

A LAWLESS U.S.A. TODAY

Faith, Hope, And Agapē!

by Lyndon H. LaRouche, Jr.¹

The following campaign statement was issued by 2004 Presidential pre-candidate LaRouche on May 13, 2001.

For the moment, a horrid decadence grips the capital of the U.S.A. The recently inaugurated President George W. Bush, Jr.'s cronies have swept, like a pack of carpetbaggers, into occupation of the nation's capital, sometimes seeming not to know, whether they came to rule a nation, or simply to pillage it. The new Attorney General John Ashcroft, has postponed, only temporarily, his previously scheduled, pay-per-view, live snuff entertainment. Under the influence of the present, corrupt majority of the U.S. Supreme Court, no ruling principle of Federal law worthy of that name, may be relied upon in any domain of our nation's Federal practice. An increasingly lawless, Nietzschean blend of maliciousness, cupidity, and general capriciousness, dominates the behavior of the Federal government's Executive branch.

Under the past hundred-odd days of that new government, our nation has been pushed, as if by decree of a reborn Roman Emperor Caligula, folly by folly, nearer to the brink of what could become some of those wars that that administration has been working to promote, if not to fight, in the Middle East and elsewhere. Its attempts to control U.S. and world politics, through its style of crisis-management, could cause the world at large to stumble, unwitting, into an early, planet-wide new dark age for all humanity. Such are among the early effects to be feared, unless this present trend of the new Bush Administration is reversed. As Will Shakespeare might have written of this administration, "There is a fey look about its eyes."

Such is the horror which the recent trend in the Bush Administration has come to represent, in the view of leading observers watching these developments from

1. The author has been an active political figure of the Democratic Party for more than two decades, and is a candidate for the 2004 U.S. Presidential nomination.



Lyndon LaRouche and his wife, Helga Zepp-LaRouche, with civil rights heroine Amelia Boynton Robinson (right), at a conference of the Schiller Institute in February 1994, shortly after Mr. LaRouche's release from prison, where he had been incarcerated as a political prisoner for five years.

high places in the world at large.

From this awful blend of cupidity, stupidity, arrogance, and incompetence, nothing could save the U.S.A., except its return to those underlying principles of upon which our sovereign constitutional republic's existence was originally premised. What, then, shall we identify as those principles of law? What is, really, that constitutional principle of the general welfare, on which the renewal and durability of our republic's constitutional freedoms depends?

The 'General Welfare' Principle

During the Fifteenth-Century European Renaissance, that principle of the general welfare, which is also known, in the Christian tradition, by the name of the common good, was belatedly established, not only as a principle of sovereign national government. It also provides the basis for what John Quincy Adams, then U.S. Secretary of State, named a community of principle among such sovereign states.

Thus, during the Renaissance, for the first time in all known human existence, came the establishment of the efficient form of a new principle of government, the principle known variously as the common good or *general welfare*. The establishment of this principle of the state, as proposed by Nicholas of Cusa's *Concordantia Catholica*, and as typified by both the martyrdom of Jeanne d'Arc and the reforms enacted by France's Louis XI and England's Henry VII, implicitly denied the right of any national, or international oligarchy to hold the majority of the population as a whole in

the condition of virtual human cattle.²

This Renaissance thus threatened to bring to an end, what the combination of the Plantagenet house of Anjou and the ruling, imperial maritime power of that time, Venice, had done, over the interval from the accession of England's Henry II, through the overthrow of Richard III.

Under that principle of international law concerning the common good, no government has a durable claim to the moral authority to govern, except as it is efficiently dedicated to promoting the general welfare of all of its population and their posterity. No longer could a people, or any large portion of it, claim the rightful authority to govern, either as an imperial or national authority, if it, as the Bush Administration has done so far, placed the special privileges and capricious desires of a ruling faction in government above the defense of the general welfare of all the living and their posterity, and above the obligation to uphold the perfect sovereignty of all nation-states which are dedicated in principle to promotion

2. Europe's long struggle to establish the equivalent of a sovereign nation-state based upon the principle of the common good, is documented in Helga Zepp-LaRouche's May 6, 2001 Bad Schwalbach address on this subject (to be published in the Summer 2001 issue of *Fidelio* magazine). Helga Zepp-LaRouche there reviewed the pre-Fifteenth-Century efforts in this direction, as previously covered by historian Friedrich Freiherr von der Heydte (*Die Geburtsstunde des souveränen Staates* [Regensburg, Germany: Druck und Verlag Josef Habbel, 1952]), and situated the first launching of such a nation-state, in Louis XI's France, under the impetus supplied by the Council of Florence and Nicholas of Cusa's *Concordantia Catholica* and other works.



The principle of the general welfare, upheld by the framers of our Declaration of Independence and the Preamble of our Constitution, defined the newly created United States of America as exceptional among the nations of its time, and later.

of the general welfare.

Even after the great ecumenical Council of Florence, and after the ensuing reforms of Louis XI and Henry VII, the following three centuries of globally extended European civilization, were dominated by a great and awful struggle between the reactionary forces of feudalism, on the one side, and the emergence of the modern state, on the other. This was a struggle marked by such bloodshed as the religious wars which dominated European history during the interval 1511-1648. Yet, it is also the continuing struggle between the sovereign nation-state and the peril of the new imperialism, called "globalization," which grips the world as a whole still today.

In a medley of hope and despair, that typified by the religious wars of 1511-1648, the greatest Europeans looked, more and more, to the colonies in the Americas, to found what was intended to become a republican precedent for European civilization as a whole. So, in the course of time, the U.S.A. of 1776-1789 emerged as that model republic, created by the concerted influence of the noblest intellects of Europe, and intended to serve as the stepping-stone to a system of sovereign republics which would free mankind from the depravity of both feudalism, and also of most of the still earlier forms of society.

This was expressed in the principle of the general welfare, upheld by the framers of our 1776 U.S. Declaration of Independence, and the Preamble of our Federal Constitution. It is that principle, and that alone, which defined the newly created United States of America as exceptional among the nations of its time, and later.

This is the principle upheld by President Franklin Roosevelt, and defied repeatedly by the current majority of the U.S. Supreme Court. It is the principle which has been violated in the extreme, in both its stated intent and practice, up to this time, by both the present majority of the U.S. Supreme Court, and by that Court's creation, the present Bush Administration. It is the principle on whose defense the continued existence of our presently imperilled republic depends absolutely.

The need to quickly reestablish that principle of the general welfare, is an urgent need, not only on moral grounds, but also even crassly practical political ones. However, such a rejuvenation of our decadent nation were not possible, unless that fundamental principle of our constitutional law were an intention written once again in the hearts of present generations and their posterity. It is, therefore, of the utmost urgency, for you and our nation, that I write on that subject as I do here.

My Presidential Candidacy

The principal topic of this present statement, is the subject of that principle of law which I, as a prospective candidate for 2004 election as President, understand as that intention of our Federal Constitution to which I am committed to return our republic's practice. This is a fight which can not, however, be postponed until the so-called "hot phase" of the year 2004 election-campaign; our nation will not reach 2004 unless we now introduce certain sweeping reforms, reestablishing the principle of the general welfare in our practice, thus reversing our nation's policy-shaping trends of the recent three decades.

Under the present circumstances, it is of the utmost ur-

gency, that we indicate and discuss the evidence pointing to the practical urgency of the related changes in policy which I propose be made. If our nation is to be saved, these changes must be made, not in January 2005, but right now, as quickly as possible. Procrastination on this issue could be quickly disastrous. It is urgent that I act now as a leader of a great new movement among our people and our institutions, a movement to serve as a keystone among political forces brought together for the common purpose of bringing our nation back to its true self, back to its founding principle, the promotion of the general welfare, and do that during the precious short interval of opportunity left to us.

At this moment, the U.S.A., and the rest of the world besides, is gripped by the presently accelerating, chain-reaction effects of the greatest, planet-wide financial collapse in all human existence.³ Practical solutions for this crisis exist. The greatest danger for the U.S.A., and for mankind generally, is the possibility that such practical solutions, such as those which I have presented repeatedly to relevant international, and other audiences, might be either rejected, or postponed to a slightly more distant, early date when the catastrophe now in progress becomes virtually irreversible.

First and foremost, as I have detailed this repeatedly, in writings circulated to relevant circles world-wide, the financial crisis itself could be halted by a return to the kind of general, immediate, sweeping reforms of the world's monetary and trade systems which were installed at the close of World War II. Those are the beneficial changes, associated with the leadership of President Franklin D. Roosevelt, which continued more or less in effect until those successive, disastrous changes in trends within the world system, which were introduced by President Nixon in 1971, and were greatly accelerated under the disastrous, 1977-1981 U.S. Carter Administration.

I have proposed two global actions to be taken immediately, which could immediately halt the process of collapse, and begin to reverse the trends.

The first, is the emergency action by a group of sovereign nations, to put the presently bankrupt world financial system into forced bankruptcy reorganization, returning the system to the proven principles of the 1945-1963 experiences of policy-shaping under the old Bretton Woods System.⁴ Without such

measures, the situation for existing generations of humanity as a whole, would become quickly more or less a hopeless one.

The second global action required, is the launching of a long-term, global development perspective, centered upon what I have defined as a Eurasian Land-Bridge perspective, which would serve as a science-and-technology driver for the revival and growing prosperity of the world's economy. By world as a whole, I emphasize, as I did in my recent address in Bad Schwalbach, Germany, that without a Eurasian economic revival, the practical means for delivering long-overdue justice to Africa, particularly sub-Sahara Africa, were virtually impossible for any time during several generations yet to come.⁵

The third action required, especially inside the U.S. itself, is the coupling of those two, aforesaid emergency actions, to a mobilization of the U.S. citizenry around issues of the general welfare typified by the present, increasingly hyperinflationary energy crisis,⁶ and against the destruction of the health-care system through actions such as predatory speculators' efforts to close down the only full-service, public general hospital serving the people of, and visitors to our nation's capital.⁷ It is popular recognition of the inseparable connections between those presently typical global and local issues, which is the only visible means for arousing the citizenry of the U.S.A. to look back to the achievements of the President Franklin Roosevelt Administration, in pulling the U.S.A. up and out from the great depression unleashed by the errant policies of the earlier Coolidge Administration.

The farcical duplicity of the Bush Administration's current energy policy, is but one relevant example of the silliness

Among the endorsers were three former heads of state: José López Portillo, former President of Mexico; Gen. João Baptista de Oliveira Figueiredo (ret.), former President of Brazil; and Godfrey Binaisa, former President of Uganda. On April 7, 2000, the Schiller Institute released a call to form an Ad Hoc Committee for a New Bretton Woods. That call incorporated the text of a resolution, introduced on March 16, 2000, on the floor of the European Parliament by 23 Italian Senators, calling for a New Bretton Woods conference, along lines advocated by LaRouche. Among the many prominent signatories were former Mexican President López Portillo and former U.S. Congressmen Sen. Eugene McCarthy, Rep. Clair A. Callan, Rep. Father Robert J. Cornell, Rep. Mervyn Dymally, Rep. Walter Fauntroy, and Rep. Cornelius Gallagher. On Oct. 19, 2000, twenty-five Italian Senators, one-quarter of the Senate, introduced a motion to bind their government to seek a summit to save the world from the "devastating effects" of today's speculation-driven global economic system. The Italian Senate motion was officially presented in December 2000 to the Interparliamentary Group for the Jubilee 2000.

5. See Jonathan Tennenbaum et al., *The Eurasian Land-Bridge: The 'New Silk Road'—Locomotive for Worldwide Economic Development* (Washington, D.C.: EIR News Service, Inc., January 1997). For LaRouche's discussion of the Eurasian Land-Bridge at the recent Bad Schwalbach conference of the Schiller Institute, see *EIR*, May 18, 2001.

6. See **Figure 1**.

7. See, for example, Dennis Speed et al., "Hospital Protests Are Growing: Will the Congress Act?" *EIR*, April 6, 2001; and Edward Spannaus et al., "KKK-Katie Graham Runs 'Negro Removal' in Washington," *EIR*, April 27, 2001.

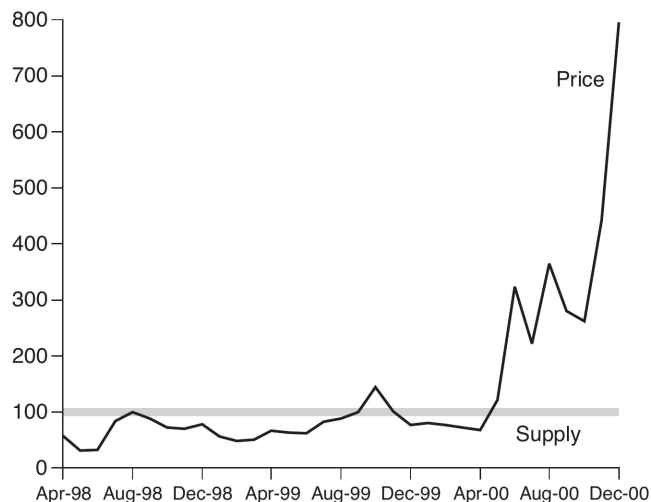
3. See, for example, Lothar Komp, "The Current Financial System Is Finished," *EIR*, May 25, 2001, speech to Bad Schwalbach conference, May 5, 2001; Richard Freeman, "Statistical Fraud Exposed: Unemployment Explosion Signals Bottom Falling Out of U.S. Economy," *EIR*, May 18, 2001; Mary Burdman, "Relentless Economic Crisis Pounds East Asia," *EIR*, May 4, 2001; Dennis Small, "'This Little Piggy Went to Market' . . .," *EIR*, April 6, 2001; and *EIR*'s ongoing coverage of the energy-price crisis in California and elsewhere, Winter and Spring 2001.

4. On Feb. 15-17, 1997, Helga Zepp-LaRouche and Ukrainian Member of Parliament Natalia Vitrenko issued an "Urgent Appeal to President Clinton to Convoke a New Bretton Woods Conference" (published, with a selection of the hundreds of prominent endorsers of the call, in *EIR*, April 18, 1997).

FIGURE 1

California Electricity Price vs. Supply

(Indexed to August 1998 = 100)

Sources: California Power Exchange, U.S. Dept. of Energy, *EIR*.

of plans rooted in the rotten intention expressed by that administration's devotion to the predatory principle called "shareholder value." However, even after eliminating such follies, it were purely idle speculation, to imagine that some paper plan, even one which were honestly well crafted, could represent, by itself, an actual remedy for the presently perilous economic situation. In real history, the course of principal developments is shaped by the relative appropriateness, or lack of appropriateness, of the *intentions* of the political and other social forces which shape both the choices of policies, and of the quality of actions taken toward their realization.

The best blueprint for economic renewal, would fail awfully, unless the population and its institutions were mustered under the governing impulse of dedication to the principle of the general welfare. A scientifically well-grounded vision of Eurasian development, for example, would not succeed unless that plan were energized in its execution by the appropriate quality of moral motivation. Without bringing into power popularly based political forces committed to the principle of the general welfare, no mere plan could avert the presently already looming threat of a planetary new dark age.

In this connection, I have earned extraordinary authority and responsibility for playing a leadership role within our nation at this time.

I have earned that authority, because I gave accurate warning consistently, over decades, of the dangers of continuing those trends in policy-shaping which have now brought our nation and the world into the present state of danger. I have earned that role by the proven accuracy of my published fore-

casts, from times when there were virtually no warning voices but my own and a relative handful of others.⁸

I have earned it by enduring that vilification and other political and related victimization, which I have shared with many among my immediate associates. I have endured this for a true and just cause. I have earned my present authority, as some would say, "the hard way." I have earned it by fighting for my fellow-citizens, even when most among them would not fight to defend their own vital interests.

During the recent Presidential election-campaign, from which I was excluded by the combined chicanery of corrupted Federal courts and the financier oligarchy which controls our nation's news and entertainment media, I was prevented from presenting myself to the public as the active candidate I was in fact. As a result of that chicanery and goonery, you have now been afflicted with the present Bush Administration, a catastrophe which could not have occurred, had I not been forcefully prevented from representing myself in the leading, relevant campaign-debates.⁹ As the facts now show, it is you who are suffering the most from that exclusion of me from the role I would have played in service of your vital interest.

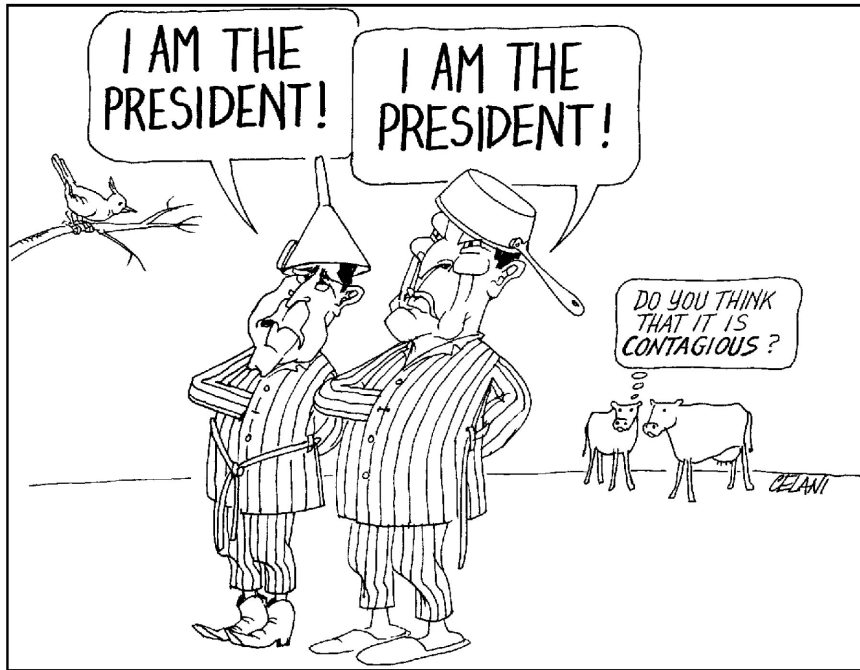
Therefore, let us speak of some necessary, abrasive truths. I was not the only reasonably qualified Presidential candidate pushed out of the campaign.¹⁰ Beginning early March 2000, all except a pair of virtual dummies were effectively excluded from the campaign, in one way or another. This exclusion was organized and maintained by the same ruling financier oligarchy which, with your toleration of this arrangement, has controlled both the nation's major news and entertainment media, and many other things.

If you recall that campaign, and compare that experience

8. See "The LaRouche Record of Economic Forecasts, Fall 1999-Election 2000," *EIR*, Feb. 9, 2001. The author's "Ninth Forecast" was published in *EIR*, June 24, 1994, under the title "The Coming Disintegration of Financial Markets." It includes a review of his previous eight forecasts.

9. The role of the Democratic National Committee, and its attorney, John C. Keeney, Jr., in nullifying the 1965 Voting Rights Act, is documented in a brief submitted to the U.S. Supreme Court by Lyndon H. LaRouche, Jr. and other plaintiffs, reprinted in *EIR*, Feb. 18, 2000. In his Aug. 16, 1999 oral argument before a three-judge panel in D.C.'s Federal District Court, Keeney stated, "... The Dissent is going to put into question the Constitutionality of the Act [the 1965 Voting Rights Act]. And that's a different question than the statutory interpretation of the act itself." The Dissent to which Keeney referred was authored by U.S. Supreme Court Justice Scalia and endorsed by Chief Justice Rehnquist and Justice Thomas in the 1996 case *Morse v. Republican Party of Virginia*, 116 S. CT.1186 (1996). See also Lyndon H. LaRouche, Jr., "U.S.A. vs. Lyndon LaRouche: 'He's a Bad Guy, But We Can't Say Why,'" *EIR*, March 10, 2000.

10. At minimum, a tolerable to good choice of President, is one who, first of all, has a guiding sense of the principled nature of the true national interest, and is to be trusted in his choice and use of his advisors. Neither Texas Governor George W. Bush, Jr., nor Vice-President Al Gore, had the moral and intellectual qualities needed to even approach that minimum standard. There were available, other actual, or prospective candidates who, beside myself, would meet, or even rise above that minimum requirement for the office.



perpetrated upon the public. This action by the leading financial oligarchy which controls our news and entertainment media, and much of the parties' financing, was disgusting, but should not be considered surprising.

It is probably necessary at this point, that I include here a few paragraphs which summarize, for the average citizen, the ways in which powerful oligarchical interests and their lackeys, inside and out of government, such as the *Washington Post's* Katharine Meyer Graham, have combined their efforts to malign and to attempt to destroy me personally, over the recent three decades.¹² What has been done against me was extraordinary, far more extensive and longer-running than against any other target of such crooked malice; but, precisely because this victimization of me is exceptional in many respects, it nonetheless shows more clearly than any

with what has happened since November 7, 2000, you know that neither of the mass media's two choices of leading candidates, said anything of any relevance on the presently onrushing world financial collapse, or any other of today's great issues of international and national concern.¹¹

For those whose memory reaches back even a dozen months, all which those candidates, and that mass media said about what the world would be like during the weeks and months after November 7, 2000, has been proven absurd by developments of the past four months. Worse, everything they, like most of the mass media, and like virtually every prominent economist, proposed to be their policy, has shown itself to be a disaster for our nation's economy and people, and for our relations with foreign nations. The evidence of this view of the present Bush Administration from around the world, is already too massive, too widely known outside the ranks of the soddenly illiterate, to require fresh documentation here.

The Washington Post Is the Issue

No one should be surprised by the fact that such a fraud as the recent Presidential election-campaign was successfully

other example, the brutally corrupt way in which our nation's ruling financial oligarchy, a real-life Orwellian "Big Brother," manages our nation's political processes as a whole.

For about thirty years, that financier oligarchy, including its associated powerful law firms, has marked me as what it considered an exceptionally capable and therefore intellectually dangerous individual opponent of its special interests. Sometimes, it has used certain elements of the government which it controlled, as, according to an admission contained in official, 1973 FBI documentation, to seek my physical elimination.¹³ It has also adopted openly stated policies of attempting to destroy me by massive campaigns of defamation through such institutions as the Wall Street-controlled *New York Times*¹⁴ and the Lazard Frères-controlled *Wash-*

for what he said was the eight years of prosperity during the Clinton-Gore Administration.

12. In an editorial commentary in the *Washington Post* on Sept. 24, 1976, entitled "NCLC: A Domestic Political Menace," Stephen Rosenfeld wrote: "We of the press should be chary of offering them print or air time. There is no reason to be too delicate about it: Every day we decide whose voices to relay. A duplicitous violence-prone group with fascist proclivities should not be presented to the public unless there is reason to present it in those terms. . . ."

13. In an FBI Airtel dated Nov. 23, 1973, the New York bureau proposes to use the Communist Party U.S.A. "for the purpose of eliminating" LaRouche.

14. On Jan. 20, 1974, the *New York Times* featured a major, lying libel against LaRouche personally, which was then widely recirculated by the FBI and other government channels. This was done in the effort to distract attention from the FBI's role in the FBI's stated intent to bring about LaRouche's "elimination" through aid of the FBI's cooperation with the leadership of the Communist Party U.S.A. In the first week of October 1979, when candidate LaRouche was beginning his first run for the Democratic

11. In the first of the televised campaign debates, on Oct. 3, 2000, journalist Jim Lehrer asked both candidates: "There could be a crisis, for instance, in the financial area. The stock market could take a tumble. There could be a failure of a major financial institution. What is your general attitude toward government intervention in such events?" Bush replied that he would "get in touch with the Federal Reserve chairman, Alan Greenspan," talk to members of Congress, and "come up with a game plan to deal with it." Gore said he would talk to former Secretary of the Treasury Robert Rubin and to Greenspan. Otherwise, Bush promoted his tax-cut plan, and Gore claimed credit



Leading allies of the United States are horrified, as much as disgusted by both the outcome of the first hundred days of the Bush Administration, and the likely developments it portends for the crisis-wracked months immediately ahead.

ington Post. Plainly, since I have no other kind of power than my bare intellectual and moral capabilities, we must conclude that it is those capabilities themselves which the oligarchy has considered a serious potential threat to its interests.

It was through the initiative of the *Washington Post's* Katharine Graham's chief personal hatchet-man, lawyer Edward Bennett Williams, the same Graham who is orchestrating increased death-rates among the people of Washington, D.C. today,¹⁵ that the secret-government operation, under provisions of Executive Order 12333, was launched, through the Justice Department and FBI, by the President's Foreign Intelligence Advisory Board (PFIAB), in January 1983, aimed at either my death, or, as the authors of that PFIAB motion proposed, my political "death" through imprisonment, on pretexts which the authors of those crafted financial charges intended should be concocted through aid of secret-government operations.

Those charges were then crafted with aid of what the record shows to have been the Federal Justice Department's intentional fraud upon the court,¹⁶ false charges popularized

Presidential nomination, the *Times* launched a three-day defamatory attack, accompanied by an editorial attack which urged Justice Department investigation of LaRouche.

15. KKK-Katie Graham's backing of the efforts to shut down D.C. General Hospital already led to two documented deaths on the weekend of May 5-6, both of gunshot victims. See Paul Gallagher, "Death Toll Hits Already, in D.C. Public Hospital Closing," *EIR*, May 18, 2001.

16. The record also shows that that fraudulent operation was crafted by the Justice Department as, in its estimation, the only way to assure LaRouche's conviction. In April 1987, three companies associated with LaRouche were illegally placed into forced bankruptcy, making it impossible for them to repay loans to supporters. On Oct. 14, 1988, Federal indictments were handed down against LaRouche and several associates, leading to a trial in which

by the leading oligarchy-controlled news media, including a massive campaign, for this purpose, by same thuggish Katharine Graham's *Washington Post* which Williams had represented in initiating the PFIAB 12333 operation.

In the case of the 2000 Presidential election-campaign, that oligarchy was determined to exclude *any* candidate who was even merely competent, from coming even within reach of occupying the Presidency under the then already looming, present conditions of world-wide financial collapse. The mean-spirited contender, Bush, considered better qualified, for the position of national First Dummy, than the self-defeating, if also mean-spirited Al Gore, was declared President by means of a mischievous, unconstitutional intervention intended to prevent the Electoral College and Congress from following through on the provisions of the Constitution, a travesty perpetrated by the current majority of the U.S. Supreme Court.¹⁷

Therefore, knowing beyond any margin of doubt, what I repeatedly, and accurately warned you the Bush Administration would inevitably show itself to be during its first hundred days, I reacted to the unconstitutional actions of the Supreme

Judge Albert V. Bryan excluded any evidence pertaining to the bankruptcy. This railroad trial led to the conviction of all accused in December 1988, based on the suppression of the evidence concerning the forced bankruptcy. Then, in October 1989, Judge Martin Bostetter dismissed the bankruptcies, finding that the government had perpetrated a "fraud against the court." In re *Caucus Distributors, Inc. et al.*, 106 B.R. 890, (Bnkrcy, E.D.Va. 1989).

17. LaRouche addressed the issues of the Electoral College and the election-crisis in a Nov. 4 pre-election statement, "Gore Might Elect George Bush" (*EIR*, Nov. 10, 2000), and in webcast seminars on Nov. 14 ("Now Comes the Aftermath," *EIR*, Nov. 24, 2000), Dec. 12 ("The Fall of Ozymandias," *EIR*, Dec. 22, 2000), and Jan. 3, 2001. Texts of the webcasts are available at www.larouchepub.com.

Court majority, by preparing to launch my campaign for the 2004 Presidential nomination immediately, even before that inevitably disastrous Bush Presidency was inaugurated.

The first hundred days of that administration have proven that I was correct in my estimation of what the Bush Administration would become, and, also, what it will continue to become, unless you join me in acting to change our nation's direction in policy-shaping now.¹⁸ Increasing numbers among the nations of the world, even those which have been long-standing close, leading allies of the U.S.A., are horrified, as much as disgusted by both the outcome of the first hundred days of the new administration, and the likely developments it portends for the crisis-wracked months immediately ahead.

There are still pressures which can be brought to bear, to prompt this administration to, shall we say, make a considerable improvement in its ways. Therefore, in my sundry writings as a candidate, such as this present one, I set before you the most relevant crucial issues for your immediate action.¹⁹

Do not speak of winning a future struggle to save our nation, in 2004, after the time that cause were already lost by your negligence. You must support the necessary actions now, in Spring through Autumn 2001, rather than waiting until after the fight has been lost, when it will be far too late to begin.

As I said above, I have been proven, by clear and simple facts, to have been right on all leading issues, and my opposition terribly wrong. That affords me the earned personal authority to assume a leading position in this fight, and the incurred responsibility to work to rebuild our nation's political leadership around the lessons to be learned from recent decades' experience. While my immediate responsibility is to act to aid in rebuilding a temporarily shattered Democratic Party, it is also urgent that we forge a sense of unity of national interest and purpose, and develop collaboration among all relevant political forces of good will. It is urgent that we not only discuss together, but proceed to act together, on urgent issues such as the energy crisis and health-care crisis, as the occasion may demand.

For that purpose, I now ask those of you who should have learned the now-painful lessons of the Year 2000 Presidential campaign, to think; such that, by thinking, you might know yourself better as a citizen of our republic. I ask you to consider those principles of law which every citizen, not only our political leaders, should understand, especially under the present conditions of deepening national and world crisis.

18. For LaRouche's forecast of the Bush Administration's characteristics, see, e.g., his articles "On the California Energy Crisis: As Seen and Said by the Salton Sea" (*EIR*, Feb. 16, 2001) and "Political Theocracy Defined" (*EIR*, April 27, 2001), and his March 21 webcast speech to a Washington seminar, "The Bush Administration: The First Sixty Days," published in *EIR*, April 6, 2001, and also available at www.Jarouchepub.com.

19. E.g., "On the California Energy Crisis: As Seen and Said by the Salton Sea," *EIR*, Feb. 16, 2001; and "LaRouche in 2004: A Draft Policy: Launch a Sudden Recovery," *EIR*, May 4, 2001.

The principles, the intentions, which you must defend are the same principles which Katharine Graham's *Washington Post* has devoted its efforts to destroying, as it has attempted once again, in its efforts to accelerate the death-rates in our national capital, through a gigantic real-estate scam, potentially aiming at as much as, ultimately, even trillions of dollars in speculative capital gains in real estate, a massive looting operation which includes the targetting for destruction the city's only full-service general public hospital, D.C. General.²⁰

About This Report

We have come into a time, as in many comparable periods of history, during which the ability of a people to escape the disaster which popular opinion has contributed so much to bringing upon itself, depends upon popular willingness to look into the false beliefs which have guided the majority of the people into their support for the ultimately disastrous policy which has dominated the political and cultural trends of the recent thirty-five years. Until now, only a shrinking minority of our excessively entertained population has been willing to face that fact. The difference today, is that the crisis produced by that past trend, has now become, suddenly, a very painful one, even a desperate one.

Until the brewing crisis reached the threshold of pain, at which increasing portions of the population were willing to doubt their own long-standing habits of belief, there was little immediate prospect for turning the nation around.

But, now, in the recent months of suddenly more acute crises on both the national and world financial markets, trillions of dollars of financial assets of U.S. citizens have been wiped away. World-wide, the fable of the so-called "new economy," has become a sick joke. In the real economy, as distinct from financial-market indexes as such, a full-scale slide into a depression as serious as that of the 1930s, is now fully under way.

We have now reached the point of popular pain, to which the recent inauguration of President Bush has brought the U.S. population, or at least a large and growing part of it, during the course of the several months since January 20th.

What I present to you now, is something which it is indispensable that you know. During the recent thirty-five years, our nation's citizens in general, have tolerated, increasingly, trends in popular opinion which have led their nation to the brink of self-destruction. Unless those citizens uncover the assumptions of belief which have caused them to lend their support to the policies by which our nation is being destroyed today, this nation were not likely to survive.

Thus, we have been brought into a time, in which growing rations of our citizenry will now be willing to question the

20. See Edward Spannaus, " 'Invisible Empire' of Kate Graham Targets D.C. for 'Negro Removal,' " *EIR*, April 13, 2001; and Edward Spannaus, "The Bleaching of 'Chocolate City,' " *EIR*, April 27, 2001.

myths and fables which they had considered unshakeable until the recent months' shocks. Issues which many of you would have avoided, by saying, "I don't go there," are now coming to occupy your house, if you still have one, whether you chose to invite them in, or not.

Yet, you should come to agree, on reflection, that in the following pages, I have presented to you only those topics which it is essential for you to know, if you are to understand actually both our present crisis and the most essential steps to overcome it. Yet, some parts of this report, will, admittedly, require careful study by many of you. Lest you falter at those points in my account, I emphasize, that in this present case, as in any period of great personal or national crisis, like the present one, it is precisely what you do not know, which is most likely to hurt you the most. Indeed, those are precisely the kinds of issues, which you did not know earlier, which are hurting you, personally, the most, at this present moment.

In compensation for your patience and efforts with the points included in the following pages, I can promise you two things. The knowledge I present here is practically indispensable for our nation, and for you personally, if you aim that your family should survive this present crisis. Second, in the end, I think you will agree, that some of these ideas, old and new, which I have to present to you here, are truly beautiful, truly sublime and truthful ones, which should bring the great joy you will need for your role in the fight ahead of us.

1. What Is 'Natural Law'?

On the first level, the subject of this report is the principle of the general welfare, and its practical implications for today's exploding world crisis. Yet, as I shall show, to understand that notion of the general welfare in the way the practical problems before us demand, we must go to the deeper roots of that principle, to uncover the principle which underlies both our nation's 1776 Declaration of Independence, and our most basic law, the Preamble of our Federal Constitution. That deeper principle, is the notion of *natural law*.

All that is distinctively good in globally extended, modern European civilization's contributions to human culture at large, is centered in a conception of natural law which is implicitly as ancient as the famous poem of the great reformer Solon of Athens, and in a related conception, called *agapē* in that ancient Greek, which Europe's most beneficial philosopher, Plato, places in the mouth of the Socrates who is the chief protagonist of his dialogues.

This same conception known to Plato, was supplied a far richer meaning by the mission of Jesus Christ and his Apostles. The famous 13th Chapter of the Apostle Paul's first letter to the Corinthians, is the most famous of the locations in which the Christian conception of the Platonic Greek term *agapē*, has been circulated to the world at large. If you know music, this is also famous, and richly admired in its expression



Masaccio's "St. Paul Visiting St. Peter in Prison." The 13th Chapter of Paul's first letter to the Corinthians, is the most famous of the locations in which the Christian conception of the Platonic Greek term *agapē*, has been circulated to the world at large.

as the fourth of the great four hymns, called "The Four Serious Songs," one of the greatest works by one of the greatest musical composers of all time, Johannes Brahms.

"Faith, hope, and charity," are the words we read from the King James authorized version of the *New Testament*. I recall, gratefully, from an earlier time, when heathenism had not yet become all the fashion in our public schools, that literate teachers would read this chapter from *I Corinthians*, which, both then as now, rivalled the *Gospel of John* as my favorite Biblical text.

The notion which is termed the common good, or general welfare, is a product and corollary of that underlying principle of natural law.

Unfortunately, today, the popularized falsification of the original meaning of the term *agapē*, is shown by the way in which the Latin translation of *agapē*, *caritas*, is misused in the form of the English word "charity." I refer to the widespread, contemptibly hypocritical practice of the Bush Administra-

tion, for example, where “charity” is degraded into the pathetic sense of “giving money to charity,” or the wickedly hypocritical notion of “Faith-based initiative” projects.

That corrupt, “Faith-based initiative” policy, has been promoted by a Bush Administration which is steeped in hatred of our republic’s constitutional principle of the general welfare. That administration’s camp-followers have misused the word “charity,” in a way which has been intended to corrupt and, also, cheat the credulous. Nothing is more disgusting than the self-righteous donor of “charity,” who drops a few pennies’ worth of tax reductions into the hands of the man he has just, once again, robbed blind at the gas pump or power station, like the murderer who sends flowers, as a “touch of class,” to the widow of his victim. Such popularized uses of the term “charity,” are characteristic of those religious and other hypocrites, whose conduct, down through the ages, like that of President Bush, is denounced by the Apostle for that very reason, in the indicated chapter.

The true meaning of the term *agapē*, is approximated very well, by that principle of the general welfare which the Preamble of our Federal Constitution sets forth as an integral principle of the highest law of our Federal republic, a principle inextricably linked to the notion of our nation’s perfect sovereignty as a republic under such law. The term “general welfare,” so employed, is, as I have already emphasized, interchangeable in meaning with a related term, “the common good.”

For example, if one does not defend such public interests as effective health care for all persons, and does not act to ensure an adequate and reliable supply of energy to institutions and persons, at what we used to recognize as fair prices, one’s profession of commitment to charity is an obscene hypocrisy.

The fact that the principle of the general welfare is part of our constitutional tradition, does not signify that the principle of the common good is a mere tradition. It is no mere matter of some people’s debatable opinion; it is a principle of natural law, as the term *natural law* implies the kind of law which is neither a mere legal fiction, as the positive law is merely such fiction, as the notion of “common law”²¹ is a mere, Romantic’s fiction, nor is it a matter of belief in the efficacy of the mere phrase-mongering recitation of some traditional phrases. When we speak of natural law, rather than any other kind of law, we must use the term to identify a universal principle, which, as I shall explain, is proven to be universal, from physical evidence, with a scientific quality and degree of certainty.

21. E.g., customary law, as in the Romantic school of Kant, Savigny, et al. Throughout this report, as in other published locations, the use of the term “Romantic,” by me, signifies the cultural legacy of ancient pagan Rome, and, thus, implicitly, the cultural legacy of the Delphi cult of the Pythian Apollo, and of ancient Mesopotamia’s so-called “oligarchical model,” earlier. “Romantic” is to be recognized as the cultural adversary of its opposite, the Classical humanist model.

While the primary emphasis here is on the meaning of *agapē*, as the terms general welfare and common good are the more commonly used synonyms for *agapē*, I situate that latter term, as Paul does, within the setting of what the King James version presents as “faith” and “hope.”

Thus, my reading of the cited chapter of Paul is as follows. By “my reading,” I mean to say, you may hold me personally accountable for what I am about to lay out before you. That means, that what I say is not something borrowed from reading or overhearing somebody’s traditional opinion, as if in some classroom lecture; it is something which I personally know to be true, that in the same sense that the discoverer of some validated universal physical principle knows that discovery to be true, whether some putative authority agrees, or not. It is a truth which you may also discover, and thus verify for yourself, by the same means I have used.

In physical science, “faith” signifies belief, but not belief in one’s own, or someone else’s mere opinion, nor faith in horse-betting, stock-market trend-charts, or the other mere statistics popularly worshipped among virtual idiot-savants. It signifies belief *in the idea of* validated universal physical principles. These are not principles “proven at the blackboard” by the delphic sophistries of so-called “formal logic.” As I shall explain here, these are principles which can be proven by the same methods of physical experiment used to test, and prove the validity of any discovery of a universal physical principle.

Although you may not have thought of this fact before, I shall demonstrate, once again, to you here, as I have in numerous other published locations, that the principles of natural law are knowable with the same precision one might wish to attribute to what are otherwise regarded as experimentally validated discoveries of universal physical principles. Therefore, bearing in mind this promise to demonstrate that connection, think of “faith” as an expression of confidence in the conditional²² efficacy of those validated universal principles, which the act of discovery has made part of one’s own knowledge.

“Hope” references the expectation of the possibility of a happy, even a sublime outcome for the effects of success in applying validatable universal principles.²³

As Paul wrote, the third, and greatest of these three concepts, *agapē*, references what thoughtful reflection shows to

22. By “conditional,” I signify that the discovery of new universal principles not only transforms our knowledge of the universe as a whole, but corrects the errors embedded in our lack of knowledge of additional such principles.

23. As I shall clarify that point later in this report, there are two contrasted, but sometimes overlapping notions of the term happiness which Gottfried Leibniz’s attacks on John Locke imparted to the writing of our 1776 Declaration of Independence. This is a matter of distinction between the “profane” and the “sublime.” “Profane” pertains to such matters as short-term sensual gratification; “sublime” refers to joy in the immortal outcome of one’s having lived, including the outcome of the risk of one’s mortal life for the sovereignty and future of one’s nation or civilization as a whole.

be a still higher quality of principle than either faith or hope. That is the implication of the Classical Greek and Christian understanding of the scientific truthfulness of the Mosaic conception of man and woman, as made equally in the image of the Creator, and as obliged to exercise increasing dominion over the universe. This is not believed simply because those reported words are attributed to Moses; rather, confidence in Moses is strengthened by the experimentally demonstrable scientific certainty, that those words, as I read them here, are true.²⁴ This conception of human nature is, as I shall show you, if you did not already know it, the entire basis for the conception of natural law.

Thus, the proof of the proposition, that man and woman are equally superior to all other living things, which are, in turn, superior to non-living things, defines the essential, sublime nature of the human individual, and of society. That is a nature which imparts to both the sovereign individual and the society certain intrinsic rights, and also certain intrinsic obligations. This notion of the nature of man, and of mankind's relationship to the physical universe, as expressed by the Declaration of Independence's adoption of Leibniz's concept of "life, liberty, and the pursuit of happiness," as a refutation of the philosophy of John Locke, is not an opinion; it is a validated universal physical principle of science.

The broad conclusion to be drawn as to the matter of law, is that that sublime quality of efficient intention which is called *agapē*,²⁵ must rule the conduct of both the individual person and society. This conduct and its implied outcome, are the common good, or, the general welfare.

At this point, we must turn our attention to the proof of the special quality of human nature. It is upon the proof of that principle, that all natural law depends absolutely. It is that proof, upon which an efficient understanding of *agapē* depends.

What Is 'Human Nature'?

The basis for natural law, and also for the existence of the modern form of sovereign nation-state republic, is not to be taken from the mere teaching of any religious denominations as such. Rather, as in the case of the physical-scientific proof in support of the Mosaic conception of man, as from *Genesis* 1, we must let the stones speak for the Creator, as the Gospel of Luke reports the words of Jesus Christ.

This concept, of letting the stones speak, is, as I shall show once again, here, the most important, the most fundamental

principle in all knowledge.²⁶ "*Letting the stones speak,*" refers to the way in which those non-deductive mental processes which are called "cognition," "reason," or, sometimes, "insight," enable the human individual to do what no lower form of life, such as the great apes, can do: discover an experimentally validatable, as universal, physical principle.

Typical of this definition, is Johannes Kepler's original (1605) discovery of that principle of universal gravitation, which Isaac Newton was unable to plagiarize successfully, even by attempting to copy this discovery from the published edition of Kepler's works available to him and his associates at that time. Or, take the related example of Leibniz's original discovery of the calculus, a discovery which, as the French Bourbon Restoration's Newton devotee Augustin Cauchy, later, implicitly conceded, plagiarist Isaac Newton could never have grasped, or duplicated.²⁷

These principles of experimentally validatable discoveries of universal physical principle, also apply to the discovery of physically efficient principles of social relations, as much as they do to discovery of physical principles underlying the universe of our sense-experience. I shall show this connection here later, under the heading of "Economics and the General Welfare."

The included working point to be emphasized at this immediate location in my report, is that the standard of quality of education in English-speaking North America, was of a higher quality during the century in which our Declaration of Independence and Constitution were first adopted, than in the leading universities of the U.S.A. during recent generations.²⁸

Typical are the educational programs established in the Massachusetts Bay Colony under the leadership of the Winthrops and the Mathers, or in Pennsylvania under the leadership of James Logan and Benjamin Franklin. It was for this

26. It is a principle which demonstrates, as Plato had already demonstrated, the inhuman quality of ignorance inhering in the beliefs of the empiricists, Kantians, deductive formalists, and other materialists of all kindred varieties.

27. Especially after the circulation of a ridicule of Newton by three leading Cambridge University figures, Herschel, Babbage, and Peacock, the scandalous worthlessness of Newton's supposed alternative to the Leibniz calculus became so unbearably obvious, even to such rabid French devotees of Newton as the Bourbon Restoration's Laplace and Cauchy, that Cauchy castrated the Leibniz differential calculus, by use of his "Cauchy fraction," in order to provide a form of the calculus which would put Newton's own silliness out of the limelight of the continuing controversy. This change by Cauchy et al., was not a fruit of good will, but a recognition of the fact emphasized by Leibniz follower Babbage (the first designer of the modern digital computer), that Britain had fallen far behind continental Europe, including Russia, and the U.S.A., in scientific competence. For Britain, the abandoning of Newton's silly claims to have discovered a calculus was a matter, not of honor, but of crass strategic necessity. The later founding of the British Association for the Advancement of Science (BAAS), reflected the trend set into motion by the repeated warnings of Babbage, Herschel, et al., decades earlier.

28. This is not the same as claiming that all education in the English-speaking North America of that time meets that standard. It is to emphasize the decisive role contributed by those whose educational development, or equivalent, met that standard.

24. In science, when we encounter those kinds of striking words which express an opinion which could not be derived by any means but a valid act of discovery of universal physical principle, we know the mind of the author of such an expression in the most intimate way.

25. The use of the term "sublime," throughout this report, is coherent with the treatment of that subject in the work of the great Classical historian-playwright Friedrich Schiller.

reason, that the citizens of President George Washington's time, represented a level of literacy, productivity, and real income more than twice that existing then in the British monarchy's United Kingdom. It was this superior quality of knowledge among our nation's leaders at that time, and even within those large portions of the general population sometimes referred to as "the Latin farmers," which made possible the adoption of constitutional principles of which even the majority of U.S. Supreme Court justices are pathetically ignorant, or which they simply hate, today.

All of the wisest and best leaders of globally extended European culture since ancient Greece, have developed their mental capacities through a method sometimes called *the Classical humanist method of education*, a method reflected in the educational programs of the Winthrops and Mathers of the Massachusetts Bay Colony. The characteristic of this method of both school and self-education, is the principle that one knows no principle by learning it; one knows a principle only by re-experiencing the act of the original discovery of that principle. Thus, a Classical humanist education, which is the only morally decent policy for education, emphasizes the reliving of the original act of discovery of the most important ideas from both the past and present, and assimilating those ideas as a coherent body of knowledge of principles.²⁹

"Looking information up on the Internet" is not education, but, chiefly, simply communication as such, or, in the alternative, merely a preferred form of entertainment among certain types of idiot-savants. Contrary to the fraud spread by Norbert Wiener and his dupes, "information" is not knowledge. The acceptable standard for all education, is that provided by a Classical humanist classroom, in which there is close cognitive interaction among the members of a classroom with a limited student population, and much reliance on experimental demonstrations of both paradoxes of principle and the act of rediscovering what had been the original, experimentally validated solutions for those paradoxes.

The point is, that much of the remedy for our present problems as a nation, is to be found in returning to the Classical humanist educational roots of that leadership which led our nation to its independence and Constitution. This means returning to those superior methods of argument by means of which our nation produced its Declaration of Independence, the Preamble of its Constitution, and our republic's rebirth under the leadership provided by John Quincy Adams' and

29. In the case of the work of Winthrop, for example, the emphasis on certain methods for teaching geometry typifies the point. There are two ways of teaching geometry. One, is the formalist, "ivory tower" method at the blackboard. The other is seeking in experiment those paradoxes which have led the greatest scientific minds, such as Leonardo da Vinci, Kepler, Fermat, Huyghens, Leibniz, Bernouilli, Kästner, Gauss, Monge, Dirichlet, Riemann, et al., in the development of an anti-Euclidean conception of physical geometry. The related distinctions between opposing teaching methods for geometry classrooms, are a useful model for making the principles of Classical humanist education clear to prospective teachers.

Henry C. Carey's protégé, President Abraham Lincoln. This means returning to an emphasis upon experimentally verifiable universal principles, the kinds of methods of discovery which have ceased to be taught in most public school or university classrooms of the U.S.A. inside or outside Texas today. It means returning to the methods on which I rely, in presenting you with this present report.

The sovereign nation-state depends for its existence upon ecumenical principles, which may, or may not coincide in effect with certain religious conceptions, but which are not acquired as knowledge through the kind of teaching practiced in most of today's schools, nor by any other sort of mere tradition. They are a quality of knowledge acquired only through those methods of cognitive thinking whose existence is denied by Immanuel Kant and the other modern Romantics. They represent knowledge contrary to the pagan Roman tradition in modern society, such as the pro-paganist Romanticism of Kant, Hegel, and Savigny; they are principles which may be discovered only through the processes of cognition, discoveries which must also be independently verifiable with the same quality of rigor expressed by an experimentally validatable discovery of a universal physical principle.

The indispensable standard of education which I uphold here, on which the healthy development of the qualities of our citizens depends, is not a religious standard, in the sense of religious denominations, but an ecumenical standard. By ecumenical, I mean the same thing that Pope John Paul II has shown, once again, in his recent visit to Greece and the predominantly Muslim Middle East.³⁰

I mean such examples of ecumenicism as the cooperation between the Emperor Charlemagne and Caliph Haroun al Rashid, or among the Emperor Frederick II and Alfonso the Wise of Spain, on the one side, and currents of the Islamic world, on the other. I mean ecumenical in the same sense argued and practiced, respecting Christianity, Judaism, and Islam, by the great professing Orthodox Jew, Moses Mendelssohn.

Therefore, let the stones speak; let Creation itself, a more reliable text than that of any grammarian, certainly more reliable than any among today's customary U.S. Supreme Court majority, testify to the manifest intention of the Creator, as it did to Johannes Kepler, and to Carl Gauss after Kepler. Let

30. For the Pope's statements during his trip to Greece, Syria, and Malta, see Marianna Wertz, "Pope Brings 'The Common Good' To Judge Globalization and War," *EIR*, May 18, 2001; and Elisabeth Hellenbroich, "Pope John Paul II's Voyage in the Footsteps of Saint Paul," *EIR*, May 25, 2001. Jesus Christ never willed that Christians conduct Crusades. It is not necessary for a Pope or anyone else to fight religious wars to secure God's sovereignty in the universe. God will take care of that, whether anyone chooses to believe it or not. One fights only to defend those sovereign institutions on which the sovereignty of true human nature depends, and only when that fight is necessary in light of the effects of failing to fight that war, and also necessary because it can be justified by its prospective outcome to that effect, as Augustine emphasizes this point.

the relevant evidence speak for itself, as Moses Mendelssohn taught and demonstrated. Let the relevant evidence speak for itself, as the cognitive powers of the individual mind are capable of reenacting, and thus verifying universal physical principles, including principles bearing upon our notions of the nature of the relations among man, God, and nature.

We require the present, and urgent reorganization of the relations among nations, that according to verifiable universal principles which are within the scope of the diverse national cultures of this planet. We require this, just as we require the same ecumenical sense of common, universal principle, as properly governing the diversity of religious and non-religious belief among our people within the U.S. itself. It is only through reason, so defined, that differences in religious affiliation are peacefully and constructively resolved, as a common intention to do good in a spirit of fraternity among peoples.

It is by this approach, and only by this approach, that the essential notions of natural law are known as actual knowledge, rather than merely parrot-like recitations of regurgitated opinion, such as mere "information."

Vernadsky and Natural Law

The earliest clue, leading to such an ecumenical, "let the stones speak," proof of the referenced passage from *Genesis 1*, is found in the dialogues of Plato, his *Timaeus* most notably. Such predecessors of Kepler as Nicholas of Cusa, Luca Pacioli, Leonardo da Vinci, had emphasized that connection to Plato explicitly.

The discovery, by Plato's Academy of Athens, of the proof, by construction, of the fact that only five types of perfectly regular solids could be generated from the sphere, demonstrated that the physical universe is organized in a way which contradicts the notion that space is simply extended indefinitely in three respectively independent senses of direction. It demonstrated, also, that the form of physical action associated with living processes, was coherent with the characteristic feature of that so-called "Golden Section" defined by the construction of that series of solids, whereas ordinary non-living processes were organized in a different way.³¹

This same conclusion was developed, at the beginning of the Sixteenth Century, by the two already referenced students, Luca Pacioli and Leonardo da Vinci, of the work of that Cardinal Nicholas of Cusa who had founded modern experimental physical science a few decades earlier.

This same so-called *hylozoic* principle was introduced, explicitly, into the core of modern physical science by Johan-

31. Notably, the human senses are an organization generated by a living process. Therefore, the dogma which insists that the "Euclidean" model is the standpoint of the abstract observer, is a fraud. The senses are a natural product of a living process, and what is sensed, is by the very nature of the process of sensing, a "shadow," not the substance, of that which is observed.

nes Kepler, who based his own, related discoveries, explicitly, on the inspiration provided him by the work of Cusa, Pacioli, and Leonardo. The same notion of a principled distinction between the physical-space-time geometries of respectively, living and non-living processes, has been emphasized to a significant degree by Louis Pasteur, and, explicitly, by the founder of the branch of physical science called *biogeochemistry*, V.I. Vernadsky. This is the same principle on which my own original discoveries of the late 1940s and early 1950s, in the science of physical economy, were premised.

Before the founding of modern astrophysics by Kepler, the post-Hellenistic, anti-Classical, Romantic method in astronomy, of Claudius Ptolemy, Copernicus, and Tycho Brahe,³² was based, mathematically, on an erroneous, ivory-tower conception of mathematical method, which is essentially equivalent to the modern game designed for young children, the game of "connect-the-dots."

Kepler showed, chiefly by reference to more precise study of the same data collected by Brahe and others, that the orbits of the planets do not follow pathways which could be determined by the type of "connect-the-dots" statistical mathematics used by Copernicus and Brahe. This led Kepler to his famous discovery of the notion of "equal areas, equal times." In Kepler's first approximation of a solution for the physical determination of the Solar orbits, it was the area generated by the orbit, not the previous positions of the orbiting body, which predetermined (subsumed), harmonically, the pathway and velocities of the orbit, as the pathway which must be followed by the orbital trajectory.³³

The original discovery of the principle of universal gravitation, by Kepler, as developed principally in his 1605 *New*

32. The rise of Rome to supersede Hellenistic hegemony in the Mediterranean region, coincides approximately with events of the period of the Roman murder of Archimedes and the fall of King Pyrrhus. This resulting rise of the rule and hegemony of Rome unleashed a combined moral and intellectual decline in the level of culture throughout the region as a whole, such that the level of scientific competence which had been represented by such cases as the Platonic Academy's Eratosthenes and by Archimedes, was not reattained until the developments within the Fifteenth-Century Renaissance. The case of the wittingly fraudulent doctrine of Claudius Ptolemy in astronomy, overturning fraudulently, the previously established solar hypothesis, is typical of the quality of a new dark age of humanity which the rise of Rome unleashed upon the culture of that region as a whole.

33. This, by the way, is the essential difference between the castrated version of the Leibniz calculus, the latter, the textbook version introduced by Cauchy, and the Leibniz original. Historically, and functionally, the Leibniz calculus as a whole is implicitly grounded in the integral calculus, as a solution to the problem of mathematics first posed by Kepler, contrary to common teaching practice, of attempting to fit the integral calculus to the arbitrary, false presumptions of a linearized version of the differential. The chief problems posed by Leibniz's work, were essentially resolved by the successive discoveries, in the principles of a purely physical geometry, by Bernhard Riemann. On Gauss's validation of Kepler, against the empiricists, see Jonathan Tenenbaum and Bruce Director, "How Gauss Determined the Orbit of Ceres," *Fidelio*, Summer 1998.

Astronomy and his 1619 *World Harmony*,³⁴ demonstrated that the true pathways of the planets, and among the planets, could be adduced only through the notion, that the regularity of the orbit was attributable to a higher, platonic quality of harmonically-ordered *intention* embedded in the organization of the Solar System as a whole.³⁵

What Kepler described by the term “intention,” on that account, is what modern science recognizes by a different choice of language, as an experimentally validated discovery of a universal physical principle, or what is otherwise called a truly universal physical law. This is the kind of physical law which is axiomatically contrary to the ivory-tower mathematics used for the connect-the-dots dogmas of those Kepler predecessors who typify that Romantic School of Claudius Ptolemy, Galileo, et al. These Romantics were the predecessors whose methods Kepler opposed, and whose presumptions he overthrew by means of both his own experimentally verified discoveries; this matter was, later, settled conclusively by the work of Gauss.

What we know of this coherent set of developments in experimental physical geometry of living and non-living processes, from the *hylozoic* view which informed the work of Plato, through Vernadsky, is best summed up from the standpoint of Bernhard Riemann’s fundamental contributions to mathematical physics, including not only his development of the principles of hypergeometry, but his advanced development of the principles of what is called *Analysis Situs*, in the context of that hypergeometry.³⁶ It is sufficient for the moment, that that connection be simply identified, as I have just done; the relevance of Riemann’s role for the subject at hand, will be clearer a space ahead.

What we actually know of universal physical principles,

34. The recent English translation of Kepler’s *New Astronomy* is provided, the spin-doctoring of Foreword-writer Owen Gingerich included, in the William Donahue translation (Cambridge, U.K.: Cambridge University Press, 1992). Obviously, from Newton’s work, he had also studied Kepler’s *Harmonice Mundi*, but, also, without efficient comprehension. My earlier references to these two works, during the 1970s and early 1980s, relied upon the Max Caspar editions.

35. For the benefit of the picky reader, I interpolate the following note. This notion appeared later, in a more developed form, as Leibniz’s original discovery and development of the calculus, and also in Leibniz’s related notions of *Analysis Situs* and what he termed a monadology. This notion was expressed in more modern terms through the work of Gauss, whose solution for the asteroid orbits showed the root of the erroneous “Three-Body” paradox which Newton et al. produced by their attempted plagiarism of Kepler’s *Harmonice Mundi*. It was the attempt to eliminate the harmonic principle of Kepler’s discovery, which resulted in the Newtonians’ paradoxical construct, “Kepler’s Third Law.” Riemann’s further development of Gauss’s notions of hypergeometry laid the basis for solving the paradoxes which such crucial physical evidence posed for mathematics.

36. *Bernhard Riemann’s Gesammelte Mathematische Werke* [Riemann’s Collected Mathematical Works], D.G. Weber, ed. (New York: Dover Publications reprint edition, 1953).

are of the same characteristic features as what Kepler signified by his use of “intention” in these cases. This notion of universal principle, also applies to the study of living and cognitive processes, as well as to what are conventionally regarded as non-living physical processes.

Therefore, let the stones speak, as they spoke to Louis Pasteur and informed the founding of biogeochemistry by V.I. Vernadsky. Let us understand the meaning of universal principle in the terms just referenced. Let us see what relevant things the stones might tell us, from that standpoint in scientific method.

The most convenient modern language for identifying the way in which the crucial evidence is to be adduced, is to employ Vernadsky’s definition of “natural products.”³⁷ The method to be applied to the study of such “natural products,” is that which is sometimes described by theologians as “spiritual exercises,” which is a very useful, if often misinterpreted synonym for those mental processes of the sovereign individual human mind which we call *cognition*. Those are the principles of cognition, otherwise known as “reason,” whose existence was denied by the Romantic, and British empiricist turned neo-Aristotelean, Kant, for example, and, also, by the empiricists, positivists, and existentialists, down to the present day.³⁸

The distinction of reason from merely deductive exercises, is not only a very important one; but, without it, it is impossible to deal with the issues of principles of law in the rigorous way we require. This applies as forcefully to the laws of social processes, as to the domain of experimental physics. Indeed, without the Romantic school of the irrationalists Kant, Hegel, and Savigny, the architect, Carl Schmitt, who designed the Adolf Hitler dictatorship’s 1933 and 1934 acts creating the totalitarian state in Germany, and the present Chávez government of Venezuela, could not have existed.

The working point here is, that the outcome of the application of the method common to the relevant work of Plato, Kepler, Pasteur, Vernadsky, et al., shows us that principles of natural law, such as the notion of the common good, or general welfare, are experimentally validatable discoveries, that meant in the same sense we may properly employ the term universal physical principles. The point, as Vernadsky makes it clear enough, as Pasteur, among others, did before him, is that the notion of “physical” should be attributed to the validatably universal *physical effects* of the action of a princi-

37. Vladimir I. Vernadsky, “On the Fundamental Material-Energetic Difference between Living and Non-Living Natural Bodies in the Biosphere” (1938), Jonathan Tennenbaum and Rachel Douglas, trans., *21st Century Science & Technology*, Winter 2000-2001.

38. E.g., Immanuel Kant, *Critique of Pure Reason* (Garden City, N.Y.: Doubleday & Company, Inc., 1966, translation of 1781 edition). For example, as Hannah Arendt emphasized, neither Kant nor Arendt herself, believed in the existence of truthful knowledge. Both were, thus, liars by profession.

ple, rather than the particular object of sense-perception as such.

We do not know reality through sense-experience as such. Even those poor dumb beasts we call cattle, or pets, are not so biologically inept as to be empiricists. We experience reality through our senses, but we know reality through our demonstrated ability to change reality, as Plato defines *a principle of change*; we accomplish this by means of our *intention*, as Kepler employs the notion of *intention* as equivalent to what we term experimentally validated universal physical principles.³⁹

We understand the laws of the universe only to the degree that we are able to impose our will to alter the course of that universe. The difference is, that the acts of beasts produce physical effects; but, the will of the beasts can not willfully change the characteristic way in which the universe responds; only God and man can cause the production of what Vernadsky designates as the “natural products of the noösphere.” The demonstrated ability to bring about such changes, defines the outer limits of what all intelligent persons will claim to be their personal knowledge, up to any point of their intellectual development.

I must, here, once again, explain these crucial distinctions between merely learning and actually knowing. The work of Vernadsky affords a highly relevant choice of means to illustrate that principle. The issue of whether truth exists in the practice of law by courts, or the practice of legislators, depends upon a precise adherence to that same distinction between truthfulness and merely expressed opinion, which separates merely having learned, as in schools and universities, or from habitually lying gossip-sheets such as *The Washington Post*, from actually knowing.

The classical example of what Vernadsky means by “natural products of life,” for example, is Louis Pasteur’s evidence from his studies attacking the falseness of both the then popular myth of “spontaneous generation” of living processes (i.e., from non-living ones), and his demonstration of that argument for such cases as the chemical products of fermentation caused by action of a living process. Vernadsky carried this notion of a principle of life further, to emphasize the superiority of the organization of the biosphere, produced only under the impact of action by the creative (i.e., cognitive, noëtic) processes of the human mind, elevating the functional quality of the biosphere above what it is possible for the biosphere to achieve without the intervention of the superior principle of cognition.⁴⁰

39. This should be taken to signify the notion that those intentions expressed as universal physical principles by man, are physically efficient causes, in the sense that Kepler identifies intention as the governing motive of the planetary orbit. This means, in the case of the expression of such a quality of intention by man, the cause of the generation of the relevant “natural products” of the noösphere.

40. Op. cit.

To summarize the point, leaving its fuller implications to a later place in this report, we know, as Vernadsky emphasized this, three distinct kinds of universal physical processes. These three categories are, a.) ostensibly non-living processes, b.) anti-entropic living processes in general (the biosphere), and c.) the anti-entropic cognitive processes which are found only in human individuals (the axiomatic basis for the existence of the noösphere).⁴¹ My own discoveries, which define the present state of knowledge in the field of the science of physical economy, address the general nature of cognitive processes at the point at which, in practice, Vernadsky leaves off.

These three categorical qualities of processes, are not the simple-minded variety of facts, which presume to address only the simple evidence of sense-perception of objects. In the domain of actual knowledge, the crucial phenomena are the universally verifiable, and experimentally crucial forms of *implicitly measurable changes of effects, as defined in patterns of development of processes*. These are changes which are provably caused by the action of the respective universal principles (manifest intentions), of either non-living processes, living processes, or cognition.

The physical effects which satisfy the corresponding experimental requirements for proof of principle, are, once again, what are termed by Vernadsky “natural products,” *measurable physical effects* attributable, respectively, either to ostensibly non-living universal principles, the universal principle of life, or to the manifested physical efficiency of the universal principle of cognition, in a way which is beyond the capacity of non-human forms of life as such.⁴²

In other words, the fact that the apparently “weak” principle of life, has been able to impose the existence of the biosphere, including the creation of atmosphere and oceans, upon our planet, shows, as measurable natural products of life, the multiple-connectedness of life to non-life. The transformations of the biosphere to a higher state, which it could not reach by its own unaided means, by mankind’s willful interventions, demonstrate the absolute superiority, on principle, of the human species, as a cognitive species, to all other forms of life. These measurable distinctions must be proven to be

41. This, I have emphasized at another point in this report, does not signify that non-living processes are intrinsically entropic in the sense that the followers of Clausius and Kelvin insist. It signifies only that non-living processes are relatively entropic, when compared with relevant living ones.

42. An important technical point, which should be noted at this point: the fact that the three classes of universal physical principles coexist and interact (in what is called a “multiply-connected” manifold) within one and the same universe, signifies that the distinction between living and non-living processes is a relative and conditional one, not an absolute one. Although non-living processes are apparently entropic, relative to the characteristic anti-entropy of living and cognitive processes generally, this does not signify that the non-living aspect of the universe is actually entropic, since, of course, the universe in which the non-living aspect is manifest, is also anti-entropic as a whole, especially when living and cognitive processes are taken into account.

of the quality of universal physical principles, by the same methods and standards through which Kepler discovered a universal physical principle of universal gravitation.

Although the distinctions among those three categories were already reflected in the work of Plato, Kepler, and others, my situating of the contributions of Vernadsky et al., within the context of my own development of the science of physical economy, provides the best, and most convenient of the available demonstrations of the point to be made, bearing upon the proof of an ecumenical definition of the meaning of natural law. As a matter of letting the stones speak, this is the standpoint in physical science, from which to address the matter of defining human nature.

My Debt to Riemann and Vernadsky

My own original discoveries of universal principle, in the context of the Leibniz-founded science of physical economy, were first developed, during the interval 1948-1951, in rebuttal of the hoax of “information theory” which had been perpetrated by MIT’s Professor Norbert Wiener. Those discoveries were made prior to my adapting those discovered principles to the relevant work of Riemann and Vernadsky.

What those 1948-1951 studies led me to recognize in Vernadsky,⁴³ was a powerful statement coinciding with the conclusions I had reached from the standpoint of the evidence which is internal to the axiomatic issues of a science of physical economy; these were issues concerning the principled distinctions among non-living, living, and cognitive processes. My adoption of Vernadsky, at that time, occurred, as if in a flash of recognition of the world-outlook of a stranger who I knew, from the first instant, was to become, in principle, if not in flesh, a dear old friend.

What I recognized in Riemann, near the close of 1952, was that he had provided the unique and indispensable basis for accounting for the multiple-connectedness of those principled distinctions among non-living, living, and cognitive functions, which were already central to my own discoveries in the field of physical economy.

Riemann’s method is also indispensable for comprehension of a universe, as defined by Vernadsky, in which ostensibly non-living, living, and cognitive processes, are respectively universally distinct from one another, but in which these respectively distinct classes of universal physical principles interact, in the mathematical-like manner of the kind of multiply-connected manifold associated with a Riemannian physical geometry. This approach best defines Vernadsky’s own, experimentally based, if nonetheless inadequate definition of the noosphere.

From this, Riemannian vantage-point, we know that the distinctions to be made are inherently measurable ones — as

43. As distinct from the reductionist views impairing the work of Nicholas Rashevsky and Oparin, which I had studied during the course of my 1948-1951 work.

we sometimes say, “in the final analysis,” even if they can not be predetermined by methods of ivory-tower mathematics at the classroom blackboard.⁴⁴

That, in brief, defines the core of the basis for the approach to defining human nature, and natural law, which I present here.

To make clear what I am saying at this point, consider a few of the most commonplace obstacles to rational thinking, which are to be found among ostensibly educated members of today’s adult population. Clearing the air in that way is necessary to bring the most crucial, axiomatic notions of natural law into focus. Think of clearing the accumulated garbage from the kitchen, as a necessary precaution before attempting to prepare a safe, tasteful, and truly nourishing meal. Typical, irrationally arbitrary questions of the types which are to be cleared away with the garbage, include the following.

Begin with a few of the biggest, most commonplace such whoppers. “When did the universe begin?” “How far is infinity?” Or, an interesting, corollary question posed to me in the closing moments of the recent Bad Schwalbach conference: “What exists outside our universe?”⁴⁵ Or, the more sensitive, more sensible, but extremely important and fundamental question in natural law, “What is the distinction between the soul and the body?”

These questions have the crucial significance of being questions which individuals ask about themselves, questions concerning their implicit functional relationship to the universe in which they enjoy a relatively brief mortal existence. It is in that context, that the answers to such questions bear implicitly upon the definition of natural law.

44. The same apparent difficulty arises in music. A rather popular, but intrinsically incompetent, Romantic trend in musicology, insists that there is no principled inconsistency of practical importance between an equal-tempered scale and a well-tempered polyphony, or, the more radical, such as the followers of the hoaxster Helmholtz and Ellis, will defend arbitrary rises in the setting of the tone A. Those cited, Romantic corruptions in musicology are usually defended from the standpoint of a modernist doctrine of “instrumental music,” either defining “instrumental music” as free from any of the considerations implicit in the bel canto-trained human singing voice in general, or bel canto polyphony, in particular. Once one insists on that, without an emphasis upon bel canto vocalization as the foundation of music, the present-day Romantic and modernist opinions, such as those of the devotees of Helmholtz and Ellis, are chased off the performing stage, and the argument of the Romantics and modernists falls apart. In well-tempered polyphony, the position of an individual note on the written score does not precisely determine its value; nonetheless, the pitch at which that note should be sung, is precisely predetermined by the relevant context. This determination is derived from the polyphony, rather than the individual note per se, just as the position and velocity of a planet in a Keplerian orbit is determined by the higher principles governing the orbit as a whole. This reflects a general principle which is underscored by Leibniz’s notion of a monadology. Monads are definite existences, but of variable particular values, values varying according to the physical geometry in which they are situated. Therefore, while the definiteness of the monad is measurable, its precise mathematical value remains relative. Such are the values of tones and intervals in well-tempered polyphony.

45. See *Appendix*.

In first approximation, it is useful to approach the answers to defective such questions, as if the questions themselves reflected a semantic disorder in the questioner's use of words. The general recipe for dealing with such problematic cases, is to ask the questioner to consent to a certain kind of redefinition of the question itself. Otherwise, the likely result would be, that the attempt to answer the question exactly as stated, would place the identities of both questioner and responder entirely outside the real universe. The purpose of restating the question, is to situate the question within a context in which a sensible reinterpretation of the question itself can be introduced. Properly restated, a clear, and also sane response to that question may be then found within that reformed context

The rule is: *Before you ask a question, ask yourself, whether or not you know what you are talking about. Before you attempt to answer a question, ask yourself whether the questioner knows what he is talking about.* What is the experience which justifies your use of the word "universe," for example? "What was the color of the suit the Emperor was actually wearing, in the Hans Christian Andersen fable of 'The Emperor's New Suit of Clothes'?" Many seemingly perplexing, stubborn, ostensibly philosophical problems evaporate, once the questioner recognizes that the subject of his question is actually nothing more than a word for something which either does not exist, or, at its best, corresponds to something for whose existence the questioner has no relevant evidence.

Some of these false questions are useful. For example, "What good is a mathematician, if he can not show me how to square the circle?" or, The answer to that question, is: "Nicholas of Cusa was the first known person to demonstrate, as he presented this argument in his *De Docta Ignorantia*, that the circle can not be squared. This discovery by Cusa, was the basis for the later definition of a category of numbers called 'transcendental.'"

Such issues are related to Kepler's proof, that, while the orbit of a planet is known, its exact position and velocity at any moment can not both be simply predicted in an arithmetic way, but only from a higher standpoint in physical geometry. Before insisting upon receiving an answer to a question, make sure that you have situated the question in a meaningful choice of physical geometry.

Questions based upon assumptions which later prove to be absurd, are not necessarily useless questions, in and of themselves. By discovering not only that they are absurd, but, more significantly, in also discovering *why* they are absurd, society progresses to higher states of knowledge about the universe we inhabit. Limit ourselves, for this moment, to the typical student's sort of questions about the "universe" and "infinity." Focus on the answers to those questions, as the answers are defined from the standpoint of the relationship between my own discoveries and the referenced work of Vernadsky and Riemann.

The Universe in Which We Act

Now, we come to the crux of everything which I have to report here, respecting the principles which must underlie the way in which modern government shapes its medium- to long-term economic policies. By "economic policies," I not only intend to include educational policies; I place the heaviest emphasis upon educational policies as the root of all sound economic policies, that for reasons I shall demonstrate in the concluding portion of this report as a whole.

You wish to use the word "universe" in a question? Tell me, what basis in experience do you command for your use of the word "universe"?

For me, "universe" signifies the complex which combines as one, not some mere collection of sensible objects, but all of those known principles which have been, or might be proven to have universal efficiency. That is what I mean by the word "universe." "Universe" is the concept of a multiply-connected universality of experimentally validatable, universal physical principles. That is the universe as I know it; limiting our discussion to things we actually know. I know of no other universe, and neither do any among you.

Therefore, we know, on the basis of that fact alone, that when sane people write or speak rationally of the "beginning" of the universe, they are not pointing to some date in clock-time. They are referring to nothing more nor less, than that integrated array of implicitly knowable universal principles, known and yet to be known, which underlies everything that does, or might happen in the universe. The mere existence of the universe is the only meaningful definition of its "beginning;" and, nothing exists outside that universe, or prior to it.

Yet, even though we do not yet know all of those universal principles, we know that none exist which are not integral to a multiply-connected manifold, combining both known and yet-to-be-known such principles. We know that what our cognitive mind experiences, is a reflection of that manifold. That, for all sane and non-illiterate adults, is the primary meaning, a very practical, but nonetheless very profound meaning of the term "universe." That is the meaning upon which the sane use of the term "science" is premised for practice.

Thus, in the relatively simplest aspect of this matter, when the Apostle John writes, "In the beginning . . .," that is his referent. God, the Creator of the universe, is a sovereign cognitive principle, and therefore a sovereign personality, which existed "from the beginning." So, following Vernadsky's reading of what he called "natural products," did the universal principle of life. So, by virtue of an implication I shall clarify here, did Jesus Christ.

In other words, nothing exists outside the universe so defined. There are no higher gods, above the Almighty. Do not waste your breath, or my hearing, speculating upon the existence of "Hollywood sex-tra-galactic wonders" or other lunatic concoctions!

There is, however, a deeper aspect to this same matter. People whose moral-cultural development has not yet



The “Big Bang theory” is a purely fictional concoction, existing only outside our universe, merely a pathologically imagined entity, like the “little green men under the floorboards” alleged to run the universe. Here: A spiral galaxy in the constellation Ursa Major.

reached the level of true adult maturity, attempt to explain what they call “the universe” in terms of moment-to-moment personal experience of sensible objects and related passions, that in clock-time. Such immatured individuals think of clock-time as lying along a uniform, simple straight line, backwards and forwards, without limit.

That delusory, but popular misconception of the meaning of “time,” therefore insists, by deductive logic, upon the notion, that to say “In the beginning,” implies the existence of time in some clock-time preceding “the beginning” of the universe. One popularized example of that kind of childish delusion, is the so-called “Big Bang theory.”

The “Big Bang theory,” closely examined, proves, on scrutiny of the literature, to be a purely fictional concoction, existing only outside our universe, merely a pathologically imagined entity, like the fictional “little green men under the floorboards” alleged to run the universe, or like the fabled new suit of clothes of Andersen’s fictive Emperor. It is a bad mathematician’s gruesome fairy-tale, concocted on the basis of purely arbitrary assumptions, which were built into empiricist theories of taught thermodynamics by the mid-Nineteenth-Century founders of the radically reductionist school, a hoax associated with such textbook names as those of Claudius, Grassmann, Kelvin, et al.

In the real universe, such simplistic statistical notions of universal clock-time, do not exist. The delusion that they might exist, is a popularized fantasy of reductionist statistical thermodynamics, which has the same, purely fanciful origins

as the fallacious, geocentric astronomy of the hoaxster Claudius Ptolemy.

It is typical of ideas portraying non-existent realities, ideas which have been concocted to create the appearance of explaining away some devastating paradox in the system of reference, within which those ideas are situated. They are of that infamous quality termed “fictions created to save the appearances of the system.” In this case, what is being defended by that concocted mathematical sophistry, is the Descartes-Newton ivory-tower system of mathematics. It is a fallacious fiction which lures the credulous into belief, through the deductive chicaneries of certain axiomatically bad mathematics, a “Kafkaesque” sophistry which was designed, as what is often called “spin,” a made-up “explanation,” in defense of a sophist’s blind faith in a non-existent universe.⁴⁶

Specifically human action upon the universe, is limited to the function performed by the cognitive act of discovery of experimentally validatable universal physical principles. As the accumulated number of these known principles increases, and as society develops better modes of cooperation in use of those discoveries, man’s power in and over the universe increases. This increase accounts for what Vernadsky references as the physically measurable *natural products* specific to the noösphere. This is the same process which, both, forms

46. “Mommy, I admit it would have been wrong of me to drown baby sister in the bathtub, but since you were not supposed to look, you have to testify that you know her death was an accident!”

the basis for my original discoveries in physical economy, of the 1948-1951 interval, and the process which led me to adopt the world-outlooks of both Vernadsky and Riemann.

The mathematical-physics distinction of the human being from lower forms of life, is that the human mind's knowable cognitive processes, the same processes which Kant denied to exist, cause human behavior to produce effects of the type Vernadsky classes as "natural products," within and upon the universe, "natural products" which, as effects, are not generated in any other way, which are not effected by the action of any other kind of species.

The characteristic feature of that specific quality of action, is the willful increase of the equivalent of the potential relative population-density of the human species, in a manner and degree which does not occur in any non-human living species. The characteristic form of human action, by means of which this qualitative difference is expressed, is those qualities of discovery of experimentally universal physical principle which are typified, inclusively, by Kepler's original discovery of universal gravitation, and Leibniz's original discovery of the calculus.

That far, what I have written here does not go beyond the bounds of science as situated within the implied bounds of Vernadsky's definition of a noösphere. Nor, other matters taken into account, does it go beyond Riemann's definitions of a multiply-connected, hypergeometric manifold. What has been supplied, more or less uniquely, by me, consists of, chiefly, three points.

First, although Vernadsky's work begs for its recapitulation in the form implicit in Riemann's work, that recapitulation was not accomplished, at least that is the impression according to all indications available thus far. My approach to the issues of the noösphere requires that that recapitulation be made. Second, although Riemann's method opens the door for the admission of the higher categories of life and cognition as qualitatively distinct categories within a universal, multiply-connected manifold, he does not make that specific connection. Third, neither Vernadsky nor Riemann actually take into account the equivalence, between the social category of the discovery and application of universal physical principles of Classical artistic composition, and the notion of the discovery and application of universal physical principles in general, a distinction which is a central, unique feature of my own discoveries.

The specific distinction of my discoveries, as considered from that vantage-point, is the notion of an efficient physical principle of *cognitive space-time*.

Cognitive Space-Time

The distinction of universal physical principles, from sense-impressions as such, is the crucial basis for the definition of human knowledge. This distinction defines the notion of *cognitive space-time*.

It was already the central feature of the entirety of the Classical humanist world-outlook, as typified by Plato's work, that experimentally validated universal principles can not be perceived in the form of simple sense-perceptions. As the famous allegory of "Plato's Cave" illustrates this point, what we perceive as sense-perceptions, are as shadows cast upon the irregular surface of the wall of a dimly firelit cave. Sense-perception does not show us the actual object which causes the shadow. To discover that object, we must prove the latter's necessary existence through the method which Vernadsky associates with his sense of "natural products," a proof which includes the requirement that this knowledge enables us to control efficiently the relevant kinds of those projected shadows called sense-impressions.

These discovered and proven objects of the mind, insofar as they are demonstrated to be efficient means for controlling the physical world around us, are called *Platonic ideas*; experimentally validated discoveries of universal physical principles, are such Platonic ideas.

This conception of reality, as distinct from mere sense-impressions, is in absolute opposition to and distinct from both the teachings of the Greek sophists and also that Romantic world-outlook which continues to pollute globally extended European civilization, still today. Empiricism, Cartesianism, Kantianism, pragmatism, positivism, and existentialism, are varieties of the Romantic world-outlook. All of my quarrels, as against the empiricists and their followers within the domain of mathematics and physical science, as I have referenced those issues here, are a reflection of that axiomatic controversy between the Classical world-view, which I have adopted as my own, and that of adherents of the pagan Roman tradition, my opponents.

My most essential work has focussed upon exposing the nature of such discoveries of Platonic ideas. Those amendments which I have made to Leibniz's original, 1671-1716 development of the branch of physical science called physical economy, are each and all the outcome of my essential discoveries, as first developed over the course of the 1948-1951 interval.

This chasm of difference between the Classical and Romantic methods, is the practical expression of two irreconcilably opposing conceptions of man and nature. It is only within the first conception, that of the Classical humanist world-outlook, the outlook from the prominence of Platonic ideas, that the notion of natural law exists.

It is only from the Platonic, Classical standpoint, as typified by the Gospel of John and Epistles of Paul, that the notion of the common good, or general welfare exists. Outside the Classical viewpoint, man is treated, under law, as the currently customary majority of the U.S. Supreme Court has done, as merely another beast, as expendable morally as mere cattle may be expended by even the capricious whims of the Roman Colosseum, under the principle of "slaveholder

value,” or, similarly, the prescriptions of “shareholder value.”⁴⁷

From the standpoint of physical scientific method, the essential difference between man and beast, is located entirely in the human individual’s sovereign powers of cognition. In other words, the sovereign power of the individual mind to discover a true Platonic idea.

The crux of the proof of the conclusions I submit here, is situated within identification of the common features of both an original, validatable discovery of a universal physical principle, and the communication of that discovery to another person, that by no other means than inducing a replication of the original act of discovery in the mind of a second person. It is the implications of these aspects of the cognitive process, which define the unique nature of the human individual, and his or her immortality, as distinct from the nature of all lower forms of life.

Inevitably, I have summarized the relevant argument in numerous public locations, over the course of decades. I summarize it again, as briefly as might be allowable, here.

The crux of the issues so posed, is the following.

By definition, any validated universal physical principle, can not be directly experienced by the senses. Our senses present each of us with the shadows, not the substance of reality. For that reason, the ability to discover a true universal physical principle lies within that perfectly sovereign mental quality of the individual, which is opaque to the sense-perceptions of other persons. The discovery of an idea by one person can be communicated to another, only by inducing the reenactment of the original discovery within the sovereign cognitive processes of the other.

The epitome of such transmission of valid discoveries of universal principle, from an original discoverer, to another person, is recognizable as the axiomatic principle of the Classical humanist mode of education. This mode of intellectual interaction, viewed as a process extended over successive generations, is key to the mastery of the subject of history. The essential history of mankind, as distinct from what might be termed the mere spin-doctor’s explanations of history, is

47. For example, the doctrine of “textualism” professed by U.S. Supreme Court Justice Antonin Scalia, a nominal Catholic, is otherwise the characteristic of the so-called “literal reading of Scripture” among the most lunatic “know-nothings” from among typical U.S. “Protestant Fundamentalists.” The perverted victim of that delusion imposes what he or she insists is his rightful “literal interpretation” of about as much of any piece of Scripture or simple printed trash on which his stunningly brief attention-span is able to focus at that moment. The idea that he should be obliged to actually think, and be held responsible for a knowledgeable and rational reading of the writing in context, is received with that populist’s red-eyed hatred focussed against the meddlesome offender. This same pathological world-outlook is also typical of devoutly atheistic, and passionately “anti-intellectual,” leftist soap-box orators, whose chief skill as agitators, is their habit of concocting an off-hand literal interpretation of almost anything, on the proverbial spur of the moment.

the social process of transmission of valid discoveries of what are equivalent to Platonic ideas of principle, even across the distance of thousands of years, or more, from one original discoverer, to an individual person living today. A competent notion of time is defined in that frame of reference.

Relative to the standard implicit in the notion of a mathematical physics, the typical way in which a discovery of physical principle may occur is the following. (As I have detailed this in earlier publications.) I emphasize, that this following illustration is only the most readily considered of typical forms in which validatable discoveries of universal physical principles occur. Nonetheless, all other cases are comparable in effect to this one.

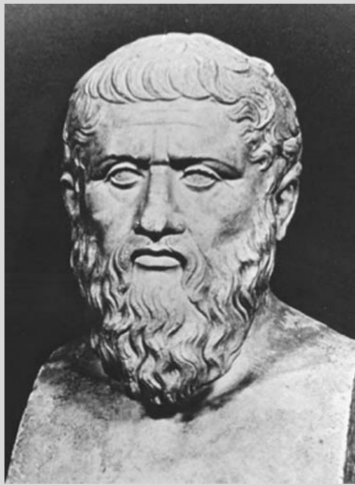
In the case, that the application of some specific mathematical physics to two equally valid experimental demonstrations, produces mathematical expressions of the compared results which are mutually contradictory, the two statements have assumed the form of an elementary statement of a proposition in the form of what is called *Analysis Situs*. Either the two results are mutually, directly contradictory, or the contradiction between them lies in the fact that, apparently, two inexplicably different results may be produced by the same mathematical-physics schema. In either case, the contradictory implications of the two statements, have the quality of what is called an *ontological paradox*.

Take the case of the regularity of the Mars orbit, which became the crucial point of difference between Tycho Brahe and his sometime collaborator Johannes Kepler. A more careful correlation, by Kepler, of the observations in question, showed what we call, for convenience sake, today, the elliptic orbit of Mars (in particular), but also the impossibility of predetermining both the exact future position and velocity of the planet in its orbit from the basis provided by a connect-the-dots, statistical mathematics. Hence, a truly Classical ontological paradox.

Furthermore, although Copernicus’ imitation of Nicholas of Cusa, in adopting the solar hypothesis, was not only correct, but a correct reading of the astronomy of the pre-Claudius Ptolemy Classical Greek astronomers, otherwise, the systems of Ptolemy, Copernicus, and Brahe, although differing greatly in particulars, shared the exact same defect in mathematical method.

Since the non-uniform curvature of the orbit precluded simple mathematical predictions, how did the planet know, in advance, where next to go, and also at what speed? Where, said Kepler, lay the planet’s *intention*? Thus, as I have emphasized earlier, the solution, as provided initially by Kepler, lay in the discovery of a universal physical principle, the principle of universal gravitation.

Reduced to essentials of principle, all validatable discoveries of universal physical principle, occur in the same general form. 1.) The use of experimental methods to generate an ontological paradox in an existing equivalent, or analog of a



Plato
(Greece,
ca. 428-348 B.C.)
*The founder of modern
scientific method.*



**Johannes
Kepler**
(Germany,
1571-1630)
*The founder of both
astrophysics and
modern mathematical
physics.*

mathematical physics; 2.) The generation of a solution, in the form of a newly discovered, or rediscovered technology, or universal principle, from within the sovereign cognitive capabilities of an individual mind; 3.) The replication of the original experiment and act of discovery within the sovereign cognitive powers of another individual; 4.) The sharing of this experience, in a sufficiently broad way, within a society, to permit the discovered principle to become a subject of the cooperative practice needed to bring the use of the principle to fruition.

That, in the simplest possible way, is what should be understood as the act of discovery and social integration of a validatable universal physical principle. This method is the foundation for the Classical humanist mode in education, including one's own self-education.

In the process of developing mankind's increasing mastery of the universe, there is a certain ordering in the determination of which discovery must tend to occur, first, and, as

second, which is likely to occur only in the changed environment brought into existence by the prior discovery.

Since the increase of mankind's potential relative population-density, as measured per capita, per square kilometer, and in terms of demographic characteristics of populations, is the result of man's increasing mastery of the universe through the application of valid discoveries of principle, the following must be said of the notion of time.

The fact that a person deceased thousands of years earlier, may contribute to the development of the practice of present generations, and the similar impact of valid discoveries by present generations upon generations yet to come, defines human relations in a different way than the utopian, ivory-tower teaching of "Euclidean" space-time at the blackboard might suggest. In this process of increase of the potential relative population-density of our species, there is an ordering principle, in the sense of a sequence of discoveries of principle, but the action associated with the combined generation



**Louis
Pasteur**
(France,
1822-1895)
*His work led to the
discovery of the
principle of life, and
the later work of V.I.
Vernadsky.*



**Vladimir I.
Vernadsky**
(Ukraine and Russia,
1863-1945)
*A world leader in the
development of nuclear
science and the
founder of the science
of biogeochemistry.*

Gottfried Leibniz

(Germany, 1646-1716)

The original discoverer of the calculus, and the forerunner of Kästner, Monge, Carnot, Gauss, Dirichlet, and Riemann.



Bernhard Riemann

(Germany, 1826-1866)

He made the revolution in physical geometry upon which subsequent net progress in modern physical science has depended.



and transmission of those discoveries defies the simplistic notions of clock-time.

In a Classical human mode of education, the object of the process is to bring the mind of the student into an immediate proximity to the act of original discovery even thousands of years earlier. Relative to that mode of education, every contrary policy governing learning is relatively bestial, and cripples both the technical and moral qualities of performance, and sense of personal identity of the student.

The outcome of a conscious apprehension of these implications of a Classical humanist mode in educational policies of practice, is a comprehension of the relationship of mortal body to immortal soul. The soul is located in its cognitive existence, as rising above notions such as those of mortality's clock-time, to a mind existing within a relative simultaneity of eternity.

Take, for example, an adequate performance of J.S. Bach's *St. Matthew Passion*. In such a performance, the con-

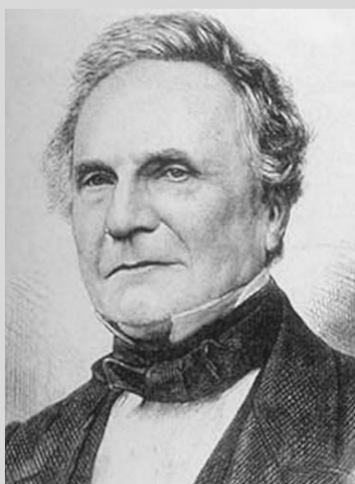
gregation, in particular, participates in the living cognitive experience of Christ's Passion, as if one were there. In a similar way, all great Classical tragedy and related forms of drama, have the same quality of purpose, and meaning. The importance of fidelity to historical specificity, as in the case of the *New Testament*, or, allowing for the defects which Plato rightly recognized in the great Classical tragedies of early periods of Greece, is a matter of the necessity for truthfulness in all Classical art. The function, as in Classical human education in general, is to bring the mind of the audience into proximity to the reality of a cognitively significant occurrence in a specific time and place of earlier history.

The highest form of such Classical drama, is, indeed, the Passion of Christ adduced from *New Testament* sources. Here, as in Plato's figure of Socrates, dramatic accounts rise above the level of tragedy, to what historian-dramatist Friedrich Schiller identifies as the principle of the sublime, as his *Joan of Arc* (and the real-life Joan) typifies this principle,

Charles Babbage

(England, 1792-1871)

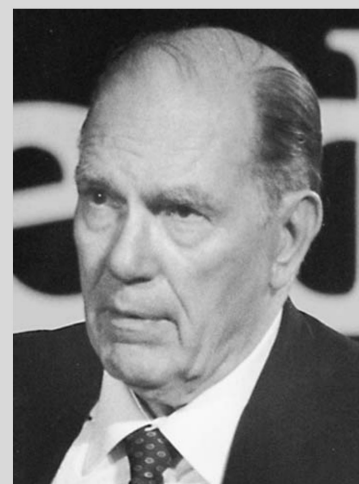
The Leibniz follower who discovered the modern mathematical design for the digital computer, and who, with his collaborators, brought about the dumping of the useless Newton version of the calculus.

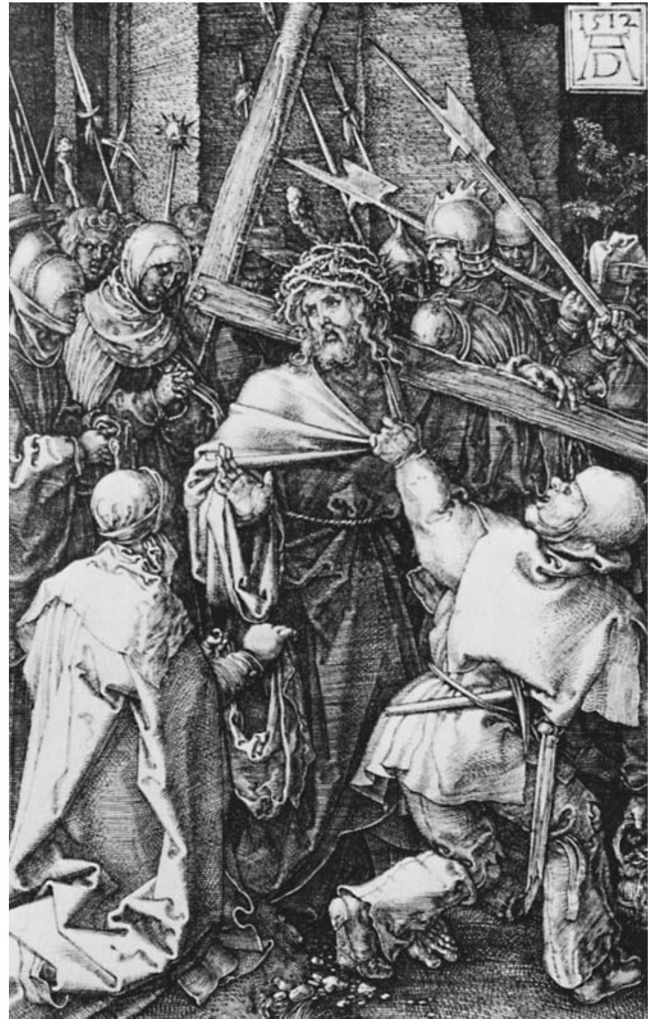


Lyndon H. LaRouche, Jr.

(United States, 1922-)

A follower of Leibniz, who has emerged as the leading physical economist of the world today.





The highest form of Classical drama is the Passion of Christ, as portrayed here in etchings by Albert Dürer, "Ecce Homo" (left) and "Bearing of the Cross" (right).

and as Mozart's opera *La Clemenza di Tito*, similarly, not merely typifies this, but makes the small-minded heathen uncomfortable with its performance. So, in education, in science, we must build our cognitive powers into a condition in which we embody in ourselves, a re-creation of many among the greatest cognitive experiences of all known humanity before our time. Such may be truly called the proper, Classical education of the soul.

So educated, we act in the present to make the past more fruitful, and the future possible. As should be suggested by a viewing of Raphael Sanzio's *The School of Athens*, in the Classical educated mind, the student has achieved a higher moral level of existence and action than among those educated by different, and therefore inferior methods. Important minds, whose mortal existence represents millennia of the history of ideas, live within our consciousness, where we may speak with them, they among one another, and they to us. This

collation of the minds of the past, we know as the quality of conscience. We must do nothing shameful, by commission, or omission, in their minds' eyes.

It is this transmission of ideas which transforms the discovery of principle by the individual, into a factor in the relationship of the society, as expressed in demographic, per-capita, and per-square-kilometer terms, to the universe as a whole.

That much said in the intervening exposition, now return attention to the relativistic concept of cognitive space-time. The kernel of the issue is the following.

The only meaningfully human form of action upon the universe, is those specific qualities of action by means of which mankind transforms its functional relationship to that universe.

The essential such action, is the validated discovery and practice of a universal physical principle. These changes are

not simply additions to a pre-existing repertoire. The universe is multiply-connected in the Riemannian sense. This has the essential implication, that the addition of a new principle to the manifold results in a change in the characteristic “curvature” of the manifold as a whole. This means, that the value, the impact of each such discovery, changes the value of each previously established type of action within the thus-unfolding manifold.

So, for example, a successful such change within the technology of a society, will tend to increase the effective productivity of even those forms of action which are not themselves changed otherwise. So, a genuine improvement in the basic economic infrastructure of a society, increases the productivity of otherwise unaltered modes of productive action within the society as a whole. By definition, no mathematical model of the Descartes-Newton type could represent such connections and effects.

In that same general sense, it is the human activity which expresses the change resulting from applied discoveries of principle, which is the form of human action which expresses explicitly the difference between the human species, and all others. It is the form of human action, which defines the characteristic quality of the functional relationship between the human species and the universe.

Thus, those transmissions of ideas, by means of which the fruits of cognition increase man’s potential mastery of the universe, are the form of action which defines man’s efficient relationship to the universe. Thus, the notion of relevant connections between the discovery contributed by a figure from thousands of years earlier, become functionally immediate relations within a simultaneity of eternity, in which only functionally defined order, not mere lapse of time, defines the meaning of time.

This notion of the functionally relativistic conception of time, should be assessed, as but a step beyond the implications of the successive work of Kepler, Fermat, Huyghens, Leibniz, Bernouilli, et al., in defining the pathway of least action in terms of Fermat’s notion of a pathway of quickest action, rather than shortest distance, and Leibniz’s development, out of his original creation of the calculus, of intermeshed principles of universal least action and monadology.

In general, this means, that we must discard all ivory-tower notions of physical space-time, all classroom varieties of so-called Euclidean or quasi-Euclidean notions of space, time, and action. We must insert no definition, axiom, or postulate into our thinking, which does not have a provable, experimentally validated existence as a universal physical principle.

The distinction between the customary classroom mythology respecting the meaning of the term “physical principle,” and the true meaning we emphasize here, is indicated in an adequate way, by reflection upon Vernadsky’s definition of implicitly measurable natural products of respectively non-living, living, and cognitive modes of action, as I have done

through my own elementary discoveries in the science of physical economy.

Thus, on a directly related account, the inherent fault in a purely technical education, is that it presumes that the relationship of man to nature, is essentially individual, rather than social. This was a difficulty left unresolved in Vernadsky’s view of the noösphere, for example.

The individual functions with respect to nature, essentially through society. Thus, the functions which approximate the effect of Classical humanist modes of education, and a corresponding Classical view of the cognitive history of a society, or mankind in general, are the medium upon which the individual contribution to mankind’s mastery of the universe depends. On this account, the mastery of Classical principles of artistic composition, and that application of that artistic view to history and politics, is indispensable for human progress.

The Miracle of Sovereignty

The relationship among cognition, individual personal sovereignty, and efficiently principled intention, is expressed by what Vernadsky termed the production of the natural products of the noösphere. It is the universe’s submission to the intention represented by such discoveries, as Vernadsky writes of the natural products of the noösphere, which speaks, like stones, to man’s natural relationship to both the universe and its Creator. It is that relationship which expresses the intention of that process which the Christians call *redemption*. The human individual is created to be good, but must be developed, from conception, into that adult form in which that good becomes an efficiently expressed intention, as through aid of appropriate forms of family life and education, preferably, Classical humanist modes of education, to bring that seed of goodness to harvest; that harvest, is both the *redemption* of the talent of the individual, and of mankind.

Terms such as “knave” and “churl,” arise in language to denote that depraved condition into which ruling oligarchies and their lackeys, who have been, usually, themselves depraved by profession, hold those subjects which they treat as virtual cattle. The idea, that man of so-called “common birth” and “common estate,” is naturally foolish and evil, is a condition of the victim desired and fostered by the oligarchy and its lackeys. The idea that man is naturally wicked, debased, is a reflection, not of man’s nature, but of the practice and intention of the oligarchical classes and their lackeys, down through the ages.

How could it be, that the noblest creature in all creation, the human individual, could be seen as axiomatically, innately debased, evil? This could appear to be the case, only if that individual were debased, as into a parody of a beast, especially into the likeness of a beast of imbued feral predilections, as the evil which was pagan Rome and its public opinion (*vox populi*) reduced the population to hyena-like predators in the spectators’ seats, and the victims in the



William Hogarth, "A Midnight Modern Conversation," 1732. "The idea that man is naturally wicked, debased," writes LaRouche, "is a reflection, not of man's nature, but of the practice and intention of the oligarchical classes and their lackeys, down through the ages."

arena, into beasts to be slaughtered.

For example, this view, of man as inherently wicked, as that view expresses the practice of oligarchies, is sometimes reflected into perverse parodies of Christian teaching and belief. That view expresses the intention of the oligarchs, that their virtual chattels shall believe themselves to be the mean creatures such doctrines describe them to be, and so be content to submit to that status. Thus do oligarchies create, as substitutes for history, curious fables and mythologies, which, as popularized opinion, serve as ideological shackles more effective than steel ones, on the mind of the intended victim.

The teaching, that man is inherently base, has the collateral effect, of course, of licensing all sorts of depravities as unavoidable expressions of the supposedly natural human moral condition, in the ranks of the oligarchies and their lackeys, alike. More and more, today, the mass media and entertainment spectacles celebrate that depravity as the natural wont of the human creature, slave, lackey, and oligarch alike.

The ancient cultures of Mesopotamia were essentially evil on this account. So was the Delphi cult of the Pythian Apollo, or its show-case society, Sparta. Such was the depravity of the culture and continuing modern legacy of pagan Rome. Such was feudalism. Such were the actions taken to delay the emergence of the modern sovereign form of nation-state. Such was the Confederacy, and were all those evil creatures who condoned the slaveholder system then, or its memory today. Such were those celebrated revivalist tent-meetings of

the Fundamentalists, within whose environs more souls were conceived than saved.

This debasement could occur, only by suppressing the development within the individual, and among the members of society, of that quality which defines men and women equally as made in the image of the ultimate good, the Creator.

The redemption of mankind from what might otherwise become a debased condition, requires the satisfaction of three general kinds of preconditions. The development of the individual, as the goals of Classical humanist education typify this, and as a Classical artistic culture, as opposed to a Romanticist one, fosters the expression of the natural nobility of the individual member of society. Second, the basing of the ruling practice of the society upon that intention which corresponds to man's nature as a cognitive being. Third, is the submission of the institutions of society to what is called natural law, to the intention to foster in each and all persons those conditions of life, practice, and development which are consistent with man's nature as a creative, which is to say cognitive being, and thus a creature made, and made to be in the image of the Creator.

Two ideas are of the utmost importance in this connection. By that, I mean to emphasize, that just as the universe is run by those intentions we call universal physical principles, so society, and the individual within it, must be governed by intentions consistent with the nature of matured, specifically human intentions. It is the latter, which shape the practice of

the individual and society, as universal physical principles predestine the fate of planets. One of the two necessary human intentions, is the notion of the difference between the mortality and the immortality embodied within one and the same living human individual. The other, is the hard proof of the nature of the Creator Himself.

The generation and transmission of valid cognitive ideas of principle, across many generations, typifies the essential access to immortality of the individual person, a quality lodged within the mortal individual, but whose efficient reach is extended into the remote past and distant future. That idea of one's individual self, the self which must emerge from that flirtation with insanity called adolescence, will and must determine the role of the individual in society, in history. This is in the nature of functionally indispensable ideas, indispensable, ruling intentions.

What of the Creator? From ourselves, we may and should learn, that the power of creativity, as we associate that with those discoveries of principle upon which scientific progress depends, occurs only as a quality of the sovereign cognitive powers of the individual personality. When we speak of God as the Creator, or, as Plato does in his *Timaeus*, the Composer, either we are chattering nonsense, or, if not, we are imputing to God that characteristic of creative action which we reference as comparable to our experience of creativity within our own sovereign cognitive powers and personality. Unless we mean Creator in the sense of that personal cognitive experience to which we have immediate reference, our use of the term "Creator" would not be true testimony, but only superstitious babbling.

Do we then, mean God in the image of man? Or, do we not mean nothing more, nor less, than what we actually know, man made in the image of God?

There is one final point to be added on this second idea. From the principle of cognitive creativity, as we know it, and can validate its claims to efficiency, God is a sovereign personality, as Plato indicates in his *Timaeus*. We can actually know nothing to the contrary in this matter.

These two ideas, situated in the context of the other matters addressed before this point in our present report, express the notion of *agapē*, the notion of natural law. Our intentions, our actions, individual and societal, must be in accord with those two ideas.

Now, look at the way in which this functions in the national economy of a sovereign nation-state.

2. Economics and the General Welfare

The origin of a systemic discipline usefully named "economics," is located within the related work of Gottfried Leibniz over the span 1671-1716.

Admittedly, the roots of what emerged as Leibniz's founding of economics as a branch of science, are to be found in a preliminary form in developments during the Fifteenth-Century Renaissance, and, in what were often identified as cameralist and related practice, into and slightly beyond the Eighteenth Century. These developments, many of which were most valuable, accompanied the emergence of and continued struggles for the modern sovereign nation-state, but they lacked those systematic qualities of notions of principle, which are the required qualities of anything usefully termed "science." Those notions of principle, of economics as science, were introduced by Leibniz.

By physical economy, we mean mankind's relationship to nature, to the universe as a whole. We define that relationship in terms of either humanity as a whole, or, on no lesser scale than certain most relevant, functional interrelations among nation-state economies. No "Robinson Crusoe" or kindred "microeconomic model" is taken seriously, except, perhaps, by the would-be economist's psychopathologist.

The primary measures of what Vernadsky would term the "natural products" of economic processes are, in first approximation, principally three. These first-approximation, physical measurements of performance of national economies are to be made: 1.) Per capita of population, and of its labor-force component; 2.) per square kilometer of the functionally defined surface-area of the nation or nations considered; 3.) as relative improvements in the demographic characteristics of growing populations. In all cases, we measure the changes in physically-defined input-output relations. "Physical" signifies, as that has been qualified earlier in this report, the combined natural products of non-living, living, and cognitive processes.

Any definitions of performance of economies, which do not emphasize each and all of those three sets of acts, are to be expelled as intrinsically incompetent, or even willfully fraudulent, from the outset. Exactly how the application of these sets of facts should be approached, I shall clarify a bit later here.

Next, we must define the way in which that data is to be assessed.

In this next step, we must approach the assessment of relative performance of the economy in a manner similar to Kepler's approach to defining the lawful composition of the Solar System. We must compare the apparent performance of the economy, in the indicated, raw, or semi-raw terms stated immediately above, with the attributable *intention* expressed by the currently ongoing development of that economic process.

Before the close of this report, I shall provide a summary of an actual policy which I have proposed, to illustrate the practical expression of the relationship between such a notion of the implied *intention* expressed by the existing economic situation, and what may be best termed its expressed change in potential for expressing a still higher quality of *intention*. I

mean potential in what is best described as a “Riemannian” sense.

All of these and other tasks of assessment, must proceed from a single principle, the principle, and, therefore, the purpose of human nature as I have emphasized that, throughout, thus far.

A Crucial Error Among Economists

Scan the relatively saner textbooks and other written materials on the subject of the principles of measurement of performance of national economies, individual enterprises, and so on. Look at these materials with a reflection on what Kepler recognized as the crucial error of method of both Copernicus and Brahe. I ask you to think about the question: What is the most common fallacy of assumption, which leads what seems to be these relatively better, or merely less bad writings on economic measurements, into a foolish reliance on mere statistics similar to that of Copernicus and Brahe?

Let us call this error, as it appears in the economics literature, “The Cartesian Fallacy.” Call it the Cartesian fallacy of all contemporary professional and related accounting practice, and of most among even the relatively more rational economists, too.

The point to be clarified on this account, is that, *in real economic processes, contrary to what is depicted under the influence of that Cartesian Fallacy, the definition of relevant action is essentially cognitive, not algebraic.* That is to say, the objective, and proof of effective economic growth, is the transformation of the present manifold of economic practice of whole economies, from a relatively lower to relatively higher composition of axiomatic principles, axiomatic *intentions*, in Kepler’s sense of the term *intention*.

Up to a certain point, this goal may be reflected in the terms of approximation provided by an algebraic model of measurable economic growth in raw performance, per capita, per square kilometer, and so forth; but, beyond that, such models break down. No longer do the formerly used, standard bills of materials and process sheets serve as reliable tools for estimating relative growth. Qualitatively new definitions of specific requirements must be adopted, reflecting deep-going effects of radical technological changes, such as the vanishing of the formerly commonplace buggy-whip.

The causes for that breakdown in previously established bills of materials and process sheets, have been thus far represented in two alternative ways. One way is provided by the development of the so-called “long wave” studies premised on the argument of the celebrated Russian economist Kondratieff, an argument which continues to be elaborated in Russia’s Academy of Science, as by Academician Dmitri Lvov and his associates, including Dr. Sergei Glazyev. The alternative approach is my own. There are marked similarities between the two approaches; there is, as I shall show, also a very significant difference.

Compare the effects of the two choices of approach, from



Statue of Peter the Great in St. Petersburg. The character of Russia as a Eurasian nation, did not begin with Peter, “but his revolution in political economy set into motion what might be called Russia’s high ‘long wave’ of technological and related development, up to the present time and situation.”

the standpoint of seeking to eliminate what I have just identified as the Cartesian Fallacy spoiling the more serious varieties of today’s and recent economics practice. Pursue that comparison both in what may be termed historical-analytical, and in what may be described as Riemannian terms.

The Russian experience which tends toward the outlook of Kondratieff’s long waves of technology, can be most efficiently traced to the related institutional impact upon Czar Peter the Great of the combined influences of Gottfried Leibniz, and of that same Freiberg Academy which, later, did much to shape the future scientific career of Germany’s celebrated Alexander von Humboldt. From the point of Peter’s second visit to Freiberg, this time as Czar, the development of science and economic thought in Russia travels a sometimes rocky road, but a road whose overall direction and controlling sense of mission have an ultimately clear and definite intention. In the history of Nineteenth- and Twentieth-Century Russia, the names of the great Mendeleyev and his onetime student Vernadsky, are outstanding on this account.

It is in this historical context, that the significance and impact of Kondratieff’s concept is to be apprehended. The relevance of emphasis on this point is made clearer, by viewing the trajectory marked by Russia’s scientific and economic



Benjamin Franklin. Russia's economic and scientific development reflected its special relationship to the legacy of Leibniz and Freiberg, and, therefore, to the circles of Franklin and the American intellectual tradition.

development as a specifically Eurasian nation. That character of Russia as a Eurasian nation, did not begin with Peter the Great, but his revolution in political economy set into motion what might be called Russia's high "long wave" of technological and related development, up to the present time and situation.⁴⁸ The role of Mendeleev in the economic development of Russia, especially since his attendance at the 1876 U.S. Centennial celebration in Philadelphia, is exemplary of that continuing trajectory.

It is historically and strategically significant today, to emphasize, that this observable characteristic of the "long wave"

48. There are, in fact, principally two, mutually contrary notions of Russia as a "Eurasian nation." Both are viewed in today's western Europe and the U.S.A., as expressing a land-based geopolitical impulse, but the two are actually directly opposite impulses in their cultural characteristics and implicit objectives. One is that defined by Russia as an assimilationist, "melting-pot" frontier of European civilization; the opposite, the darker, anti-European impulse supplied by the specific cultural effects of the prolonged Mongol occupation. It is the former, as emphasized by the pivotal role of Peter the Great in defining the historic impulse of Russia since his time, which is intended here.

of economic and scientific development of Russia, over somewhat more than three centuries to date, can be summarized as reflected in Russia's long-standing special relationship to the legacy of Leibniz and Freiberg, and, therefore, to the circles of Benjamin Franklin and the American intellectual tradition.

This set of connections is to be recognized, as mediated, most significantly, not only as a reflection of the League of Armed Neutrality from the period of the U.S. War of Independence, and Czar Alexander II's de facto military alliance with President Lincoln's U.S.A., against the U.S.A.'s British enemy of 1861-1865. It is to be recognized in terms of the powerful, Eighteenth-Century impact of Leibniz in shaping the American intellectual tradition, as Leibniz's influence is reflected directly in the 1776 U.S. Declaration of Independence, and through German circles such as those of Franklin's sometime host Kästner and de Vattel, in defining the Hamiltonian definition, as what U.S. Treasury Secretary Hamilton defined as the American System of political-economy.

The impact of the American System, as expressed by the direct influence of the world's leading economist of that time, Henry C. Carey, and of the German-American exponent of the American System, Friedrich List, were explicitly powerful, leading influences in the new, continental-railroad-building phase of development introduced into Russia's economy over the interval 1876-1905. It was against this centuries-long background, that the Russian tendencies toward development of a notion and practice of physical economy, must be recognized and understood. Kondratieff reflects the effects of that long wave of intellectual development in Russia; my own role in respect to foreseeing Russia's available future, especially since my televised Berlin address of October 12, 1988, reflects inclusively the coincidences between the history of that nation and my own native American intellectual tradition.⁴⁹

In this context, the central importance of the work and legacies of Mendeleev and Vernadsky for economic science, especially the science of physical economy, comes into focus. The impact of this legacy in Eurasian Russia today, has world-importance as a crucial contribution to the theory and practice of economic science in today's world as a whole.

The Kondratieff view of modern Russia's internal economic history, emphasizes a pivotal common feature of qualitative successions in technological progress, and in use of what are termed raw materials. Of my principal scientific objection to that view, it can be fairly said, that that view of long waves is, that it is much too fatalistic for my markedly "voluntarist" tastes. My view places the emphasis on what are called "science-driver crash programs" of general, willful economic development. Yes, there are observable "long waves" of technology in modern economy; the difference between my view, and that implicitly expressed by Kondratieff's statements during the mid-1920s, is posed by the ques-

49. See LaRouche, Bad Schwalbach address, op. cit., footnote 5.

tion, whether these are long waves to be followed, as if by a surf-boarder, or waves to be created to occur, by *intention*?

I read the most useful implications of Kondratieff waves, not as prophecies of what will become the case, but, rather, a warning of the possibly terrible things which will surely happen, if we fail, as the Soviet economy failed during the course of the 1960s through 1980s, to generate the “next waves” in a timely fashion.

However, it would be an elementary blunder to leap to the conclusion, that the differences on this account reflect differences between the U.S.A. and Russian historical experience; in fact there are examples of both approaches, the surf-boarders’ and the “science-driver” practice, in Russia’s modern history generally, including the experience of the Soviet Union. We have also, since the 1960s, the miserable, cumulative effects, of a shift from the science-driver policy of the Kennedy space program, to the lunacy of the U.S. Carter Administration, and ruinous effects of the military “double-dippers” “off the military vendors’ shelves” policies of the allies of the late Lt.-Gen. (ret.) Daniel Graham.

Examination of this difference in emphasis helps to put the leading issues of economic thought today into their most relevant focus. This examination is, for several reasons, the strategically most important question facing the planet today.

Where Did All Those Buggy-Whips Go?

As I have emphasized in early portions of this report, the forecasting of developments in real-life economy, confronts the would-be forecaster with a more challenging expression of the same problem addressed by Kepler in treating the problem of forecasting a specific combination of position and velocity for some impending interval of the planet’s travel along its orbit. Kepler’s “equal areas, equal angles” formulation, merely points in the direction to be followed in seeking what will be no worse than a first approximation of a conceptual solution for the forecasting problem.

Let us simplify the statement of this problem somewhat, as a matter of first approximation.

Let us restate this simplified version of the problem in the truly simplistic language of equalities and inequalities. For this, return now to the three classes of data: per-capita, per-square-kilometer, and demographic characteristics of populations. Assume that the population grows, while the demographic characteristics of the population and its households are improved. Assume that the per-capita physical consumption and output of the economy as a whole, increases, but that the ratio of output to input is either constant, or rises. Assume that these improvements in performance occur with a reduced per-capita, per-square-kilometer requirement. What, then, are the conditions, under which this set of inequalities might be satisfied? Those estimated conditions identified, what are the processes of change in composition of the physical products and activities used to determine per-capita and per-square-kilometer input-output relations?

What happens, when the buggy-whips are gone?

Assuming those challenges are met, we are then faced with a more profound challenge. Once we had satisfied the set of questions just implied, we would have accomplished no more than to describe some possibilities. What transforms mere possibilities into actualities? This, in turn, obliges us to face a still deeper question. What drives such an array of possibilities and actualities into the equivalent of a regular orbital pathway? All of the problems faced by Kepler are replicated, but on a higher level.

Earlier in this report, and in previously published locations, I have already identified the essential principle of action which underlies the process we are now considering. The action which underlies the desired transformations, is cognitive action of the class typified by the discovery of new, experimentally validated universal physical principles. I emphasize “typified,” because, as I have already emphasized, earlier in this report, we must include the discovery of validatable universal principles of Classical artistic composition, the principles of communication of cognitive insights, as co-determinants, with what are more readily recognized as physical principles, of the transformations in the manifold which subsumes progress in a society’s potential relative population-density.

For that context, the most crucial consideration, is the role of the relevant principle of action of the system as a whole. That principle of action, is the discovery, communication, and application of the validated discoveries of universal physical principle. In other words, it is a process representable, conceptually, as a Riemannian succession of manifolds, which underlies the principle of change being considered.

This succession has a structure, in itself. This structure has two principal types of components, *universal principles* and *technologies*. I explain.

In the process of constructing what proves to be a successful design of a crucial test of hypothesized universal principle, the apparatus employed will reflect within its design some feature which corresponds to the reproduction of the effect associated with the principle being tested. This feature of the design of such an experiment, is best termed a *technology*, a ruse employed to distinguish universal physical principles from the arrays of mutually distinguishable technologies such principles subsume. This defines the area of competent pursuit and practice of the higher classifications of machine-tool and related work. It is the combined array of principles and technologies, which provides the controlling interface between what society is intellectually equipped to undertake, and its development of the practical means needed to realize the benefit of that knowledge.

This includes what I have categorized as the Classical artistic types of universal principles. For example, the reason for the failure of the collapsing U.S. economy today, is not the previous lack of existing principles and technologies, but the ideologies which control the practices of government and

other institutions, including those ideas, more or less rampant within the population, which prevent society from taking effective action to solve problems, even when the technical means for effecting a solution might be readily at hand. For example, belief in such absurdly false principles as “free trade” and “globalization,” is at the root of the past thirty-five years’ process of self-destruction of the once-powerful U.S. economy, an economy which had, formerly, all of the scientific and other technical potential for limitless growth.

Thus, the first step in assessing the future prospects of a physical economy, is to take into account the likelihood of relevant actions, for better or worse results, of the ongoing process of generation, dissemination, practice of an unfolding repertoire of both universal physical principles and technologies, and ideas of social practice which steer the development and use of physical principles and technologies.

Next in significance, after the three types of raw considerations already discussed, is the changing composition of the society’s social division of labor, with emphasis upon the so-called “structural” composition of employment.

For example, a school-leaving age of between twenty-two to twenty-five years, or the functional equivalent, with strong corrective emphasis upon Classical humanist methods, and Classical artistic principles, would be mandatory for sustaining the level of scientific and technological practice which assured continuing progress, as definable in terms of the three sets of indicated ratios, implies.

This would mean a drastic reduction in cheap-labor employment in services, in financial and related services, and in non-professional categories of services generally, accompanied by consistent upgrading of the technological quality of employment directly in production and physical distribution of goods, and a rapid growth in the categories of what is presently called physical science and in machine-tool or related categories. This would also require an improved standard of living in households, including a reversal of the destruction of family-function-centered neighborhood organization which has occurred, in the U.S.A. for example, over the course of the recent fifty-five years.

This would mean rapid increases in the energy-flux-density of the economy as a whole, with heavy relative emphasis on production and distribution of goods.

All of these measures would be strongly affected by the factor of the approximate twenty-five-year lapse of time, between the birth of a child and its appropriate maturation to state of full, truly adult development of the personality (as distinct from the increasing tendency, within the U.S. in particular, to increase the entertainment-sodden rations of adolescent, childish, and even infantile personalities among biological adults).

It is in those kinds of trends in education, organization of family life, and employment, that what a Kepler would recognize as the *intention* of a society’s economy, is expressed.

To restate the same point in other words, we have the following. We have the possibilities embedded in knowledge and the continuing process of generating and proliferating new knowledge. We have the cultural goals associated with that spread of knowledge. We have the possibilities for initiative, based upon that knowledge. We have the constraints upon action, represented by, combined, the current rates of physical output, the investment in basic economic infrastructure, and in means of production. We have thus, in this and related ways, the combination of a capacity and intention for action. Within this, we single out the intention for cognitive action. Then, we have the factor of cultural influences tending either to enhance, or depress the desired process of net growth.

To forecast effectively, the would-be forecaster must, therefore, have something approaching an encyclopaedic overview of all of these interacting considerations, including those usually classed as physical-technological considerations. There is no digital computer, or related formula, by means of which a competent form of so-called “objective” forecast could be generated for scoring. Only the sovereign cognitive powers of the individual human mind, can encompass all of the leading considerations which enter into such estimates. Nonetheless, I have demonstrated repeatedly, and consistently, over now more than forty years, that such methods of what is essentially long-range forecasting (over a decade or more) are, on the one hand, as precise as forecasting can actually be, and do produce what are not merely, relatively very precise estimates, but, far more important than that, precise indications of decisions urgently to be made, and the consequences of failing to do so.

The human mind, properly developed to maturity, is the most effective computer mankind could ever possess.

Infrastructure and Biosphere

Certain implications of the proof of this can not be avoided. Life is a universal physical principle, distinct from what is ostensibly a non-living universality. This means that the principle of life was not something which evolved out of non-living processes, but a universal principle which has always been actively and efficiently present in the universe as a whole.

There are many things about this yet to be determined; but, we have more than enough to chew on from what is already proven. What we do not know, for example, is at what level of the equivalent of energy-flux-density might what we presently regard as living processes exist. To clear away possible confusion on the implications of this point, return attention to the notion of *intention*, as Kepler’s use of that notion implies.

The characteristic of the Riemannian manifold, as implicit in the work of Vernadsky, is that *the existence of intention precedes the occurrence of that which is intended*. Consider the following points of illustration. Some of this

involves reasonable speculation from generally accepted knowledge; but, the factor of speculation cancels itself out in a way which I shall identify. Most of my conjectures respecting the “history” of the Solar System, here, I “batted around” with my friend Professor Robert Moon, during our discussions on this matter during the middle to late 1980s; some of the crucial points, respecting fusion, were discussed with specialists at Lawrence Livermore Laboratories, during that same period.

From Kepler’s astrophysics, we may adduce that our Sun was once a much faster-spinning body. At some such past time, the Sun threw off a fairly large amount of material, thus, in the popular language of some classrooms, “shedding rotation.” Had this been the case in fact, then, a ring-like formation would have accumulated around the Sun, perhaps defining the ancient ecliptic of our Solar System. This formation would have been densely hit by radiation from the Sun, bringing the material in the ring to a much higher state of potential for processes of thermonuclear fusion than in the internal processes of the Sun itself. This would have to occur, according to known fusion doctrine, to produce the periodic table characteristic of the Solar System today; that cancels out at least some of the speculative features of the account.

The result would include the distribution of materials throughout the system, in something which might suggest a fractional distillation. The materials would be distributed, differentially, according, at least approximately, to Kepler’s estimations for the predetermined, as available, orbital pathways within the system.

In that eventuality, the material initially spread throughout the orbital pathway, would be forced to condense, because of the harmonic characteristics of the orbit, forming planets and moons according to Kepler’s estimates, at least in significant approximation.

With the “condensation” of the planets, notably planets such as Earth and Mars, and possibly also what Kepler identified as the missing, but necessary, self-destroyed planet, from which the asteroid belt was formed, the preconditions needed for expression of the principle of life must have tended to arise, as they did arise on Earth. This brings me to the point bearing upon biosphere and infrastructure. What I have said during those several paragraphs, contains significant hypothetical speculation, but I have introduced it, nonetheless, for pedagogical purposes. My purpose is, to describe the kind of situation which we do know as the setting for the development of the biosphere. At this point, the included element of speculation ends.

Once we establish the principle, that life is a distinct class of universal physical principle, not sprung from non-living processes, certain conclusions follow. Vernadsky’s approach to the reading of the significance of natural products, is referenced.

In a developmental process, of the type represented im-

PLICITLY by a Riemannian manifold, the existence of established conditions (such as may be represented by certain arrays of natural products), makes it feasible for the principle to express itself as certain species and varieties. Thus, going up the scale, we find the preconditions for the sustenance of human life created as natural preconditions corresponding to an appropriate array of natural products of the biosphere. At that point in the process, we might anticipate the intervention of a pre-existing universal principle of cognition, to bring forth a form of life, distinctly human, and distinct from all lower species.

That description incorporates, as it reflects what we know respecting man’s relationship to the biosphere. To restate the crucial point, the argument is the following. The argument is essentially the same which Leibniz made, respecting the principled character of the existence of a species of any class, in his monadology. The principled precondition for any class of universal physical principle, always existed in the universe; but, the expression of that principle in any other way, can occur, only as the preconditions for that “activate” the principled potential as an actuality.

That said, and its implications taken into account, functional considerations intrinsic to the science of physical economy, oblige us to regard what we term basic economic infrastructure, as part of the biosphere, whether that is produced without human intervention, or only by human intervention.

Basic economic infrastructure, so defined, has two general, functionally defined sub-classifications. In the simplest case, man causes needed conditions of human life, as through forest management, water-management, sanitation, and so on, to proliferate where the needed conditions would not be developed without human intervention. In the alternate case, such as transportation systems, power production and distribution, and development of urban infrastructure, man adds new types of elements to what human existence at that level of development treats functionally as it treats the fostering of conditions typical of the pre-human definition of the biosphere.

As is most simply illustrated by the role of transportation and production and distribution of power, the development of the biosphere, as including such elements, creates a physical-economic geometry in the economy as a whole. Basic economic infrastructure does more than merely sustain life and necessary productive activities. It has the effect of a change in the Riemannian physical geometry of the economic process as a whole. The included result of this effect is an increase in the per-capita productive powers of labor, even without any improvement in the internal features of that production itself. In other words, the geometry in which the productive act is situated has been changed. The effect is implicitly a change in characteristic curvature of the manifold in which productive activity occurs, such that the net effect, is an increase in the productive powers of labor, even when no change has been



The late physicist Dr. Robert Moon, teaching a class in electromagnetism during the 1980s. A good educational system is typified by the relationship between fundamental scientific research and development, and the machine-tool functions which lead to the design and development of products and production processes.

introduced to the performance of that labor, or the local productive process itself.

These two combined types of willful changes in the biosphere are measurable, at least implicitly so, as natural products of the noösphere.

The Productive Process As Such

Although a similar case is to be made for the way in which investment in production of goods affects productivity, there is a twofoldly crucial distinction between those elements of the biosphere introduced by the noösphere, and those aspects of the productive process which are typically, and rightly, the customary province of private investment.

The immediate responsibility of society for the development of basic economic infrastructure, is derived from the principle of the general welfare. It is the unique, and non-divestable responsibility of government, the sovereign state, to maintain all of the area, and all of the population and posterity of a nation. However, as the American System of political-economy prescribes, in order to foster the freest expression of individual cognitive powers for the benefit of society, it is desirable that private entrepreneurs (preferring closely held enterprises, as distinct from a financial shareholder interest) be encouraged to innovate in improvements in applications of science and technology.

It is that functional distinction of such entrepreneurship which defines the functional distinction between basic economic infrastructure and the (chiefly) privately operated productive processes of agriculture, manufacturing, and so forth.

The functional interface between these two aspects of the

economy, is an educational system which, at its apex, is also a fountain of scientific and technological progress. This function of education as a fountain, is typified by the relationship between fundamental scientific research and development, and the machine-tool functions which bridge the connection between proof-of-principle experiments and the general process of design and development of products and production processes.

Those three components, basic economic infrastructure, private entrepreneurship, and education, come together as the shaping of the physical geometry of the economic process, that to the effect of shaping the Riemannian type of characteristic physical-space-time curvature of the economic process as a whole. The relevant natural products of the noösphere, as basic economic infrastructure, fruits of private entrepreneurship, and the educational process so outlined, define that progressive change in the characteristic curvature of the national-economic and global manifolds, which is the principal source of increases in the effective productive powers of labor.

Thus, the measurement of relative productivity, must take into account the changes in composition of the required inputs to the population, infrastructure, and production, to bring about the desired change in curvature of the economic process as a whole. So, the buggy-whips waste away, while a new composition of the required inputs emerges. Thus, conventional cost-accounting and related practices become worse than irrelevant in the longer term. It is the changes in potential produced by aid of changes in the required composition of the market-baskets of consumption and output, which are cru-

cial. It is not those market-baskets which determine productivity; rather, it is the requirement of increased productivity, as it causes the buggy-whips to disappear for the sake of technological progress, which must determine the composition of the market-basket.

Against this summary description of the background considerations involved, look at the significance of my programmatic approach to a general, global economic revival from the dismal swamp of the recent thirty-odd years trends in U.S.A. and other policy. The following leading elements are indispensable.

1. Attempting to match debts to assets, within a world system as degenerated as this has become, is not merely futile, it would be an exercise in mass-homicidal insanity. We must prepare to sacrifice the greatest portion of the financial creditors' claims, for the sake of the continued existence of civilization. The same principle of U.S. Chapter 11 bankruptcy-reorganization proceedings, which is conducted according to the prior requirements of the general welfare, must be used to save the continued functioning of essential public and private institutions, even at the price of writing off as much as hundreds of trillions of dollar-equivalent of currently outstanding, largely speculative financial creditors' claims. If we do not do this, civilization can not survive for the lifetime of the presently living.
2. The optimal mechanism by means of which this financial reorganization must be effected, would be common action by perfectly sovereign nation-state governments, putting the existing financial and monetary systems into a Chapter 11-style general reorganization in bankruptcy. The model objective of this emergency action, should be to apply the lessons of the successful post-World War II application of the highly protectionist, highly dirigist Bretton Woods agreements to simply transform existing relevant agreements among states, into a reformed institution.
3. A general economic recovery can be effected only with aid of fixed, low simple-interest borrowing costs for medium-term to long-term reconstruction and physical development programs. This shall be accomplished by the use of state-issued purchasing credit, within a new, fixed-exchange-rate monetary system, rather than money loans, buttressed by such firewall defenses as capital controls, exchange-controls, financial regulation, and protective-tariff arrangements.
4. Such a recovery program must have a leading, large-scale science-technology driver. That driver must be centered in a Eurasia-wide, long-term development program.
5. This development program must feature, not only

the most massive infrastructure-development programs yet seen, but also the mustering and developing of science-driver-oriented capital goods production programs, by means of which sectors of the world economy able to aid as fountains of such technology, commit themselves to provide a flow of needed technologies into regions of the world which are relatively technology deficient.

6. Thus, under the only visible, generally workable approach to global economic recovery from the presently looming financial doomsday crisis of the U.S. dollar, there must be a qualitative shift away from the structural changes in composition of employment seen in Europe and North America during the recent thirty-five years, toward a reemphasis on production, and an accompanying, increasing emphasis on employment and investment in the science-driver sectors of "crash program"-driven fundamental scientific research, expansion of machine-tool and engineering capabilities, combined with a reemphasis on employment in relative high-technology, capital-intensive modes of what used to be called, in the U.S.A., "blue collar" production and related occupations.

I must now restate the crucial point of what I have written. Such a revision in global arrangements, is not a "blueprint." It is a policy of action, framed within a few crucial parameters. Of all these parameters, the most essential is the principle of the natural law, of the general welfare. However that, in itself, is still not sufficient. The motive, the required intention, flows from the appropriate conception of the nature of man, and, therefore, of man's functional relationship to the universe at large.

Appendix

Did the Universe 'Begin'?

The following interchange took place at the May 5-6 conference of the Schiller Institute in Bad Schwalbach, Germany.

Q: Man has an amazing capability to understand the universe, and therefore we are in harmony with it. And in the *Timaeus*, what he goes through, is—I think one thing, that definitely has been going through my mind, is why did I assume, that the universe has not always existed? And what Timaeus goes through, is that anything that is perceptible, has come to be; and there is not anything in this universe that hasn't come to be, as far as I can see, except for maybe the ordering, the principles, or the cognition of man that has al-

ways existed. What I wanted to know is: What is the definite distinction between whether the universe has always existed, or whether it was created? And also, what was the intention in creating it? Thank you.

Lyndon LaRouche: It is a good sound question and a fundamental one. . . . Just think about “always.” What do you mean by always? Think about, what we knew, know, and don’t know. Think about, what I did refer to earlier, about this *Scheinprobleme der Wissenschaft* [“Imaginary Scientific Problems,” by Max Planck]. Don’t give ourselves false problems, simply because they apparently fit a formula. What do we know? Not, “What infinite extensions of space do you imagine?” What do we *know*?

When we say universe, what do we mean? In physics, in physical science. What do we mean by universe? We mean, that which corresponds to what we call, universal physical laws.

Now, Vernadsky enhances our understanding of what we ought to mean by the words “universal physical laws,” by his introduction of his concept of the natural products, respectively of the so-called non-living universe, the living processes, and cognition. So, therefore that means, that when any one of these things existed— Cognition existed from the beginning of the universe. Cognition existed as soon as there was a non-living universe. The principle of life necessarily existed, since it is independent of anything else at the point of any notion of beginning.

So, that is the universe. The universe is bounded by this notion of the interaction and multiple-connectedness of three universal principles. [First,] a principle we associate with non-living processes—which is not necessarily entropic. Don’t assume this means entropy; it means processes which we do not identify as being living ones, or can not. [Second,] living processes, which are distinct and experimentally distinct in a universal way, though we have not full proof of that, because we did not treat this seriously enough, long enough. And thirdly, the thing which we ought to know, is that man is the master of the universe. . . .

If man is cognitive, if man can master the universe and can do so by discovery of universal physical laws, for example, then man is made in an image of an individuality, an individual being called the Creator. And there was never anything before that, no universe. But there is no limit on the universe, because it is the universe, because there is nothing outside it.

That is what we know: There is nothing outside or before the universe. To try to find out what it might be, is to pose in one’s mind the appearance of a false problem, the false appearance of a problem. And trying to solve it, is like trying to mine green cheese on the Moon—don’t do it! It is wasted time and it tastes terrible. . . .

So, that is the point. So, the issue here, is to understand our relationship to the universe. We are what? We are made in this respect, because we only embody cognition, we are made each in the image of the Creator of the universe, and we

were always and always will be as individuals connected to the Creator of the universe. That is all there is to it. And we should learn to act accordingly, especially with respect to one another, with respect to other human beings. We are all part of the process of the ongoing co-creation of the universe.

Look, what happened, essentially—Vernadsky gives the answer, with his idea of natural products—the development of the biosphere as we know it on Earth, as Vernadsky defines it with his approach to natural products, occurred in a certain point in the development of the Sun, which is some long time ago, when, according to Kepler’s implicit rules, it was spinning very fast and it was much bigger—not that much bigger, but bigger.

And it spun very fast, and it spun off a ring, like the rings of Saturn, and these rings were much hotter than any part of the Sun, inside the Sun. And from the Sun was coming radiation, more strongly than now. This radiation hit this ring and the ring became hotter and hotter; it was polarized, you know. How do we know that? Because we found 92 elements in the Solar System, and that means, that the Solar System had to have been developed in terms of a planetary system, at a certain energy-flux-density, a certain level of fusion.

Now, what happened, according to Kepler’s laws, the principle of Kepler’s laws, is that this material is spun out from the ring, where the fusion is occurring. And where does it go? It is condensed, like a big fractional distillation apparatus to distill petroleum and its various kinds of petroleum products, motor oil, when you get so much kerosene, so much gasoline, and so force it all to spin off. One of these places it goes to, was called Jupiter, another was called Saturn, and so forth; so you had the planetary orbits. And some of the stuff is spun off and falls through. It goes by the same principles, the same laws.

This is initially very hot. The material of the planets is condensed into planets. The material is distributed first in an orbit, then it condenses, it condenses, it heats up, it fuses, it forms planets at various degrees—no apparent life yet. Then, at a certain point, the planet develops; at a certain condition, the harvest is ready, and living processes, as we know them, begin to show their presence on Earth—at a later stage, the development of living processes on Earth, developing the biosphere. They transform the biosphere. They produce pre-conditions, under which human life, cognitive forms of life, can emerge, including us.

But in a sense, we were always there, and when you think of yourself in your relationship to someone like Archimedes or Kepler, or someone in the distant future, a scientist, in terms of the exchange of a concept between two minds across the great distances of apparent time: You were there, and you will be there, and you are always there, because you are a part of the universe.

That is the universe. There is nothing mystical about that; it may be seen as mystifying to some people, but it is not mystical. That is what we know, that’s what we can prove. And before that and outside that—we call that nothing.