Weber, in addressing the experimental proof of, and measuring the role of a “longitudinal force”—neglected by Clerk Maxwell—in Ampère-Weber electrodynamics, is representative of the kind of challenge posed.<sup>41</sup>

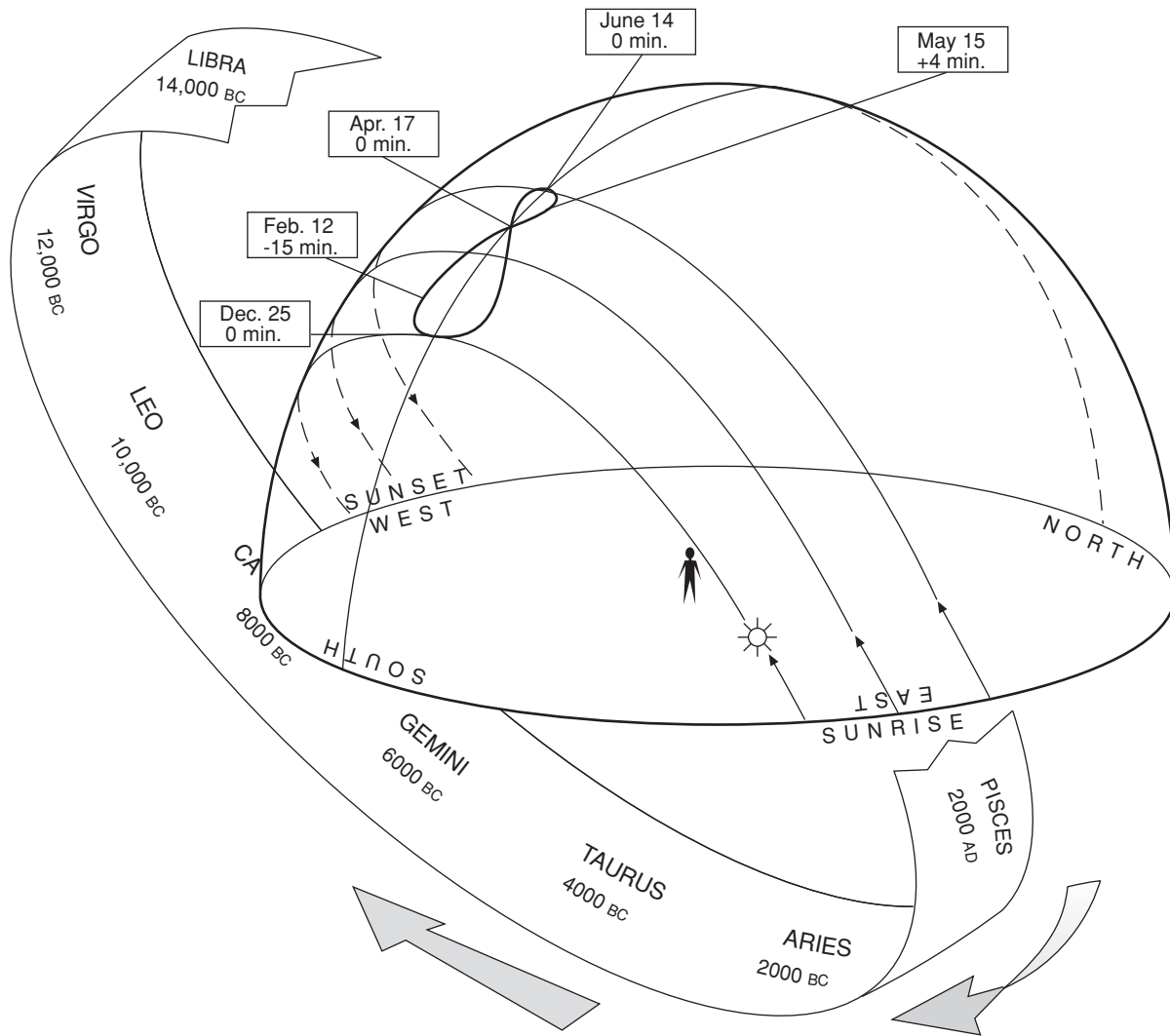
In other words, it is a commonplace of study of our universe, that very long cycles provide a confining “envelope,”

40. Since Kepler, and Leibniz, the interaction of cycles forms a new, higher branch of geometry. The combining of studies of trajectories consistent with conic sections, with the implications of Leonardo da Vinci’s discovery of the relationship between the catenary and caustic, defined the starting-point for Leibniz’s contributions to the founding of a general theory of hypergeometric functions. The generation of non-constant curvatures, extended into the infinitesimally small, has been the characteristic line of irreconcilable division between the geometers and algebraists in mathematics, from the time of Leibniz, to the present day.

41. Laurence Hecht, “The Significance of the 1845 Gauss-Weber Correspondence,” *21st Century Science & Technology*, Fall 1996.

FIGURE 3a

### The apparent motion of the Sun, relative to an observer on Earth



This diagram shows the sky and horizon visible to an observer in the Earth's Northern Hemisphere. The apparent path of the Sun reflects three astrophysical cycles, each with its own curvature (actually, there are many more, but we limit ourselves here to three):

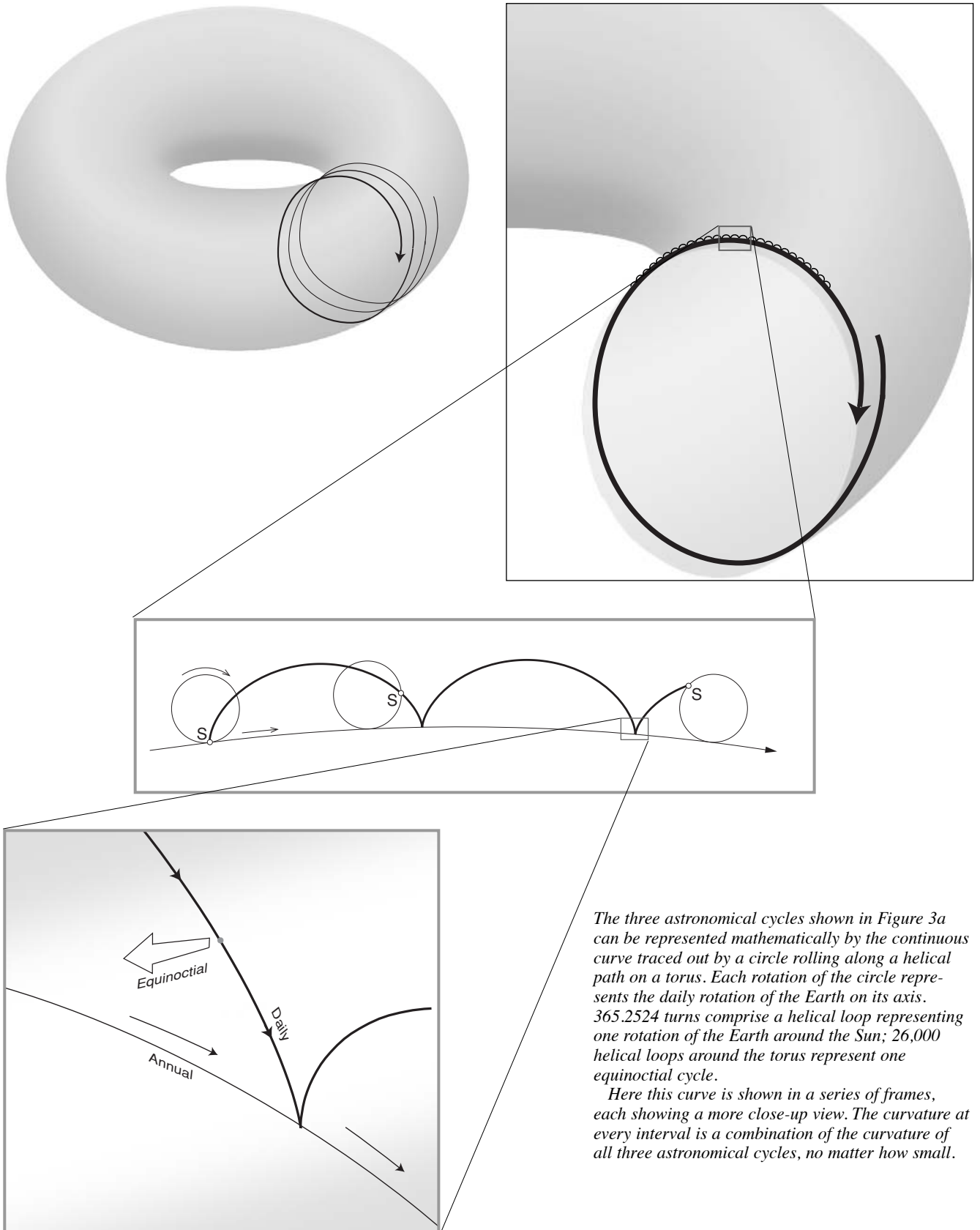
1. The daily, approximately circular rotation of the Earth on its axis. The observer sees this as the Sun rising in the east, traversing an arc in the sky, and setting in the west.

2. The annual elliptical orbit of the Earth around the Sun. This is reflected in the observed change in position from day to day, of the position of the rising and setting Sun and the arc between them. Over a year's time, an observer sees the Sun travelling low in the sky at the winter solstice (the southernmost of the three daily paths depicted here), climbing each day higher, through the vernal equinox, and reaching its highest point at the summer solstice (the northernmost of the three paths), then descending again, day by day, to the autumnal equinox, and back down again to the winter solstice. These seasonal changes reflect the fact that the Earth's axis is tilted 23.5°. The figure 8 (or "analemma"), drawn here on the meridian (noon) line, is a reflection of the ellipticity of the orbit, among other factors. It shows the displacement of the Sun from the actual meridian on a given day at noon, standard time (adjusted for one's position in the time zone). The fact that the Sun is sometimes ahead of the clock, and sometimes behind, in reaching the sky's mid-point (as much as 15 minutes either way), reflects the fact that the Earth travels faster, in its elliptical orbit, when it is closer to the Sun.

3. The equinoctial cycle, or "precession of the equinoxes," is reflected in the observed change in the constellation in which the Sun appears to rise. This is shown here by the apparent rotation of the band of zodiacal constellations. (Currently, the Sun is rising against the background of the constellation Pisces). As the Earth rotates on its axis, the orientation of the axis itself rotates, in a cycle of about 26,000 years. Thus, the North Pole Star is now Polaris, but about 13,000 years ago, it was Vega.

FIGURE 3b

### Curvature of the astronomical cycles 'in the small'



The three astronomical cycles shown in Figure 3a can be represented mathematically by the continuous curve traced out by a circle rolling along a helical path on a torus. Each rotation of the circle represents the daily rotation of the Earth on its axis. 365.2524 turns comprise a helical loop representing one rotation of the Earth around the Sun; 26,000 helical loops around the torus represent one equinoctial cycle.

Here this curve is shown in a series of frames, each showing a more close-up view. The curvature at every interval is a combination of the curvature of all three astronomical cycles, no matter how small.

FIGURE 3c

**Three-way curvature of the 'typical collapse function'**

When the three curves of Figure 1 are plotted on one three-dimensional axis, a curve is generated which combines the curvature of all three. As in the case of the astronomical cycles, the combination of all three curvatures is present in every interval, no matter how small.

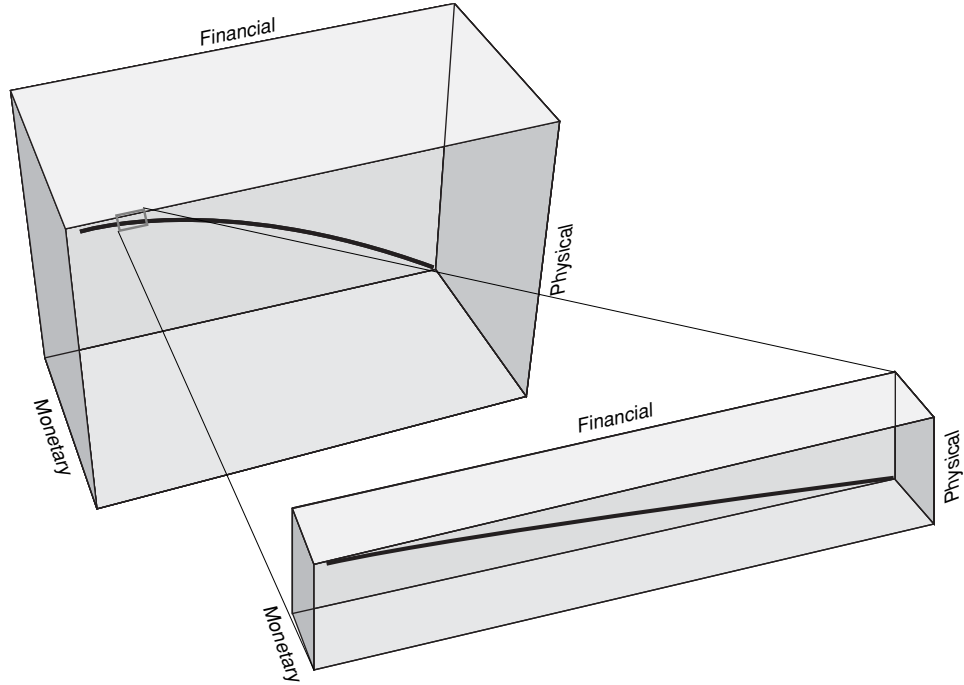
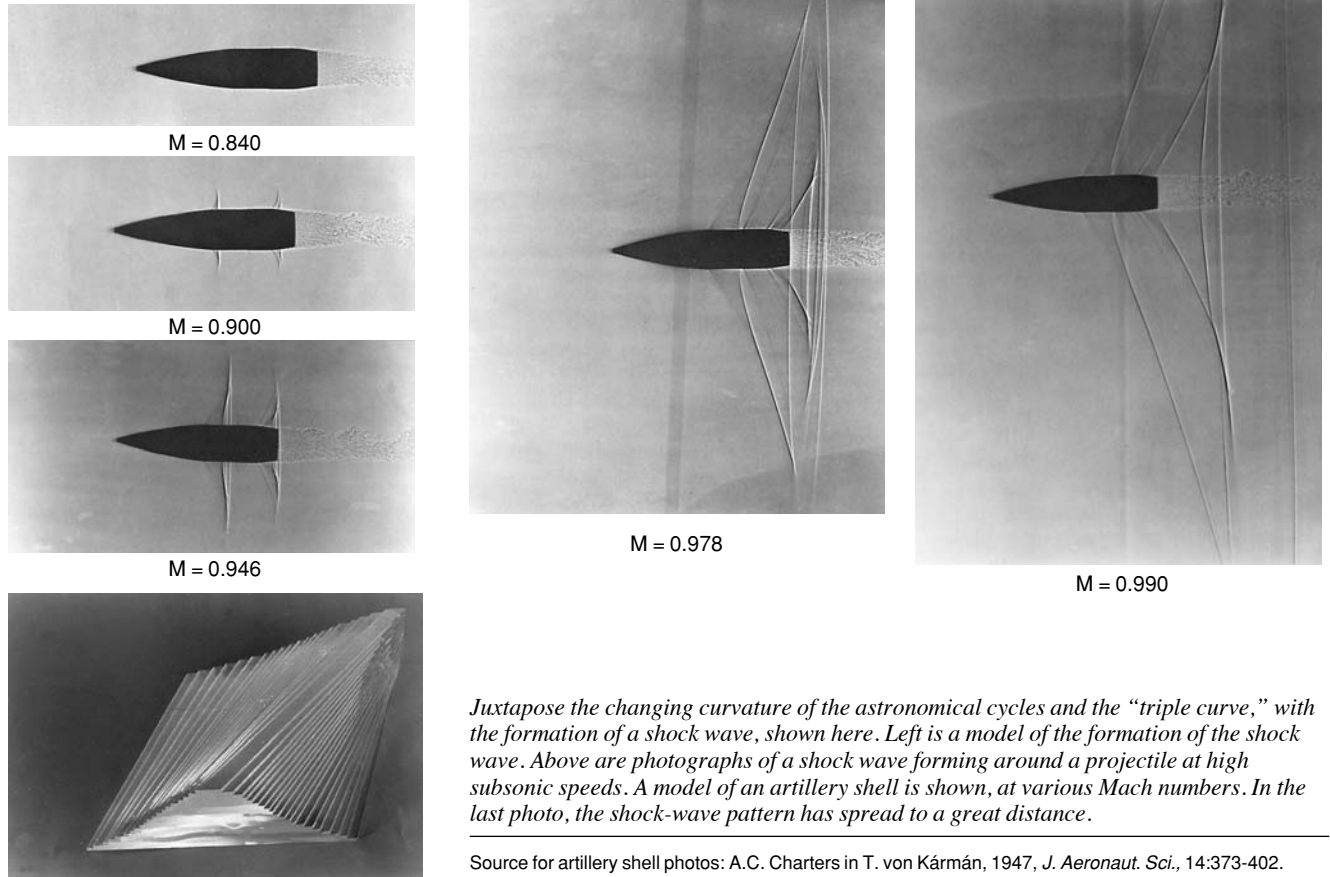


FIGURE 3d

**The formation of a shock wave**



*Juxtapose the changing curvature of the astronomical cycles and the "triple curve," with the formation of a shock wave, shown here. Left is a model of the formation of the shock wave. Above are photographs of a shock wave forming around a projectile at high subsonic speeds. A model of an artillery shell is shown, at various Mach numbers. In the last photo, the shock-wave pattern has spread to a great distance.*

Source for artillery shell photos: A.C. Charters in T. von Kármán, 1947, *J. Aeronaut. Sci.*, 14:373-402.

which determines the allowed characteristic ordering of the relatively shorter ones. However, although the momentary effect of the longer cycle upon the shorter, may appear, deceptively, to be so marginally infinitesimal as to be ignorable for all practical intents, it is the enveloping cycle which determines the ordering of the other.

As a consequence of such configurations, the process combining these cycles, will reflect the existence of a non-constant curvature in the very small interval of action, which is characteristic of the interrelations among all of the relevant cycles. Thus, by adducing this tell-tale specificity of non-constant curvature, as in the extremely small, we are enabled to identify the curvature of the larger process in its totality. This was crucial in the method selected by Gauss for his successful adducing of the orbit of Ceres. This was already the astrophysical method developed by Kepler.

This is key to understanding the blunder of Newton's astrophysics. Although Newton derived his "law of gravitation" from nothing but an algebraic manipulation of the same "Kepler's three laws" by means of which Kepler had already defined universal gravitation in his *New Astronomy*, Newton's plagiarism of Kepler in this way resulted in a "three body paradox" for Newton, where no such problem arises in Kepler's approach. The fuller comprehension of this matter waited until the successive work on development of modular functions by Leibniz, Gauss, and Riemann. Already, Leibniz showed, through his emphasis on non-constant curvatures, that the Newtonians' reliance upon blind faith in linearity in the very small, is key for understanding the bankruptcy of Newton's system as a whole.<sup>42</sup> For our purposes here, it may be fairly said, that the relationships among longer and shorter cycles, as reflected by non-constant curvature in the very small, are the key to solving the conceptual and related practical problems.

Look at the development of human culture from the vantage-point of the determining, subsuming role of very long cycles. In dealing with human cognition, we are addressing something which has probably existed for less than two millions years, not the tens of millions to billions of years associated with long astrophysical cycles. Nonetheless, there is a relevant comparability. Look at this aspect of the matter from the vantage-point of nests of successive Riemann manifolds.

In human existence, it is the principle of cognition, the characteristic distinction of man from beast, which determines a long cycle in human existence as a whole. Cognition, itself anti-entropic in character, introduces an anti-entropic ordering-principle into the marginal directedness of the nature with which man is interacting. Situate this within Riemann's notion of manifolds. *It is the family of anti-entropic "curvatures" expressed within Step Two of the four-step process of cognition, which provides the long-wave characteristic of mankind's successful relationship to the universe as*

42. E.g., the "Monadology," and "The Controversy between Leibniz and Clarke," Loemker, op. cit., pp. 643-653, 675-721.

*a whole.*

In Riemannian higher geometry, no axioms are self-evident. Even space and time must have an experimental basis. That is, each "dimensionality" of the manifold must be a necessary principle whose efficient existence, as a principle, has been validated by crucial experiment. In that sense, presumably "self-evident" notions of "space" and "time" are replaced by functionally grounded notions of "relative space" and "relative time."<sup>43</sup> Each new such principle (e.g., "dimensionality") added to the repertoire, through experimental validation, overturns the previously established manifold of scientific practice, and produces a new, improved manifold. In the sense that scientific progress is ordered, we speak of a series of manifolds of the order . . . , n, (n+1), (n+2), . . . . The effect is related to that of adding newly discovered astrophysical cycles to our calculations. The effect is to increase man's per-capita power of action in the universe, that anti-entropically.

It is such orderable successions of manifolds, which correspond to a process of increase of relative "anti-entropy." This is the source of relative increase in physical-economic profitability of economies considered as indivisible wholes. As we noted in connection with the illustrations supplied in Figure 3, although the infinitesimal effect of an added element of non-constant curvature may appear to the careless person to be contemptibly small, it is the cumulative effect of such marginal changes which is ultimately decisive.

In economics, it is the same. In what used to be thought of as "business cycles," the fault in the economic system already existed as an axiomatic feature of the process from the start of the "boom-bust" cycle; it was as the cumulative effect of the faulty feature became relatively large, that the down-side of the cycle became apparent. Return to Table 1 above. In this case, the doom of the system was also embedded from the start, 1964-1972, in the intent to shift away from emphasis on investment in scientific and technological progress, toward a neo-Malthusian utopia of a form which was termed variously a "post-industrial society," an "information society," a "cybernation society," or a "technetronic society."

This latter, 1964-1972 "cultural paradigm-shift," is the most crucial, "long wave" feature of the present global catastrophe. It changed radically the working conceptions of man, nature, and the relationship between the two, at least among the politically, culturally hegemonic strata of the 1964-1972 university-student populations. As these students graduated, to begin their generation's long upward march through the institutions, this cultural paradigm-shift determined, more and more, the kinds of decisions which society would make in response to stimulus. Under that influence, each decision was almost invariably wrong, and, as time passed, the quality of those wrong-headed decisions became progressively worse. So, now we have the systemic crisis which was already inevitable from the beginning, unless we reversed that cul-

43. See Lyndon H. LaRouche, Jr., "The Essential Role of 'Time-Reversal' in Mathematical Economics," op. cit.

tural paradigm-shift associated with the 1964-1972 student youth-counterculture.

Thus, the policy question — “To be, or not to be” — before us, is not, “Which policy shall we choose?” The question is, “What new cultural paradigm-shift shall we choose, to reverse that 1964-1972 paradigm-shift which had done us in?” The answer is: “We must make a revolution!” The question is, then: “Which revolution?” This is the context in which the matter of higher truthfulness confronts us. Smashing shop-windows, fire-hydrants, or household furnishings, is not what we should take the word “revolution” to signify. We should think first, instead, of uprooting from within ourselves, certain popularized, virtually axiomatic assumptions which presently color, for the worse, every policy-decision made; we must purge the old manifold of those axiomatic errors. Then, we should think of the new axioms, which take us to a higher-order manifold.

## A new Renaissance

Modern European civilization was proximately the product of western Christian civilization’s long struggle for a form of society cohering with the notion that all persons are made equally in the image of God, a likeness located within the developable powers of cognition whose activity is conveniently typified by valid discoveries of the physical principles underlying scientific and technological progress in the human condition. The near-realization of this goal, appeared, as an outgrowth of the 1439-1440 sessions of the Council of Florence, during Europe’s Fifteenth Century, in the first steps toward a modern nation-state and matching national economy, beginning with a France reconstituted under King Louis XI. This has proven to have been the highest state of mankind in general, heretofore existing on this planet.

However, a flaw developed. The feudal and pro-feudalist classes, chiefly the landed aristocracy and financier oligarchy then centered in Venice, naturally resisted the overthrow of their feudal system, one based in the twin evils of serfdom and “globalism,” by the new nation-state institution. Unfortunately, the treachery leading to the break-up of the crucial alliance against Venice, the League of Cambrai, postponed the unification of Italy until the Nineteenth Century, and allowed the threatened feudal classes to hold onto much of their former power. Today, although landed aristocracy mostly disappeared with the other rubbish hauled out after World War I, the other feudal power, a globalist financier oligarchy, centered in London, continues to squat like a succubus upon national economies, more or less dominating them. There is the deeper problem of modern European civilization. It is the subordination of the physical economy of the modern national economy to the usurious parasite, financier oligarchism, which has been the potentially fatal flaw in the modern state since the dissolution of the League of Cambrai.

The mid-1960s were the occasion for the eruption of a new affliction, the referenced cultural paradigm-shift, a shift largely designed by, and fostered by the financier-parasite

class, the financier oligarchy. This cultural paradigm-shift is the fatal element in the present crisis. However, the solution to the predicament this crisis creates, depends upon establishing submission of the financier-oligarchical interest to the hegemony of the republican form of modern nation-state and modern national-economy, both latter as President Abraham Lincoln would have endorsed this view.

Of this financier-oligarchical class, one is reminded of a public utterance of the late Senator Hayakawa on the subject of the Panama Canal: “It’s ours! We stole it fair and square!” So, although most of the claims of the world financier-class today, are in fact worthless, they are inclined to be passionate about defending their claims to “My money!” It comes to whether the financier-speculators will take their losses “like men,” or whether civilization itself shall survive.

This brings us to a matter of principles. Not programs, but new axiomatic principles, to replace the axiomatic assumptions which have controlled policy-shaping during the recent thirty-odd years. What we must have first, is not a great panoply of blended facts and programs. What we must have first, is a bit of the higher truthfulness which governs the transition from old to better manifolds. We require the adoption of a new array of principles, by means of which we shall compose, select, and guide the implementation of the policies and programs to get us out of the present mess.

The principles required are generally the following three.

1. **General principle:** *We must return to proven principles adducible from the successful practices of the 1946-1959 phase of global economic reconstruction under the initial terms of the Bretton Woods system, viewing this as a system which functioned as a mode of revival of the world’s economy from the combined devastating effects of the 1930s world economic depression, and the 1939-1945 global warfare.* This means abandoning all of the cultural paradigm-shift affecting economy, which has been introduced during the recent thirty-odd years.

Call this a principle of historicity: “Don’t fix what ain’t broke!” The American System of political-economy, as freshly defined by the success of the Lincoln-Carey model of 1861-1876, is the best system ever yet devised, and that by a great margin of advantage. Don’t throw away millennia of developments embodied in the historical foundations for the development of that “model.” Minimize the risk of unnecessary innovation: Use those relevant precedents in international cooperation which were successful under conditions approximating those of today.

So, in general, we must return to the best features of the pre-1966 international economy, including the form of Bretton Woods agreements generally in force during the 1950s. This must be done through substitution of newly created national banks to replace insolvent central banks, that will work. This means limited convertibility of currencies, combined with foreign-exchange controls. It means related capital-movement controls. It means currencies pegged to relatively fixed parities, and a system of finance and monetary relations



which defies markets engaged in financial speculation against currency and financial assets of protected nations. It means a sudden end to “globalization,” and a return to the American protectionist model of increase of the productive powers of labor through investments directed to fostering investment in scientific and technological progress.

2. *This requires eliminating the 1964-1972 cultural paradigm-shift*, returning to the “American System” conception of sovereign nation-state republic and national economy, as understood and practiced by Alexander Hamilton and President Abraham Lincoln, as practiced by President Franklin Roosevelt. This requires, as Presidents Franklin Roosevelt and Kennedy might wish to warn us, that we take on, and strictly regulate the Hobbesian egoism of “Wall Street” and similar factions around the world. This also requires an abandonment of “cultural relativism,” in favor of a return to the principle that truth and justice have common qualities of application for all persons, since all human beings have identical natures, regardless of differences in “ethnic” or cultural backgrounds.

3. *Apart from that which must be purged, or restored, there is the matter of that which is new, that urgent reform which must be added as a needed precondition for successful policy-shaping.* Let us term this “educational policy.”

This is the area of concern on which we have implicitly focussed attention here. The brutish misconception of the nature of the human individual, and of mankind’s relation to nature, which has hitherto prevailed, whether in feudal society, in so-called “capitalist” states, or so-called “socialist” states, has a quality which varies only from bad to worse, both in today’s economics textbooks and in related, recent notions of policy-shaping among governments. This defect is functionally related to absurd theories of profit, or, in the case of the writings of Karl Marx and his students, “theories of surplus value.” Whence does the “more” come?

As we have indicated here, the clearest evidence of what a society thinks of the nature and value of any person, is revealed by the way in which it educates the relatively “most disadvantaged” strata of the population. Does it educate in ways which foster the development of those kinds of cognitive potentials which are the source of all valid discoveries of physical principle? If the society does not do that, then it is dehumanizing those strata of the population, and is expressing doubt about its belief in the actual humanity of any part of its total population.

View the matter in the following way. Begin where each new adult generation must begin, with education and related nurture.

In a competent education, the pupils relive a carefully prepared selection of crucial original discoveries of principle from the past. This reaches as far back as history, and a bit longer. To understand anything at all about modern European branches of culture, one must emphasize Classical Greece and its historical and prehistorical situation. They relive the

act of original discovery of each of these ideas, in a certain succession, a succession which reflects the way in which a preceding array of known discoveries of principle create the preconditions for the addition of each new discovery. This education, up through secondary years, includes mathematics and physical science, history and geography, and Classical art-forms. Nothing else is essential.

What we have produced among such pupils, by such methods, is a “world-historical individual,” one who consciously embodies the reliving of crucial moments of discovery of ideas of principle, of many societies up to his, or her time. Many of these discoverers that pupil knows by name, has even relived the most intimate moments of their living thought, in reliving the relevant discoveries, and knows something of the circumstances of the society in which each discoverer worked and lived. The pupil embodies a significant essential portion of the history of ideas. The imagined faces of those discoverers haunt that pupil, faces which form an essential part of the pupil’s moral sense. The pupil thinks, “What should I become?,” and imagines the faces of the unborn, smiling or frowning upon the work that pupil will have done before he dies, as part of his vocation. Thus, the past, the present, and the future live within that pupil. He does not come into life, and depart as animals do; he is a living extension of the past, and of the future.

The pupil has an additional quality: by reliving many acts of validated original discovery, that pupil has learned to create, as valid discoveries of principle were created by the great discoverers earlier. This pupil can do what the culture so acquired equips the pupil to do, and a bit more.

We must start by creating such matriculated pupils, such young “world-historical” personalities. We must afford them the opportunity for the kinds of employment which befit the world-historical personalities education has enabled them to become.

We must end the disgusting arrangement, in which there is a dichotomy between “working for a living” and the fulfillment of the individual self as a world-historical personality in the sense just described. To this end, the object of society must be the production of personalities of such qualities, providing them the challenge of opportunities to serve the needs of humanity in a manner consistent with the work of such a world-historical personality.

This is no hype. Look at the nearest economics textbook. Examine the relevant debates in Congress and the press. Where is there any consideration of the humanity of the individual person in those places? “How to make a profit,” one says. That man is a liar: he is studying how to grab a profit, whether or not he does anything actually to earn it. Some say, it is done through “hard work;” but, what about the quality of the product? Where is the actual human in such shaping of economic policy? Where is there any recognition of the requirements of that cognitive process, on which the survival and progress of that society depend? The very fact that one

thing consistently omitted from the economics textbooks and economic-policy debates is the subject of that cognitive process on which true profit depends, is the most revealing symptom of what went wrong in our economy, not only during the recent thirty-odd years, but also earlier.

If any reader was engaged in selecting from prospective employees for placement in industrial production, during the years of World War II or later, or skilled crafts, he, or she will recall the functionally important, often great, difference in quality between two prospective employees, each from 1930s-Depression-related, relatively deprived economic household circumstances. The difference lay in the quality of culture in that household. Classical artistic culture, together with a science-oriented intellectual life in that household, meant a superior cognitive potential over the prospect whose family rearing and personal habits were of a more banal quality of "popular culture."<sup>44</sup>

How could destitute populations have risen to the challenge of progress? We find the answer not only in what the Classical Greek tradition established as modern European Classical culture, but also in those, relatively less developed forms of artistic expression which tended toward the same result, as Haydn, Beethoven, Brahms, and Dvořák pioneered in treating the folk-song, including the American Negro Spiritual, from this standpoint. Get free of the concept-free orgies of pornography and senseless violence which dominate Hollywood's and the rock stage today; get back to Classical conceptions of drama, poetry, music, and plastic arts, which we of European culture trace chiefly to origins in Classical Greece, and the impact of the Fifteenth-Century, Florence-centered European Renaissance. It is the development of the cognitive qualities of the individual personality, not merely the education of the formal powers of the intellect, but also the civilization of the passions, which produces a high quality of individual human being.

Today, if we are to uplift the increasing ration of our own population which are driven to, or over the verge of bestiality, by recent cultural trends, and if we are to hold out for realization of the economic and other human potential of the great masses of people in the "disadvantaged" regions of this world, it is the quality of development of the cognitive, and moral qualities of the individual, which is key to transforming peo-

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44. There have been relatively few cases of encounter with a truly productive scientist who was not more than casually involved in Classical musical culture, and, also, tended toward other expressions of Classical art. Anyone who has done actually creative scientific work, as described by the four-step process referenced here, has often relied upon Classical musical compositions of such as Bach, Mozart, Haydn, Beethoven, Schubert, Mendelssohn, Schumann, Brahms, et al., to bring one mind's into the order required for entering into the "Step Two" phase of the process of discovery. All persons are equally endowed, by their nature, with a developable creative potential for replicating and originating such discoveries, but those who have a Classical artistic education are, with few exceptions, far more gifted than those who have been steeped in "popular entertainments," instead.

ple from the relative depths of impoverishment, into a highly productive labor-force.

We must rid the nation of that Moloch of legendary Wall Street, which grinds up people, their health-care, and their pensions, all for the sake of a profit which Wall Street claims as its lawful prey, but never actually earned. We must end the delusion that growth is fostered by nothing so much as buying cheap and selling dear. We must insist on the quality of education, of economic determinants of family life, and productive employment opportunities, which are consistent with the kind of individual personality to whom we wish to bequeath our nation and future humanity as a whole. Only if we can mobilize the imagination of the best strata of citizens around this third, human requirement of our three-point policy, are we likely to succeed. This is no mere sentiment; it is a crucial hard fact to be faced.

We must bring to an end, the presently prevailing nightmare, of a pursuit of momentary pleasure which produces no happiness. We must steer the nation, and world, into the kind of economic development which offers each individual person, in our U.S.A., and throughout this planet, the possibility of that meaningful, and therefore happy life, of a person who knows that he or she is both a "world-historical" personality, and is happily acting so. That is something which inspired people will work hard to make come true.

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