

FIDELIO

Journal of Poetry, Science, and Statecraft



Fall 2003

\$5.00



Petrarch: Reviving the Great Minds of the Past

Francesco Petrarca's world was characterized by horrors that appeared truly apocalyptic: the worst economic collapse in history; the deadliest pandemic; global combat between Christian and non-Christian; religious schism; and constant war and popular insurrection throughout Europe.

Petrarch's lifetime (1304-1374) coincides almost exactly with the transfer of the Papacy from Rome to Avignon in France from 1309 to 1377. This *de facto* kidnapping was one part of a complex controversy that dominated Christendom in the Thirteenth and Fourteenth centuries, over the limits of the secular power of the Papacy to command kings and, more important, levy taxes.

After legal studies, Petrarch took minor orders and became an ecclesiastical bureaucrat serving the Avignon Papacy. As his literary talent became recognized, he was offered a series of sinecures that allowed him to devote much of his time to poetry. In 1336, he climbed Mount Ventoux in southern France, carrying along a copy of his beloved St. Augustine's *Confessions*. At the summit, contemplating his mortality, Petrarch realized that his arduous climb was the metaphor for the remaining years of his life.

Petrarch soon reached a profound understanding: The seeming impotence of humanity to prevent the ceaseless wars and fratricide and political chaos of the time was not the 'will of God,' but rather the failing of man. For hundreds of years, Christian thinkers had ignored a true understanding of the great ideas

of the past that had built civilization, just because those ideas came from 'pagans.' Had not Augustine stood on the shoulders of the ancients, to become the greatest of all Church Fathers? By allowing the great ideas of the past to 'waste and spoil, through our own cruel and insufferable neglect,' wrote Petrarch, we fail 'to cultivate our own talents, thereby depriving the future of the fruits that they might have yielded.'

The arduous climb to which Petrarch committed the rest of his life was to end the dark period of human ignorance, and bring alive again the mental life of all the great minds of the past.

[SEE *'The Renaissance and the Rediscovery of Plato and the Greeks'*]

Benozzo Gozzoli, 'Journey of the Magi,' 1459 (detail). The fresco subject was chosen to celebrate the 1437 Council of Florence, and portrays the gathering together of the Council participants from both the West and the East, in their attempt to unify the Christian churches on the basis of newly revived Platonic theology. The Orthodox Patriarch of Constantinople appears on horseback to the left.



FIDELIO

*"It is through beauty that one proceeds to freedom."
—Friedrich Schiller*

Vol. XII, No. 3 Fall 2003

EDITOR-IN-CHIEF
William F. Wertz, Jr.

EDITOR
Kenneth Kronberg

ART DIRECTOR
Alan Yue

BOOKS
Denise Henderson

Fidelio (ISSN 1059-9126) is published by the Schiller Institute, Inc., P.O. Box 20244, Washington, D.C. 20041-0244. www.schillerinstitute.org Editorial services are provided by KMW Publishing Company, Inc. © Schiller Institute, Inc.

Fidelio is dedicated to the promotion of a new Golden Renaissance based upon the concept of *agapē* or charity, as that is reflected in the creation of artistic beauty, the scientific mastery of the laws of the physical universe, and the practice of republican statecraft for the benefit of our fellow man.

Subscriptions by mail are \$20.00 for 4 issues in the U.S. and Canada. Airmail subscriptions to other countries are \$40.00 for 4 issues. Payment must be made in U.S. currency. Make check or money order payable to Schiller Institute, Inc.

On the Cover

Rembrandt van Rijn, *Homer Dictating to a Scribe* (1663).
"Sense perception is not necessarily knowing."
(Scala/Art Resource, NY)

4

Believing Is Not
Necessarily Knowing

Lyndon H. LaRouche, Jr.

36

The Renaissance, and the
Rediscovery of Plato and the Greeks

Torbjörn Jerlerup

56

The Joy of Reading
Don Quixote

Carlos Wesley

74

Shattering Axioms, Fighting
For Our Future!

A PRESENTATION BY THE
LAROCHE YOUTH MOVEMENT

Editorial	2	The Roosevelt Syndrome
News	105	LaRouche in Turkey: 'Remove Cheney from Power'
	105	Maestro Briano Visits Los Angeles
Obituary	107	Graham Lowry's Historic Mission
Commentary	108	The Immense Debt of Ibero-America to the German-Jewish Renaissance
Books	109	The Shaman's Coat

The Roosevelt Syndrome

The following excerpt is taken from a statement entitled, "The DLC Wanes: Sewers Are Often Suburban," issued by Lyndon LaRouche on July 29, 2003 in his capacity as a Democratic pre-candidate for the U.S. Presidency. We publish this excerpt as our editorial in this issue of Fidelio, because it so succinctly identifies the primary threat to the world today as coming from the Synarchist circles of Vice President Dick Cheney. At the same time, it identifies the only alternative to such a threat today as the impeachment of Cheney and his Straussian "chicken-hawk" neo-conservatives, and the implementation of an approach in the U.S. similar to that taken successfully by Franklin D. Roosevelt, when faced with a similar Synarchist threat in the 1930's and '40's.

Today, any serious discussion of electoral strategies begins with a reference to the nearly comparable situation which faced Franklin Roosevelt, from the time of his 1932 election-campaign, until his death. No Presidential candidate should be seriously considered for the nomination, unless and until he or she recognizes certain crucial similarities between the situation which Roosevelt faced then, and what you would have heard already from any competent choice of candidate for the Democratic nomination at this time.

The principal active threat to the security of our republic, now, as during the quarter-century following the post-World War I Versailles Treaty, is an organization which was known to the world's leading intelligence services as the Synarchists. This organization was classed in the files of various among the world's intelligence services, including those of the

U.S., as "Synarchism: Nazi/Communist." This Synarchist association, steered by a consortium of private family banking interests, was the creator and controller of a network of fascist governments including Mussolini's Italy, Hitler's Germany, Franco's Spain, and the Vichy and Laval governments of war-time France, and, also, a network of Nazi Party-run Synarchists, coordinated through Spain, and subversive movements run from Mexico on south, throughout South America. This same Synarchist network is the agency behind those so-called neo-conservatives, grouped around Cheney and Rumsfeld, which has used the clearly intended effect of Sept. 11, 2001, to virtually take over the U.S. government's domestic and foreign policies. This Synarchist faction is the present political enemy which every U.S. patriot must be prepared to defeat; any different view is not

only a foolish one, but also a potentially fatal error, an error now already threatening our constitutional form of government.

EDITORIAL

When the 1940 Nazi defeat of the continental forces of France, Belgium, and Britain put Western Europe under Hitler's domination, Britain's Winston Churchill and our Franklin Roosevelt faced the following, horrifying prospect. Were the British naval forces to fall into the hands of Hitler at that time, a combination of Nazi-led, Synarchist-created fascist regimes in Germany, Italy, Spain, France, and Japan, would proceed to gobble up the Soviet Union and then present the U.S.A. with a hopeless situation, a prospective strategic threat to it, from the combined naval and other forces of Britain, France, Germany, Italy, and Japan. On this account, President Roosevelt and Churchill reached agreement on a politically very difficult alliance between them, an alliance which, with all its enormous defects, saved the world from virtual Hell.

We are in an analogous situation today. The difference now, is that the presently grave military threat to the U.S.A. comes not from Europe, but from the risk that the nuclear arsenal of the U.S.A. might fall under the general control of the Synarchists' neo-conservative circles associated with Cheney and Rumsfeld.

There are certain added parallels of crucial strategic importance, including economic parallels, which must be taken into account as the basis for the Democratic Party's policies for the present pre-election campaigns.

What became known, after the Versailles Treaty, as

Visit the Schiller Institute website at
www.schillerinstitute.org

the Synarchist International, was the kept property of a consortium of medieval-Venice-style private bankers, as typified by the Banque Worms complex which ran Vichy and Laval's France in partnership with the Nazi circles of Hermann Goering *et al.* The political forces controlled by these bankers were held together by a strange, occult variety of freemasonic sect, known as the Martinists. This sect, whose political forces had later become known as the Synarchists, had been in existence since it was formed within the dictatorship of the world's first fascist regime, that of the Emperor Napoleon Bonaparte. Following Napoleon's defeat, the notion of creating a new Europe-wide Empire based on the Napoleonic model, was a design elaborated by the principal writings of such devotees of the Napoleon image as G.W.F. Hegel, as also beast-man Friedrich Nietzsche.

This occult conspiratorial sect was steered by consortia of such private bankers throughout the history of Europe, from Napoleon's time on. It assumed its present modes of operation in the setting of the Versailles Treaty, after which it surfaced under the rubric of fascism in financier Volpe di Misurata's Italy, as the Mussolini dictatorship. All of the fascist movements of Europe and the Americas during the following period were products of a single Synarchist network which came to be dominated, for a time, by the Nazi regime of Nietzschean beast-man Hitler.

The key to Synarchist plots, then and now, has always been economic.

From the beginning, as John Maynard Keynes' treatise on Versailles warned more or less correctly, the international monetary-financial system hammered out at Versailles was doomed from the start. The system was based on Germany's obligation to pay an unpayable mass of imposed war-debts, chiefly to a France and Britain which carried an enormous burden of war-related debt to New York bankers. The built-in, foreseen doom of that Versailles monetary-financier system, was the motive-force behind the spread of fascist coups throughout much of Europe, just as the presently onrushing, inevitable breakdown-collapse of the post-1971-72 I.M.F. "floating-exchange-rate" monetary-financial system, is the driving force behind the warfare and dictatorship policies of those Synarchists, calling themselves "neo-conservatives," grouped around Cheney and Rumsfeld.

Germany failed to adopt its needed economic reform in the available time, a failure which produced the Hitler dictatorship. Roosevelt introduced the

The Youth at the Brook

By the fountain sat the stripling,
Flowers wove he in a wreath,
And he saw them ripped asunder,
Driven by the waves beneath:—
And my days are so escaping
As the fountain flows away!
And so pales my youth before me,
As the wreath does fast decay.

Question not, wherefore I sorrow
In the bloomtime of my life!
All is hopeful and rejoicing,
When the spring renews itself.
But these thousand sounds of nature,
Which awakens on the plain,
Rouse within my deepest bosom
Only heavy cries of pain.

What to me are all the pleasures,
Which the lovely spring awards?
One there is, for whom I'm searching,
She is near and ever far.
Stretch I wide my arms with longing
For the precious silhouette,
Ah, I cannot yet attain it
And my heart's unstilled as yet!

Come below, thou beaut'ous darling,
And thy castle proud depart!
Flowers, born of springtime's bounty,
Will I on thy lap impart.
Hark, the woods resound with singing,
And the fountain ripples fair!
Room is in the smallest shelter
For a happy loving pair.

—*Friedrich Schiller*

relevant reform in time in the U.S., a reform which ultimately saved the world as a whole from an excursion through Nazi Hell. That is the most crucial of the lessons from history which the Democratic Party must learn today. Time is running out; at some early point, waiting to expel Cheney from office a day too long might prove to be as fatal to the U.S.A. as the choice of Hitler was for Germany.

Unfortunately, the Democratic Party's leadership has abandoned its Franklin Roosevelt legacy. That is the sickness I intend that the party must now correct, a correction which must be made now, if the nation is to be saved from the present threat.

Reviewing An Original Discovery

Believing Is Not

by Lyndon H. LaRouche, Jr.

A see-saw battle between the opposing forces of Classical science and philosophical reductionism, has reigned throughout globally extended ancient, medieval, and modern European civilization, up through the present day.

Now, once again, a new youth movement has appeared an indispensable ingredient for the effort to rescue civilization; but, this time, let us build it more wisely, on the basis of lessons which should have been learned from the outcomes of the campaigns of the past. We must rapidly develop many veritable 'platoons' of truly qualified, young intellectual leaders steeped in a distillation of the most crucial products of the Classical tradition to date. For this, we require not only a movement for education, but a political movement which is education in and of itself.



EIRNS



EIRNS/Brendon Barnett

Pedagogical demonstrations by members of the LaRouche Youth Movement. Clockwise from top right: Cadre school presentations in Los Angeles; Wiesbaden, Germany; Wiesbaden, Germany; Los Angeles; Los Angeles.

This statement was released by the LaRouche in 2004 Presidential campaign committee. It is reprinted from Executive Intelligence Review, Jan. 17, 2003 (Vol. 30, No. 2).

Necessarily Knowing

Dec. 16, 2002

The root of the increasingly catastrophic failure of U.S. education policy of practice, over the recent thirty-odd years, may be summed up in five points of a general indictment¹:

1. Sense perception is not necessarily knowing.
2. Learning is not necessarily knowing.
3. Generally accepted opinion, academic or other, is not a standard for the definition of truth.
4. Today's teachers have not necessarily intended to educate or test their students in a manner suited to human beings.
5. The radically reductionist fad known as "Information Theory," as associated with the influence of Bertrand Russell devotees Norbert Wiener and John von Neumann, was always a hoax. Thus, the educational methods adapted to the "information theory" hoax, such as the related so-called "new math," are also a hoax.

That five-fold corruption is largely a product of a moral degeneration of our society which was embedded in those standards of general education and culture which were introduced, in pilot-phases, during the course of the 1945-1964 interval.² During the middle to later 1960's, this already emerging trend was unleashed with great destructive force, in forms such as the "rock-drug-sex youth-counter-

-
1. The corrupting influence of McGeorge Bundy's Ford Foundation on U.S. educational practices over the late 1960's and 1970's, should be seen as complementing the disastrous influence of Britain's Dr. Alexander King's 1963 Paris OECD report on education in Western Europe, as the effect of the latter is typified by Germany's disastrous "Brandt reforms." King was a co-founder, with Lord Solly Zuckermann, of the neo-malthusian Club of Rome, and was associated with Zuckermann, the U.S.A.'s McGeorge Bundy, and others in forming the pro-malthusian, Laxenberg (Austria)-based International Institute for Applied Systems Analysis (IIASA). IIASA was the Lord Kaldor-featured Cambridge Systems Analysis group's strategic back-channel to the Moscow malthusians. The corruption is to be recognized as typical of the moral self-destruction carried out simultaneously on both sides of the Atlantic, and also both sides of one-time British Prime Minister Winston Churchill's "Iron Curtain."
 2. This cultural-paradigm shift was a complement to the "preventive nuclear war" doctrine of avowed nuclear terrorist and pacifist Bertrand Russell, which became the core of the "Dr. Strangelove" (Leo Szilard) style nuclear-utopian strategic military and cultural doctrines of the anti-traditionalist, so-called "utopian" military-policy faction of the 1944-2002 interval.



EIRNS/Brendon Barnett



EIRNS/Chris Lewis



EIRNS/Chris Lewis

culture,” and the moral and economic decadence resulting from the intention to transform a formerly productive society into a “post-industrial” form of “consumer society” utopia. As a result of this post-Missiles Crisis cultural paradigm-shift, which descended upon the adolescents of the 1960’s, the world is now gripped, not only by the present, potentially terminal, systemic decline of the economies of Europe and the Americas, but by an ominous intellectual decadence among the generation presently occupying many leading positions, both in government and relevant private institutions.

Thus, we, most notably in the Americas and Europe, must recognize our nations as presently in the grip of that culturally induced 1964-2002 paradigm-shift in institutionalized popular opinion. This change has now reached the point of crisis at which the existence of this body of popular opinion *almost* assures us that today’s Europe and the Americas would not avoid an early collapse into what would become a prolonged new dark age for most of humanity. The practical means to avoid such an *almost certain* catastrophe are available, but the currently prevalent popular culture, combined with its corrupting impact on present educational institutions, would stubbornly resist any of those available, beneficial changes by means of which the economies and their nations might survive.

Therefore, the survival of civilization now depends upon the success of those among us who take the lead in rejecting, and seeking to overturn, very soon, that pathetic body of still currently prevalent popular opinion.

The presently developing international youth movement, whose specific qualities are referenced by this report, is a crucial factor in that effort for re-education.

Relevant lessons from history show that sudden changes in prevalent, practiced culture, for better, or for worse, often occur through aid of the catalytic impact of youth movements. A youth movement gave birth to the transition from medieval, to modern European civilization, through the Italy-centered Fifteenth-century Renaissance. So, a youth movement centered around Lessing and Mendelssohn, the German Classic, was a crucial, trans-Atlantic factor in the Franklin-led American Revolution. Yet, an anti-Classical youth movement directed from London by the British Foreign Office’s Jeremy Bentham, played a crucial role in giving France the horrors of the Jacobin Terror and Napoleonic fascism. So, the introduction of the 1960’s “rock-drug-sex youth-counterculture,” was an essential contributing factor in transforming the previously successful form of U.S. economy axiomatically, from a successful producer society (albeit with serious flaws), into a decadent, parasitical, and self-doomed form of “consumer society.” The

included result of the latter turn, is what has since become the self-inflicted terminal phase of material and moral collapse of a systemically failed world economy of today.

Look back, across the expanse of European history since Thales and Pythagoras, but especially since “Golden” Athens’ tragic folly in launching the Peloponnesian War. One ominous fact stands out.

We see there, in that history, repeatedly, an appalling fact. The renaissances of the past depended upon an intrinsically vulnerable, relative handful of apostles. In each renaissance, the continuation of that upturn was subsequently aborted, more or less, by its enemies. The enemies of progress were able, repeatedly, to mobilize those ruling forces of ignorant popular opinion, from the top-most ranks of society downwards, which misshaped the popular will, and thus induced the foolish majority of the people themselves to destroy or isolate the few worthwhile intellectual leaders available.

So, the legacies of murdered Presidents Abraham Lincoln and Franklin Roosevelt, and murdered Rev. Martin Luther King, have been virtually abandoned, or even explicitly betrayed by so many among their survivors. Thus, the despicable Democratic Party of Athens rallied popular opinion to murder Socrates judicially, and thus, ultimately, bring Athens’ self-inflicted ruin upon itself.

In history, the leaders with the sublime quality of a Socrates or France’s Jeanne d’Arc, are too few. This is not to recommend, perversely, the intrinsically evil Norman or Spanish inquisitions as a grim yardstick for measuring their heroic victims’ achievements. Let us be grateful for those handfuls of exceptional individuals, who led every renaissance; but, let us also be warned, that the impulse for progress has been repeatedly turned back, as it was by the 1966-1972 Nixon campaign’s “Southern Strategy.”

Remember, that Nixon’s “Southern Strategy” was a triumph of a combination of two passionately, morally illiterate, populist rabbles. This rabble included, on the one side, the neo-Confederate Nashville Agrarians’ obvious followers; on the other side, the corrosive role of the leadership of the so-called “rock-drug-sex youth-counterculture” of Ford Foundation-backed and other anti-Classical university campus rebels of the middle 1960’s. In effect, those ostensibly mutually opposing forces combined in converging effect, to unleash a process of moral decay of the campus-centered youth, which continued through the *sans-culottes*-like “Rainbow Coalition” of 1972 and beyond. It was those combined varieties of existentialists, including the “speech code” Jacobin Terror of the nation’s campuses and public schoolrooms, which

have played a crucial part in transforming public and higher education of the U.S.A. and the Americas, especially the U.S.A., into the putrid mess it has become today.

In the history of European civilization since the period of Rome's Second Punic War, the continuing cultural conflict within globally extended European civilization, has been, chiefly, the struggle of that decadent Roman legacy known *genetically* as Romanticism, in its recurring efforts to exterminate that Classical movement for truth which is associated, chiefly, with the Christian tradition of Plato.³

Among the numerous exemplary cases of this history, is the destruction of the Classical movement associated with Germany's Abraham Kästner, Gotthold Lessing, Moses Mendelssohn, and Friedrich Schiller, by the succession of those waves of reactionary Romanticism expressed in such assorted forms as France's Jacobin Terror, the rise of fascism under Napoleon Bonaparte, the waves of Romanticism spread in Germany following Napoleon's victory at Jena-Auerstädt, and the increasing influence and depravity of Europe during the decades immediately following the Metternich-Castlereagh Vienna Congress and the Metternichean Carlsbad decrees. The fascist doctrine of the Napoleonic model of the state, as elaborated for Germany by G.W.F. Hegel, and the rise of Romanticism in poetry and the musical school of Czerny, Liszt, Berlioz, and Richard Wagner, are typical of the cases under which a great upward movement of the Greek Classical tradition has been, once again, aborted for a time by the mobbish thuggery of a Romantic resurgence.⁴

So, in the history of modern science, when Johannes Kepler, the Classical voice of the Golden Renaissance, had liberated astronomy from the Romantic folly shared among Claudius Ptolemy, Copernicus, and Tycho Brahe,⁵ Venice's Paolo Sarpi unleashed the Romantic follies of his servant Galileo, and his agents Sir Francis Bacon and Thomas Hobbes, to launch that orgy of

Romanticist empiricism associated with Descartes, Locke, Mandeville; this empiricist romp was continued by that Voltaire-led pack of salons known as the Eighteenth-century "Enlightenment" of Venetian Abbot Antonio Conti and his followers.

So, a see-saw battle between the opposing forces of Classical science and philosophical reductionism, has reigned throughout globally extended ancient, medieval, and modern European civilization, up through the present day.

Now, once again, a new youth movement has appeared an indispensable ingredient for the effort to rescue civilization; but, this time, let us build it more wisely, on the basis of lessons which should have been learned from the outcomes of the campaigns of the past. We must aim at producing what might be described loosely as a factor of mass-leadership. We must rapidly develop many veritable "platoons" of truly qualified, young intellectual leaders steeped in a distillation of the most crucial products of the Classical tradition to date. For this, we require not only a movement *for* education, but *a political movement which is education in and of itself*. That must be a mass-oriented movement of future world leaders, which seeks to inspire the kind of leadership in institutions today, which those present youth will represent when they become the nations' leaders of a decade or more ahead. It must be based on an inner core of educational programs, around which other elements of education are organized. That approach to education is implicitly represented in the unfolding of this report.

The Needed Principles of Education

In service of that strategic purpose, the alternative to the ugly actuality of today's prevalent educational policy, may be summed up in the following headlined points. These points, and the following exposition of their basis, include a relevant, featured summary of that core of my discoveries in a science of physical economy, which is otherwise distributed among my published accounts from over more than three decades to date. The relevance of those discoveries of mine, to the issues of educational policy, will become clear in the course of the following pages.

On this account, it is not merely relevant, but, functionally speaking, of crucial importance, to point once more to my published record of more than three decades, as consistently the world's most successful long-range economic forecaster. The extraordinary quality of this comparative success, reflects the characteristic intellectual backwardness, the lack of consideration for scientific principle, among those putative rivals of mine, who prac-

3. The Gospel of John and the Epistles of Paul typify this most clearly. However, the Platonic tradition is also an ecumenical one, as typified by Philo of Alexandria and Moses Mendelssohn for Judaism, and also Islam.

4. Cf. two works by the anti-Kantian Heinrich Heine: *The Romantic School*, in *The Romantic School and Other Essays*, ed by Jost Hermand and Robert C. Holub (New York: Continuum, 1985); and *Religion and Philosophy in Germany: A Fragment*, trans. by John Snodgrass (Albany, N.Y.: State University Press of New York, 1986). Emphasis should be placed on Heine's own first edition of the latter work.

5. Cf. Jonathan Tennenbaum and Bruce Director, "How Gauss Determined the Orbit of Ceres," *Fidelio* Summer 1998 (Vol. VII, No. 2).

the statistical methods prevalent among both university economics departments and U.S. government forecasting agencies, still today.⁶ Although my knowledge of many of the following matters here has been improved considerably, again and again, during the course of work done over the recent half-century, all of my unique accomplishments as an economist, has been the fruit of principled conceptions already crystallized during 1953.⁷ Thus, the evidence of my exemplary successes over some decades to date, will serve now to enrich today's student's sources of insight into the broader implications, for education and other missions, of the Classical physical principles on which my exemplary successes as a long-range forecaster have depended.⁸

As I shall show, economic science, when defined in the way in which the exemplary success of my forecasting demonstrates, should be recognized as implicitly "the science of humanity." Strong language? Admittedly. Exaggerated? Not in the slightest degree! As I shall show, and prove, at least implicitly, in the following pages, that claim is more than justified, especially in the setting of today's awful, global and systemic economic debacle.

The principled issues introduced in the list of summaries given below, reflect the starting-point of my definition of physical economy. That definition is summed up in two arguments. *First, that:* Physical economy, and its reflection as political economy, is premised upon the specific quality of principled difference which sets the member of the human species absolutely apart from, and above all lower forms of life. *Second, that:* Political-economy did not exist in practice, until the birth of the modern

sovereign nation-state during Europe's Fifteenth-century Renaissance's introduction of the notion of the supreme political authority of that General Welfare principle of natural law which Leibniz later identified as "life, liberty, and the pursuit of happiness."⁹ The existence of any acceptable practice of political-economy depends upon the submission of government to the supreme authority of that scientifically defined universal principle of natural law.

That said, the indicated principles of educational reform addressed here, are, in summary, as follows.

1. The "axiomatically" absolute difference between members of the human species and higher apes, is typified by that paradox of "The Cave" presented by Plato. The generation of what prove to be experimentally validated solutions for that type of paradox, called "hypotheses," is the gateway to the discovery of what are called, interchangeably, "universal physical principles," or, principles otherwise recognized as in the form of Platonic "ideas." The body of this quality of "ideas" uniquely constitutes the core of actually knowable truth.
2. For today's secondary or university science classroom, or comparable setting, the most convenient choice of benchmark for introducing a proof of that notion of "truth" to students today, is Carl Gauss's conclusive exposure of the axiomatically fatal, systemic error, respecting physical science, perpetrated by such leading Eighteenth-century "Enlightenment" figures Euler and Lagrange. That error was identified explicitly by Gauss, in Gauss's original, 1799 (Latin) presentation of

6. Out of compassion for the incompetents teaching in those economics departments, we should emphasize the virtually criminal kind of intentional statistical fraud practiced over the recent two decades by the Federal Reserve and other malefactors under such rubrics as the so-called "Quality Adjustment" factor.

7. It is notable, respecting lessons for educational policy generally, that an approximately year-long recovery and rehabilitation from a severe case of hepatitis, imprisoned me in circumstances under which recreation often took the form of extended, increasingly intense concentration on the relevant implications of the work of Georg Cantor and Bernhard Riemann for physical economy. This occupied most of the waking hours during the several initial months of recuperation, and reenforced greatly the habits of study and work which have dominated my life since.

8. The reader should understand "long-range" forecasts to be based on the effect of current, implicitly axiomatic assumptions of a society's economic behavior over a span of one to three generations. Approximate forecasts for periods as short as three to seven years are feasible. For example, in February 1982, I first warned the Soviet government, during my part in a 1982-1983 back-channel discussion which I conducted on behalf of the Reagan Presidency, that if the Soviet Andropov government continued the policy its representative had reported to me, that the Soviet-bloc economy would col-

lapse in "about five years." I subsequently made the same forecast publicly. On the basis of that forecast, I warned, in an October 12, 1988 Berlin press conference, later broadcast on U.S. network TV, that the policy of the next U.S. Administration must base its policy-shaping on the expectation of an imminent collapse of the Soviet bloc economy, with Berlin to become the expected future capital of a reunited Germany. This case illustrates the point, that competent short-to-medium-term economic forecasts are possible only as they are subsumed by study of long-term capital/generational factors. In the short-to-medium term, the factor of human "free will" may produce immediate effects contrary to nonetheless persisting long-term "orbital trajectories."

9. While this report was being written, I received several draft papers, of David M. Shavin and other collaborators, on the subject of my own and my associates' continuing fascination with the influence of Leibniz, from Europe, expressed in both the U.S. Declaration of Independence and U.S. Constitution, and in the principles of what Alexander Hamilton defined officially as the American System of political economy. My associates' continuing attention to these connections, which had been spearheaded by historian H. Graham Lowry during the early 1980's, will be featured in an edition of the *Fidelio* quarterly to be released from the printer during February 2003 [*Fidelio*, Spring 2003 (Vol. XII, No. 1)].

the fundamental theorem of algebra.¹⁰ This proof of that theorem, by Gauss, supplied a rigorous definition of the notion of “the complex domain.” It also supported and clarified Leibniz’s earlier, original discovery of both the catenary-keyed notion of a universal physical principle of least action, and Leibniz’s related, transcendental conception of natural logarithms.

3. These proofs by Leibniz, Gauss, *et al.*, although initially situated within the domain of *the functional* (“*phase-spatial*”) *relationship of the human individual to man-altered nature*, are also the key to defining a related, but distinct, second category of universal principles. *This second category provides an historical conception of the efficient principle of human social relations, such as the principles of what is known as Classical artistic composition, as these modes of intellectual organization of cooperation in society, bear on the increase of our species’ power to exist and prosper in the universe.*
4. The latter, *properly adduced social principles of strictly Classical artistic composition*, are also universal physical principles, so defined by their *physical effects* on the potential relative population-density of societies (“cultures”). Both these classes (sub-phase-spaces) of universal physical principles, are to be located within the anti-Euclidean physical geometry defined by Bernard Riemann.¹¹
5. The physical effects of the combination of those first and second sub-phase-spaces, are measured with reference to the long-term (multi-generational) increases (or decreases) *per capita* and *per square kilometer* of the Earth’s surface: what I have defined as *the potential relative population-density of our species*. The discovery of this twofold set of principles as an integral notion of function to that intended effect, has been my original contribution to a science of physical economy.
6. The social transmission of the first class of principles, by means of the second, defines the efficient actuality of the historical existence of our species, and thus defines the uniqueness of the human species. This transmission is the elementary basis in fact for both a history of science and a science of history.

For today’s populations, the two sets of principles just

identified, are more easily understood by aid of references to my own, critical appreciation of the work of Vladimir Vernadsky’s respective, successive definitions of the *Biosphere* and *Noösphere*. However, there are three crucial omissions of essential principle in Vernadsky’s known writings, principles which were featured as central to my own original discoveries in the science of physical economy. Nonetheless, Vernadsky’s work, if and when taken in the context of my own, is of crucial importance for inclusion in teaching my own discoveries to university-level studies today. My exposition here follows that pedagogical track, as in earlier locations.¹²

For reasons which I shall summarize here, the appropriate approach to study of the case of Gauss’s 1799 attack on the systemic fallacies of such anti-Leibniz fanatics as the reductionists Leonhard Euler and Euler’s *protégé* Lagrange, serves today’s student of university age, or a relatively exceptional secondary student, as the best point of entry into the foregoing list of categories of knowledge. A clear insight into Gauss’s discovery reported there, requires a direct comparison of the equivalence of Abraham Kästner’s student Gauss’s attack on the axiomatic errors of d’Alembert, Euler, and Lagrange, to the earlier, Classical arguments to similar effect by such Classical Greeks as Archytas and Plato on the matters of methods of construction for doubling the geometric figures of line, square, and cube. This comparison must include Plato’s, Leibniz’s, and Gauss’s mutually congruent, anti-Aristotelean notion of *powers* for these cases.¹³

12. Lyndon H. LaRouche, Jr., *The Economics of the Noösphere* (Washington, D.C.: EIR News Service, 2001).

13. Abraham Gotthelf Kästner (b. 1719) is a key international figure behind such of his students as Lessing and Gauss, and a central figure in the Eighteenth-century development of mathematical physics. He was a crucial influence in the Eighteenth-century rise of the German Classic around Lessing and Moses Mendelssohn, and played a pivotal role in bringing knowledge of the work of Leibniz into the leading circles of the American Revolution. Among Kästner’s many important publications, the most notable, which should inspire some noble souls to produce good English language translations, include his 1758 *Anfangsgründe der Arithmetik, Geometrie, ebenen und sphärischen Trigonometrie, und Perspective* and his four-volume *Geschichte der Mathematik, Vols. I-IV* (1796-1800). Kästner was the founder of an explicitly anti-Euclidean geometry; his influence on his pupil Gauss on this account, is reflected in Gauss’s own discovery of elements of an anti-Euclidean geometry, dated to 1792, and reflected in Gauss’s 1799 refutation of the reductionist errors of Euler and Lagrange. Riemann’s development of an anti-Euclidean, as distinct from merely “non-Euclidean” geometry, is chiefly an outgrowth of this line of development by Kästner, Gauss, and Dirichlet. Kästner was also a crucial collaborator of Benjamin Franklin, as a forthcoming report by my associates will pin-point this crucial connection of the anti-Locke influence of Leibniz in defining the 1776 U.S. Declaration of Independence [*Fidelio*, Spring 2003 (Vol. XII, No. 1)].

10. Although the reductionists, such as Lagrange himself, Laplace, Cauchy, Lindemann, Felix Klein, *et al.*, have rejected the crucial kernel of Gauss’s 1799 argument, no competent objection to Gauss’s proof is known, to the present day.

11. My use of “Classical” is a strict one, as I indicate below. As I shall show during my summary of the lessons to be adduced from Vernadsky’s definition of the Noösphere.

The foregoing prefatory remarks mark out the territory to be covered. What now follows is a combination of arguments presented in locations previously published, with some added points needed to bring the totality together in that kind of unified world-outlook which ought to become the common basic knowledge of persons of the 18-25 age-interval of education today.

1.

In the Beginning: Plato's Principle of Hypothesis

The sense organs of the human individual are part of the mortal human being's animal-like, biological organism. Sense-perception does not present our mind with direct images of the world "outside our skins," but rather, as Plato and the Christian Apostle Paul's 1 Corinthians 13 warn, our senses show us only "shadows" of that reality which has tickled the human individual's biological mental-sense-perceptual apparatus. So, Plato compares the experience of sense-perception to shadows cast by unseen real objects, as if upon the walls of a dimly firelit cave.

Human beings are nonetheless capable of discovering the real, essentially unseeable, immortal universe whose included, non-substantial effects are those shadows called sense-perceptions. The method by which those discoveries are made, is typified by the Socratic dialectical method of Plato, otherwise known as the method of *hypothesis*. Plato's collection of Socratic dialogues, and his *Laws*, constitute a body of exemplary mind-training exercises, by which the student is aided in attaining comprehension of scientific method. As I shall show, later in this present report, Vernadsky's definition of the Noösphere implies a strictly physical-scientific definition of the meaning of "spiritual." These same Socratic exercises which are the centrally characteristic feature of the discovery and transmission of experimentally validated universal physical principles, are therefore to be recognized as "spiritual exercises."

Among Plato's dialogues, his *Parmenides* has special relevance for that aspect of our report. In that dialogue, Plato implicitly emphasizes the importance of the development of scientific method by Thales' follower Pythagoras, a connection which has crucial significance for Gauss's referenced, 1799 definition of the complex domain. The most crucial of the known ancient discoveries, are the fruit of a class of paradoxes of geometry, including the Pythagorean experimental demonstration

of the paradoxical musical "comma,"¹⁴ and the impossibility of reductionist solutions for such paradoxes as: the doubling of the line, the square, and cube, and the construction of the five Platonic solids. Despite the claims of the followers of Euler, Lagrange, and Cauchy, no competent solution for these paradoxes is found by means of a geometry confined by "ivory tower" definitions inhering in the shadowy, axiomatically erroneous presumptions of the reductionists' sense-perception.

Gauss's discovery of the physical principle of the complex domain, as in the referenced 1799 piece, returns our attention to the Classical Greek form of the elementary paradoxes of doubling of the line, square, and cube. These ancient paradoxes are indispensable keys to defining a form of modern mathematical physics, that of the complex domain, which is capable, axiomatically, of functional representation of the real universe, as can not be done competently by the ivory-tower imageries of errant mathematical reductionists such as Euler and Lagrange, and their present-day followers.

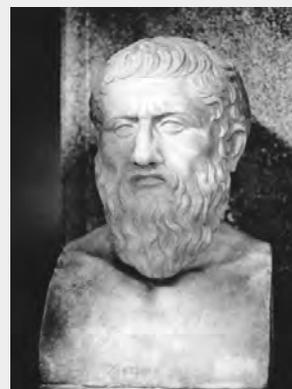
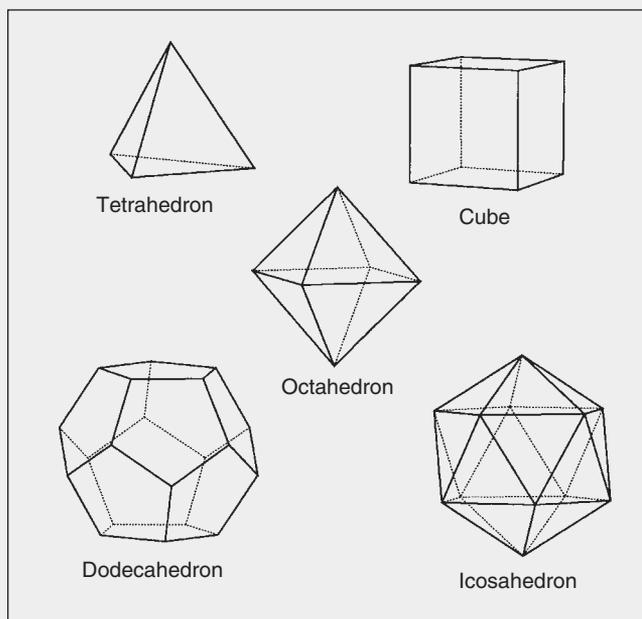
Consider the relationship between Plato's method and that of such of his modern followers as Brunelleschi, Cusa, Pacioli, Leonardo da Vinci, Kepler, Gilbert, Fermat, Huyghens, Leibniz, Jean Bernouilli, Abraham Kästner, Gauss, Lazare Carnot, Dirichlet, and Riemann. Contrast this to that fanatical sort of axiomatic error of "ivory tower" reductionism, which is common to ideologues such as Aristoteleans, and such empiricists as Descartes, Newton, Boyle, Euler, Lagrange, Laplace, Cauchy, Clausius, Grassmann, Helmholtz, Maxwell, Lindemann, Felix Klein, and the devotees of Bertrand Russell. Focus upon the most essential point of irreconcilable conflict in method between the two sets. Then examine those implications of that contrast which are illuminated by the methods employed by Vernadsky to define the Biosphere and Noösphere.

What Is Hypothesis?

The discoveries of Johannes Kepler, effected by the methods he details in his 1609 *The New Astronomy*, were the beginning of a comprehensive form of mathematical

14. The relevant experiment is Pythagoras's comparison of various orderings of what must have been the equivalent of Florentine *bel canto*-trained singing voices, in various modes, against a monochord. The naturally determined differences in intervals of the singing voice, compared with the relevant lengths marked off on the monochord, would define a "comma," not as a mathematically predetermined, but physically lawful characteristic of the properly developed human singing voice. The related case for J.S. Bach's well-tempered system, as opposed to the reductionist system of equal-tempering, an example of the same principle. Hence, the "comma" is an example of the difference between a physical geometry, and an "ivory tower" geometry.

The most crucial of the known ancient discoveries, are the fruit of a class of paradoxes of geometry, including the Pythagorean experimental demonstration of the musical ‘comma,’ and the impossibility of reductionist solutions for the doubling of the line, the square, and cube, and the construction of the five Platonic solids. No solution for these paradoxes is found by means of a geometry confined by ‘ivory tower’ definitions inhering in the axiomatically erroneous pre-surreptions of the reductionists’ sense-perception.



EIRNS/Philip Ulanowsky

As presented in Plato’s *Timaeus*, the uniqueness of the five regular solids derives from physical principles outside the domain of ‘ivory tower’ geometry. Above: Plato (427-347 B.C.).

physics. As in all science, so in contrasting the success by Kepler to the failed method of Claudius Ptolemy, Copernicus, and Brahe, we must take into account the relevant ancient precedents for the follies of such followers of the ancient Eleatics as the modern empiricists Galileo, Descartes, Euler, and Lagrange. We must give our attention to what many famous names in history have easily overlooked among the ostensibly fine details of scientific rigor. Those paradoxical details in methods of observation and judgment, are usually the key to truly important discoveries, even validatable discoveries made by confessing religious empiricists. Even reductionists such as Aristotle and the empiricists, sometimes admit the paradoxical existence of efficient principles which can not be observed by the senses, if not those principles themselves. Like the Romanticist Immanuel Kant, they either concede, or claim to know of, the existence of such considerations, which they define wrongly, while insisting that such agencies, if they exist, can not be known rationally by the individual human mind.

Apart from the specific wickedness of Aristotle’s *Politics* and *Ethics*, the general folly of Aristotle’s method for physical science itself, is typified by Claudius Ptolemy’s hoax. Although Aristotle assumes a higher reality than sense-certainty to exist, Ptolemy follows Aristotle in limiting attempted knowledge of actual physical principles

to a kind of apparent statistical regularity presumed to be consistent with the introductory books of Euclid’s *Elements*. Although Copernicus echoes the heliocentric view of Aristarchus, the astronomy of Copernicus and Brahe accepts the same anti-scientific quality of “medieval” method of Aristotle, adopted by Ptolemy.

Within his *The New Astronomy* and other published locations, Kepler presents an elaborate report on the anti-scientific character of Aristotle’s doctrines; Gauss, in developing a crucial proof of the entirety of Kepler’s argument respecting the functional composition of the solar system, applies the case of the principal asteroids as the empirical proof underlying Kepler’s definition of the principles of a comprehensive approach to mathematical physics.¹⁵

The errors of Aristotle’s method are always found in the details which that method either presumes to deny, or relegates to the domain of the humanly unknowable.

The followers of that Ockhamite perversion of Aris-

15. Cf. Johannes Kepler, *The New Astronomy*; see also Tennenbaum and Director, *op. cit.* Implicitly, Gauss’s confirmation of Kepler’s case for “the missing planet,” in the orbits between Mars and Jupiter, is an application of the notion of the complex domain which Gauss had presented, in refutation of Euler and Lagrange, in the 1799 piece.

totle called empiricism, as typified by Paolo Sarpi, by Sarpi's personal lackey Galileo Galilei, Galileo's pupil Thomas Hobbes, and Locke, turn Aristotle's details into what often prove to be explicitly an actively nasty sort of what is literally a "devil in the detail." For example, Anglo-Dutch Liberal John Locke makes implicitly a neo-Cathar argument which is featured explicitly as the central claim of Physiocrat François Quesnay. The same neo-Cathar claim is featured shamelessly in the central arguments for "free trade" by such of Locke's fellow-Gnostic followers as the more frankly pro-Satanic Bernard Mandeville, and Mandeville's follower Adam Smith.¹⁶

Quesnay is a shameless devotee of the ultramontane medieval feudal system of serfdom. His *Physiocratic* scheme explicitly classes the serf, axiomatically, as a form of human cattle. To support that argument, his absolutely irrational, *laissez-faire* defense of feudal parasitism, resorts to copying the dogma of the neo-manichean cult of the Cathars.¹⁷ He, like a Cathar, defines a capriciously corrupt deity, a nasty sort of gnome operating from under the floorboards of reality, who "fixes" the throw of his crooked dice, such that some people are made, magically, rich and powerful, while others are left destitute and poor. Modern Liberal economists describe that swindle as "statistics."

The "Venetian Party's" John Locke, Mandeville, and Adam Smith, are not customarily regarded as traditional feudalists like Quesnay; but, they share with Quesnay a common interest in their hatred of the Fif-

teenth-century Renaissance and of, more immediately, the existence of France's Cardinal Mazarin and Jean-Baptiste Colbert. These "Enlightenment" Liberals are all, like John Locke himself, typical of the philosophical expressions of that neo-Venetian form of Anglo-Dutch Liberalism which raged, like a pandemic, across the maritime regions of late-Seventeenth- and Eighteenth-century northern Europe, and spread into the endemically treasonous Essex Junto and slave-owner circles in English-speaking North America. The neo-manichean doctrine of Quesnay appears in a Liberal guise as the explicit advocacy of moral depravity in Mandeville's *The Fable of the Bees*, as the same pro-serfdom dogma of the Physiocrats is echoed in Liberal John Locke's defense of slavery as "Property."¹⁸ Quesnay's and Mandeville doctrine of "let the Satan whom Smith esteems as the knowing Director of nature, fix the dice," is echoed by Adam Smith's 1759 *The Theory of the Moral Sentiments*, as in his anti-American tract of 1776, *The Wealth of Nations*.¹⁹

To situate the subject-matters thus introduced, we must recognize that any attempted attack on the problems of physical science, such as physical economy, requires that so-called physical science and so-called social theory not be kept in separate, virtually watertight, academic compartments. On this account, a competent understanding of both so-called "physical science" and "social theory," depends upon viewing both, simultaneously, as I have done, from a common axiomatic basis in the standpoint of the pre-Euclid

16. As I have elaborated this in locations published earlier, the use of the term "capitalism," as Karl Marx does, to describe, implicitly, both the Constitutional economic system of the U.S.A. and the present systems of western Europe, shows the speaker to be either illiterate in the most elementary features of modern economy, or a shameless liar. The crucial, continuing issue of U.S. wars against the British monarchy is rooted in the axiomatic incompatibility of the British system to that U.S. Constitutional system, rightly known to scholars by the names of "The American System of political-economy" or "the national system of economy." The principal objectionable feature of the British system was, and remains, its foundations in that neo-Venetian system of Anglo-Dutch Liberalism, in which a financier slime-mold form of oligarchy controls the fate of the nation and its other victims through the agency of an "independent central banking system." The latter system represents the special interest of a Venice-style financier oligarchy, which places itself above government in the foreign and internal affairs of both the nation and foreign targets, alike. This oligarchical feature is the notorious "Invisible Hand" (the one presently in your pocket). Under the U.S. Constitution's Preamble, the U.S. government is the sole sovereign, which is accountable to the interest of the General Welfare of present and future generations. Admittedly, the U.S. Federal System, introduced by U.S. agents of Britain's Edward VII, is an abom-

ination, but, since its constituent private shareholders are presently hopelessly bankrupt, the sovereign's authority expressed by the U.S. Treasury should be putting the embarrassed Fed under bankruptcy-reorganization, soon.

17. In English slang, "the buggers."

18. E.g., "shareholder value."

19. Cf. Friedrich August Freiherr von der Heydte *Die Geburtsstunde des souveränen Staates* (Regensburg: Druck und Verlag Josef Habel, 1952). My wife, Helga Zepp LaRouche and I have compared leading international law specialist von der Heydte's thesis to our own emphasis on the Fifteenth-century Renaissance. The two views, his and ours, are more complementary than contrasted. He emphasizes the struggle to free Europe from continued enslavement by the imperial law which ultramontane feudalism continued under the tyranny of (in our emphasis) Venice and the Norman military forces. The *Fronde* adversaries of a modern form of French nation-state, and of Cardinal Mazarin and Jean-Baptiste Colbert, who later allied against Colbert with the Gnostic "Sun King" Louis XIV, were a typical expression of the ultramontane tradition. Notably, the explicit coincidences of the Physiocratic tradition of Quesnay and Turgot, with the explicit "buggery" of Mandeville and Adam Smith, reflects the Venetian oligarchical roots common to both the ultramontane feudal and Anglo-Dutch Liberal systems.

geometry of Plato's Academy.²⁰

The modern reductionist standpoint, typified by Galileo and Descartes, assumes, as Ptolemy's, Copernicus's, and Brahe's schemes did, that individual sense-experience can be represented by a set of putatively "self-evident" definitions, axioms, and postulates, and, therefore, that a sufficiently well-developed mathematics, derived from such a set of "ivory tower" presumptions, such as that of the reductionists Euler, Lagrange, and Cauchy, must, as Lagrange taught, be potentially capable of explaining comprehensively anything and everything which occurs within the bounds of sense-experience. No hypothesis allowed!

In contrast to Lagrange *et al.*, the standpoint of the school of Thales' follower Pythagoras, accepts no "ivory tower" assumptions. Typical of the anti-Euclidean physical geometry of the Pythagoras-Plato tradition, are the same three elementary challenges by means of which Gauss, in 1799, defines the complex domain: the doubling of the line, the doubling of the square, and the doubling of the cube, as defined by Plato's collaborator Archytas, the Pythagorean of Tarentum. Add to this the uniqueness of the five regular (Platonic) solids. For Plato's view on these, consider three of Plato's dialogues, where the anti-Euclidean principles of physical geometry are referenced: the *Meno*, *Theaetetus*, and *Timaeus*. Read Gauss's fundamental theorem of algebra against that background; read the *powers* of the square and cube as they are expressed in an algebra so considered, or, as Gauss's famous, and crucial two documents on bi-quadratic residues, presents this view. The solution for *the physical act of construction* of the doubling of the cube, which resolves the so-called "Cardan problem," presents the stu-

dent with a sense of the efficient "physical presence" of the same complex domain in which Leibniz had located the catenary-keyed expression of a universal physical principle of least action.

The mastery of those elementary challenges of a purely constructive geometry, is to be taken against the experimental background of Fermat's, Huyghens', Leibniz's, and Jean Bernouilli's demonstrations, that physical effects in the universe do not follow a pathway of "Euclidean" (e.g., "Cartesian") pathway of "shortest distance," but of "quickest action," a pathway of action which scientific progress typified by the characteristic figure of physical geometry, the catenary. What needs to be purged from education, is the moral degradation of the teaching and application of mathematics to a mere describing of nature, as the Newtonian tradition of Lagrange's dogma does. In other words, as I shall stress at appropriate places in my argument here; the sterile mathematics of mere "energy," must be superseded by the physical geometry of "power."

The implication of such lessons, is that the principles of space-time organization lie in physical space-time, not a space and time of "purely mathematical," "ivory tower" definitions, axioms, and postulates, on which latter, false presumptions, the relevant failures of d'Alembert, Euler, and Lagrange were premised, as were the failures of such followers of Lagrange as Laplace, Cauchy, *et al.* Contrary to Aristotle, Euclid, and the "non-Euclidean," competent mathematical knowledge can be obtained only by those experimentally verified methods of constructed proof of principle which are reflected in the Platonic argument of Gauss's 1799 paper. The outcome of Gauss's work to this effect, becomes the opening paragraphs of Bernard Riemann's 1854 habilitation dissertation, which presents a general definition for a purely *anti*-Euclidean, rather than "non-Euclidean," physical geometry.

A physical geometry limits the notion of "dimensions" to those *hypotheses*, as Plato defines a notion of *hypothesis*, which occur as the acts of discovery and experimental proof of universal physical principle. These acts must have been validated, as Riemann emphasized, by methods of experiment uniquely appropriate for general claims to a proposed principle's universality. The discovery of the method of construction which enables a human mind to double a line, square, or cube, by no means but construction, defines "properties" of each, which are expressions of the *powers* of physical action by means of which relevant construction is accomplished. For example, the sublime "power" which distinguishes rotation from a mere line, and a solid from a mere surface. Gauss's treatment of the cubic function, and also his construction of the *Pentagramma Miraficum*, are typical illustrations of the use of the principle of construction as a

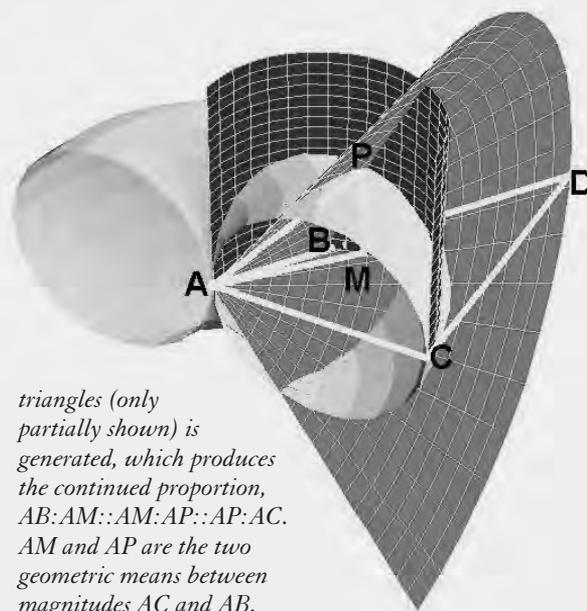
20. Benjamin Franklin collaborator, and Leibniz follower Abraham Kästner's crucial, leading role in the middle- through late-Eighteenth-century development of both Europe's Classical science and art is strongly implied here. It was Kästner who insisted that mathematics should abandon the post-Plato, "ivory tower" system of definitions, axioms, and postulates introduced as Euclid's *Elements*, and return to a strictly Platonic, anti-Euclidean conception of the experimentally based discovery of universal physical principles (*powers*). Hence, the development of an actually anti-Euclidean physical geometry is traced from Kästner, through his student Gauss, through the generalization of anti-Euclidean geometry by Riemann. This is not to be confused with the interesting, but relatively superficial "non-Euclidean" geometry of a Lobatchevsky and Janos Bolyai. Kästner, the leading German defender of the legacies of both Leibniz and Johann Sebastian Bach against the Eighteenth-century "Enlightenment" reductionists, was also the founder of the German Classic of Lessing, Mendelssohn, and such of their followers as Goethe, Friedrich Schiller, and the Humboldt brothers, in addition to causing the rescue of the works of William Shakespeare from their savage mutilation in the England of Walpole *et al.*

FIGURE 1. Archytas's construction for doubling the cube.

Archytas developed a construction to find two geometric means between two magnitudes, AC and AB. Magnitude AC is drawn as the diameter of circle ABC; AB is a chord of the circle. Using this circle as the base, generate a cylinder. The circle is then rotated 90° about AC, so it is perpendicular to the plane of circle ABC; it is then rotated about point A, to form a torus with nil diameter. (The intersection of the torus and the cylinder produces a curve of double curvature.) Chord

AB is extended until it intersects the perpendicular to AC at point D; this forms triangle ACD, which lies in plane of circle ABC, AB, and AC. Triangle ACD is then rotated around AC, producing a cone. The cone, torus, and cylinder, all intersect at point P. Perpendicular PM is then dropped from P along the surface of the cylinder, until it intersects circle ABC at point M; this forms right triangle AMP.

Through this construction, a series of similar right



triangles (only partially shown) is generated, which produces the continued proportion, $AB:AM::AM:AP::AP:AC$. AM and AP are the two geometric means between magnitudes AC and AB.

reflection of physically efficient effects of “powers.”

Successful hypotheses begin with a paradox. For example, does a cube exactly double the volume of a given cube, actually exist? Think about that; it is not an idle question. *Prove it by construction!* Look at Archytas's solution for this! The method of construction which solves that specific paradox expresses an experimentally demonstrated hypothesis which guided Archytas to that solution [SEE Figure 1].

That which is presented to the senses of the purblind newborn child is a realm of paradox-ridden sense-impressions, not a faithful image of the world outside his skin. The child must not only discover the functional relations within sensed physical space-time; he, or she must repeatedly rediscover those relations, correcting earlier errors of presumption in a succession which suggests the peeling of the onion. From the beginning, the child's mind must hypothesize the existence of that which corresponds to the always paradoxical sense-experience of that real, unseen physical space-time which tickles the human sense-apparatus. Nothing real is simply self-evident.²¹

21. Truth is expressed as action cohering with the essentially infinitesimal quality of the catenary. Scientific progress seeks to approximate that truth. As Leibniz taught, but an enraged Euler denied, it is truth, not mathematical approximations, which runs the universe, e.g., Leonard Euler, *Letters to a German Princess*, 1761. Hence Euler's denial of the infinitesimal for calculus, and Euler's and Lagrange's obsession with their protests against the reality of the complex domain. Hence, Euler's accomplice Maupertuis' fraudulent claim to have discovered a principle of least action.

New dimensions of physical space-time exist for us only as we acquire those new willful powers over nature which we define as the successive work of Gauss, Dirichlet, and Riemann defines a physical universe of that expanding array of paradoxes. These are paradoxes which the human will has either mastered as human physical powers for hypothesizing in the universe, or are, at the least, recognized challenges, as those paradoxes which we are seeking to bring under the willful control made available to us by experimental proof of physical principle.

That, in short, is the issue of hypothesis which almost invariably prompts the wildest eruptions of distemper among the reductionists of the “pure mathematics” and “physics” departments. What enrages those “ivory tower” fanatics, is their confrontation with the details which threaten to topple the edifice of their “self-evident,” mathematical “ivory tower” conceits.

That much said, what then is the way we must define the relations between what is usually assigned to the department of mathematical physics, as distinct from what is assigned to the departments of taught social dogma? A glance at Kepler's method will point the way.

Kepler and Prometheus: A Matter of Detail

Kepler's attention to detail showed him the existence of some crucial oversights in the work of astronomer Tycho Brahe. The orbit of Mars was not circular, but approximately elliptical. Moreover, the motion of the planets in

their elliptic-like orbits was not uniform, but constantly not uniform. Nonetheless, the succession of the recurring orbits was predominantly regular. These elementary details showed that the real universe did not function as Aristoteleans such as Ptolemy, Copernicus, and Brahe had imagined. The real universe was not the universe as a naive Aristotelean or empiricist blind faith in sense-certainty misdefines the notion of what are called “universal principles.”

In brief, Kepler recognized the paradox of observed, approximately elliptical orbits, that, not only, can the notion of Aristotelean regularity never be reduced to a simple form of action, but that, more to the point, the characteristic principle of action in the more scrupulously observed solar system, is expressed by constantly non-uniform motion. The shadows on the screen of a merely perceived solar system’s motions, are therefore controlled by some universally efficient power, in Plato’s sense of “power” (as contrasted with the reductionist notion of mere “energy”). Kepler recognized the object which cast the shadows of astronomical sense perception as a controlling intention of the Creator of the universe: *a universal physical principle, a power acting efficiently from outside perception, to produce the shadowy effects presented to the astronomer’s perception.*²²

The intention, which must be discovered, and then proven to be universally efficient in controlling the behavior of the shadows, appears first as a paradox, and then as an hypothesis which needs experimental proof of its efficient universality.

That much, for the moment for that example from Kepler; now, for LaRouche on the Riemannian geometry of long-range capital cycles.

What is an experimental proof of a Platonic quality of hypothesis? Really? Here, on this crucial point respecting the implications of experimental proof of principle, the Aristoteleans and empiricists figuratively hang themselves. The validity of the claim to have discovered any universal physical principle, is not satisfied by the mere repetition of the specified, observed effect. *It must be demonstrated that the application of what is believed to be an individual’s discovery of a proven universal physical effect, enables mankind to increase its power to exist in the universe.* It must be demonstrated that the claimed hypothetical knowledge represents a principled increase of mankind’s *power* to exist in the universe, as Plato defines “power” where the erring Aristotle claims to see “energy.”

In the relatively simplest case, the notion of *power*, as

employed by Plato’s dialogues in respect to doubling the square, or the Pythagorean Archytas’s construction of the solution for doubling of the cube, represent pre-existing principles of the universe, but preexisting universal principles whose discovery enables man to produce effects which are changes in that otherwise preexisting universe. The elementary cases of doubling the line, square, and cube, by construction, are typical of such Platonic connotations of *power*.

To illustrate the point of contention, consider the implications of what I have just said. Consider the legendary image of Prometheus, a subject to which I shall return at a later point here. The mention of that name now cracks the egg-shell, releasing our thoughts into a larger universe. This takes us directly to the most essential implication of Riemann’s 1854 habilitation dissertation.

Economist LaRouche’s View Of Our Universe

Now, we come to the point of this report at which we shall focus upon the idea of measurement of performance of economies in physical, rather than fictitious, financial-accounting terms [SEE Figures 2-5, page 14].

This clarification of the principles of real, as opposed to financial-accounting economics, requires a careful, preliminary reconsideration of some of the most important of the underlying considerations of physical-scientific practice. The indispensable role of the discussion of these considerations for any science of economy, will be made clear in the course of both the immediately following, concluding topics of present chapter, and subsequent, concluding chapter of this report.

We proceed, at this point, by turning first to an indispensable set of remarks on the nature of science in general. This applies to both matters of the phase-space of the individual’s action on the universe, and the physical effects determined by the principles of the social processes within which individual action is situated.

In any competent aspect of physical science, even formal mathematics, nothing exists before, after, or outside our universe. Einstein’s notion of the universe (taken as a totality) as “finite, but unbounded,” reflects such an awareness of the framework within which we might conduct any rational discussion of the universe. Similarly, if we must suppose that that universe always existed entirely within itself, that is not to suggest that it did not continue to develop, but that it is a Riemannian universe, producing not only new forms, but changes in characteristics of action within itself.

Suddenly, with that latter thought, of development, the universe becomes a fascinating place of residence;

22. Kepler, *op. cit.*

FIGURE 2. A typical collapse function.

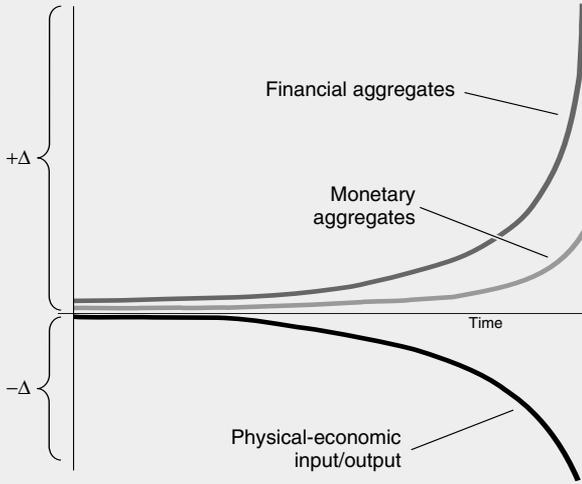


FIGURE 3. The collapse reaches a critical point of instability.

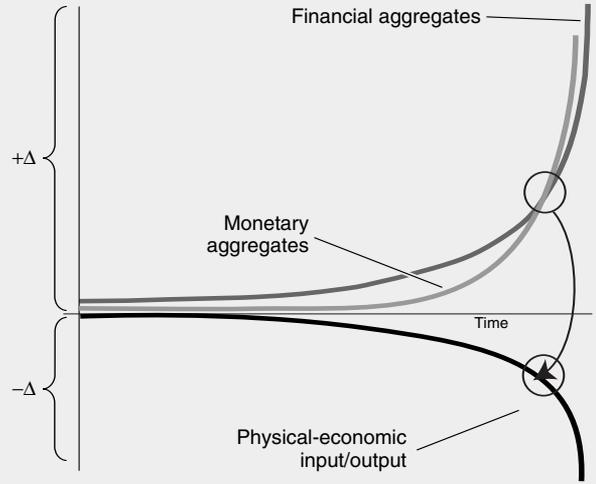
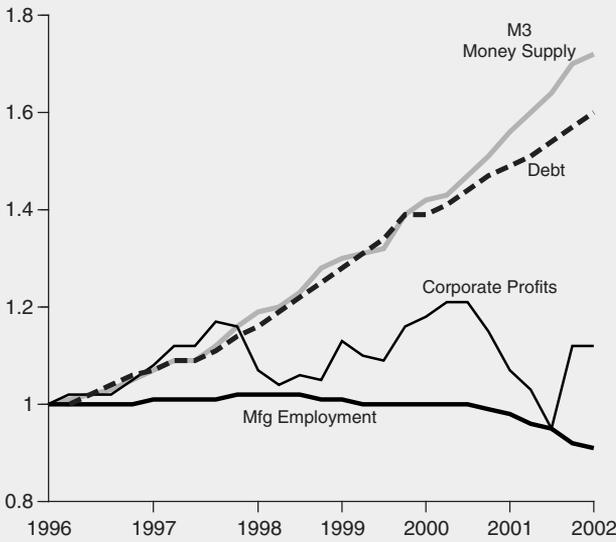
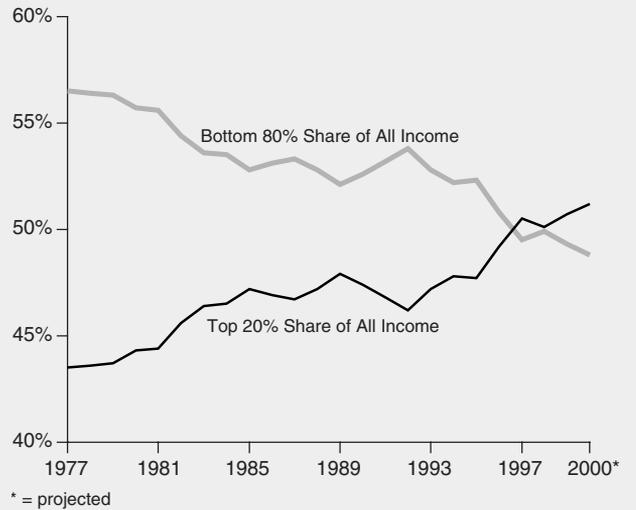


FIGURE 4. The U.S. economy's collapse function since 1996.



Source: Federal Reserve; Bureau of Economic Analysis; Bureau of Labor Statistics; EIR.

FIGURE 5. Top 20% of population have more than half of all after-tax income.



Sources: Congressional Budget Office; EIR

Over the 1966-2002 interval, the nominal values of U.S. financial and monetary growth zoomed, while the net physical values per capita collapsed. The financial crises of President Clinton's tumultuous second term, 1997-2000, culminating in the collapse of the "Y2K/Infotech" and "hedge fund" financial bubbles, were essentially a culmination of a long process of degeneration of the U.S. economy's physical basis, as reflected in the collapse of share of income of the lower 80 percent of family-income brackets.

physical science suddenly comes to life. Our notions of matter, space, and time, are changed profoundly, both individually, and in respect to their functional interconnections. Those childish notions of space and time which occupy popular and other scientifically illiterate opinion today, vanish, replaced by something which Riemann's notions of physical geometry suggest.²³

For us, as mortal human beings, all that science has discovered so far to be universal physical principles, points to principles which must be presumed to be, and should be tested for the quality of being universal, in their efficient extent of relevant application. Therefore, for a qualified physical economist, any Platonic form of hypothesis which is proven to be a universal physical principle by Riemann's implied standards of unique experiment, always existed within "the simultaneity of eternity," with those qualifications, and always will. This is to be understood in the sense that Gauss's 1799 report of the discovery of the fundamental theorem of algebra signifies "universal physical principle" in a Platonic way which reflects the Classical Greek constructions of Archytas, Plato, *et al.* That presumption of universality will remain true, to the extent some qualifying error in the interpretation of that notion were not uncovered and corrected.

Therefore, in the subject-area within which this report is situated, the practice of economic science, *we must proceed from the conditional, pragmatic assumption, that man probably does not create new general types of universal physical principles for the universe, but, rather, is able to create new physical states in the universe, through Platonic modes of discovery and application of pre-existing natural principles.* Man extends the actual application of those discovered, universal principles which have the character of Platonic

powers. This is the central principle of practice for both economic science today, and the principle governing the determination of relevant forms of competent law and policy-shaping practices of governments. Pending new discoveries which extend knowledge of our universe beyond that available today, this view expresses the principle on which the competent measurement of performance of an economy must be measured currently.

Therefore, the conditional notion of science today, must limit its claimed ambitions, to the bounds of those universal new states in the universe, which our discovery of pre-existing principles enables us to introduce as qualitative changes in our practice upon the universe. All competent notions of economic processes depend directly and absolutely on that view of man in the universe as a whole.²⁴

The essential argument to be made here respecting elementary principles of a science of physical economy, is summed up as follows.

When a person discovers an experimentally validated universal physical principle, a Platonic quality of *power* already existing in the universe, it is placed implicitly at the disposal of mankind. The best evidence of history to date, is that this action adds no new principle to the total of those existing in the universe, but increases the powers of the universe now placed within the domain (Riemannian phase-space) of powers now at mankind's willful disposal.²⁵ The realization of that new potency of mankind produces qualitatively new states within the universe, states which would not be generated without man's practice of those principles. This changes the behavioral characteristics of that universe in a principled way, without yet increasing the totality of principles existing in the universe.²⁶

23. The principle of least action (as opposed to, for example, shortest distance) points in that direction. With Riemann's habilitation dissertation, the notion of changes in characteristic values of action becomes a distinct idea.

23. The principle of least action (as opposed to, for example, shortest distance) points in that direction. With Riemann's habilitation dissertation, the notion of changes in characteristic values of action becomes a distinct idea.

24. The notion of development within the universe as a universe suggests four possibilities:

1. *The development within the universe which occurs through mankind's application of discovered universal principles which have the quality of Platonic powers.* This is a scientific certainty.

2. *The self-development of the universe implicit in the notion of a fixed set of active, "original" physical principles considered as Platonic powers.* This is also a certainty, as the presently considered development of a solar system from a "young," fast-spinning sun implies such development.

3. *That man, by discovering and adopting the power inhering in such knowledge of a self-developing universe, qualitatively expands*

and accelerates the self-development of the universe in man's practiced role as a conscious agent of the Creator.

4. *The great ontological paradox, that the Creator, as a self-subsisting personality, creates new primary universal principles (powers) within an otherwise self-developing universe.* For our purposes here, we limit most of our discussion to the first three of these notions of development of what Vernadsky identified as the Noösphere.

25. For example: Note for later reference, that man's efficient discovery of a principle associated with abiotic phase-space increases the anti-entropy of the universe by this copying action from the ostensibly abiotic to anti-entropic to the cognitive domain.

26. There is one qualification to be added to that at later point in this report. The efficient addition of the practiced discovery of any universal principle to mankind's knowledgeable practice, changes the principled character of that phase-space, but, despite that, the fact that a pre-existing principle of the universe is added to human knowledge does not add to the roster of physical principles in the universe as a whole, even though the resulting human activity may change the characteristic anti-entropic efficiency of the universe as a whole.

A related, if more limited conception of the universe, is presented by Vernadsky's successive development of the conceptions of *Biosphere* and *Noösphere*.²⁷ Vernadsky, a trained geologist, proceeding from the included benefit of the accomplishments in geology and physical chemistry of his former teacher Dmitri I. Mendeleev, took up the work of Louis Pasteur *et al.*, in defining the existence of *life* as a distinct universal principle, not derived from an abiotic universe. To this end, as a physical chemist of that intellectual pedigree, he introduced the case for the existence of what he identified as the *Biosphere*, whose geological "history" shows the abiotic processes of Earth as under increasing relative domination by the combination of the totality of living processes and their fossils, the latter including our planet's atmosphere, bodies of water, and soils.

As this fact became relatively well known among scientifically literate university graduates of the last half-century, the kernel of this notion of *life* as an expression of a primary form of universal physical power,²⁸ is that what are known to be living processes, produce what are otherwise impossible states of organization among non-living processes. This conception, whose development relevant classrooms and textbooks have traced to outgrowths of the initiatives of Pasteur, was pursued by his associates and followers such as Curie, to the effect of defining *life* as a specific quality of universal principle (*power*).²⁹

Following the introduction of the reductionist notion of thermodynamics, by Clausius, Kelvin, *et al.*, the experimentally based mathematical-physics distinction of life from abiotic processes generally, was early associated, by friends of life, with a mathematical notion originally named "negative entropy." This distinction presumed that life is a self-subsisting universal principle, not dependent upon specifically abiotic assumptions, which is imparted by life to the universe as a whole. Later, from the late 1940's onward, as the crankish, radically positivist, anti-humanist notions of such followers of the fanatical Ernst Mach as Ludwig Boltzmann, and

Bertrand Russell's devotees such as Professor Norbert Wiener, and John von Neumann, gradually gained broad, even popular currency, the original experimental connotations of "negative entropy" have almost disappeared from general use. That term has been taken over by the popularization of the pathetic science-fiction cults of the positivists, not only among science-illiterate politicians and mass-media editors, but even among many persons who are putatively actual scientists.

To eliminate that growing confusion caused by the spread of the "information theory" fads, as through the irrational fantasies of "science fiction" writers and their readers, I found myself compelled to introduce a new, mathematically more precise term, "anti-entropy," for what had been the biologists' original, pre-"information theory" intent of "negative entropy." I premised this notion of "anti-entropy" on the characteristic functional distinction between an anti-Euclidean physical geometry, notably that of Gauss-Riemann, from a merely "non-Euclidean" geometry, such as those of Lobatchevsky, Janos Bolyai, and Hermann Minkowski's famous lecture on relativity. This notion of "anti-entropy," as it must be identified today,³⁰ reveals its essential role in defining universal physical principles when we recognize two inseparable notions, as Vernadsky did, in his defining a Biosphere.

The fact, that processes characteristic of life generate ordered states of nature not existing in abiotic processes, not only defines living processes, but also provides a rigorous line of experimental division between abiotic and living processes. This line of division has the quality of a universal physical principle of the type associated with the notion of a *power* in the physical geometry of Plato, Kepler, Leibniz, Gauss, Dirichlet, and Riemann, among others. *First*: It identifies an expressed power which is always functionally characteristic of the living process, but never the abiotic as such. *Second*: As Vernadsky showed the proofs of this fact, the biological evolution of our planet, when the fossils specific to living processes are counted in, increases the accumulation of biomass,

27. LaRouche, *op. cit.*

28. Again, the term "power" is used here in the sense of Plato, Leibniz, Gauss, *et al.*, in contrast to the reductionists such as Euler, Lagrange, Cauchy, *et al.*

29. In follow-up on my initial wrestling against the quackery of Professor Norbert Wiener (most notably, *Cybernetics: The Human Use of Human Beings*) and John von Neumann (most notably, *The Theory of Games and Economic Behavior, The Computer and the Brain*), I was confronted by Erwin Schrödinger's *What Is Life?* What Schrödinger failed to grasp, is that the physical evidence for a specific principle of life, as distinct from the abiotic domain, precludes any reductionist inference. Schrödinger, to his credit, was a

physicist at heart, despite the Machian influence represented by Boltzmann's work; but, his influence is all the more dangerous to science, simply because he is less implausible than the obviously epistemologically childish Bertrand Russell clones Wiener and von Neumann. See the later discussion here of Vernadsky's concept of life, for more on this ticklish issue of defining a principle of life as such.

30. This is "anti-Euclidean" in the sense of the use of the term by Gauss's teacher Abraham Kästner. It has the geometry implied by such early Gauss writings as his 1799 report of the fundamental theorem of algebra, a meaning more amply expressed by Riemann's 1854 habilitation dissertation.

The validity of the claim to have discovered any universal physical principle, is not satisfied by the mere repetition of the specified, observed effect. It must be demonstrated that the application of what is believed to be an individual's discovery of a proven universal physical effect, enables mankind to increase its power to exist in the universe.

Superconducting magnets at the Relativistic Heavy Ion Collider, Brookhaven National Laboratory.



Brookhaven National Laboratory

including such fossils as atmosphere and oceans, the living process dominates the abiotic in long-term effects of this transforming of the planet.

This division between the abiotic and living separates the phenomena of Vernadsky's Biosphere into two distinct but universally interconnected, Riemannian phase-spaces. Vernadsky's work shows no actual comprehension of Riemannian physical geometry and its implications, but his work begs rereading from the anti-Euclidean standpoints of Kepler, Leibniz, Gauss, Riemann, *et al.*

Vernadsky's approach to the Biosphere leads him toward defining the Noösphere.

Just as the physical effects of action of living processes, produce the combination of living processes and their fossils, so what Vernadsky identifies as the distinctive creative (*noëtic*)³¹ powers of the human mind, produce qualitative changes in the combined processes of the Biosphere, changes representing physical effects

31. I would define what Vernadsky appropriately terms "noëtic" processes as cognitive in the sense of Plato's principle of hypothesis. Here, I continue to reference Vernadsky's use of the term up to the point of this report I have made my own preferences clear. I mean cognition (*noësis*) in the sense of a Riemannian, anti-Euclidean physical geometry, as Riemann employs "hypothesis."

which can not be the spontaneous outcome of living processes alone. The combined effect of these *noëtic* and Biosphere processes, produces what Vernadsky defines as the Noösphere. The result is the image of a three-phase universe, the Noösphere, composed of the interconnected action of three distinct phase-spaces: abiotic, living, and *noëtic*.

Where Vernadsky writes *noëtic*, I point to the quality of mental action typified by Gauss's 1799 exposure of the anti-creative physical-scientific impotence of Euler, Lagrange, *et al.* in the matter of those universal physical powers which are reflected in the reality of the complex domain. Gauss, like Leibniz before him, and such successors as Riemann, moved science toward eradicating all "ivory-tower" definitions, axioms, and postulates from science, and replacing these with nothing but those discovered universal physical principles defined by experimentally validated Platonic forms of hypothesizing: *noësis*.³²

It is that specific quality of creative reason which places Euler and Lagrange in stubborn defiance of the existence of human creative reason, as Gauss's cited 1799

32. In Christian theology, for example, there is no knowledge except through the Platonic principle of contradiction. In mathematics, this takes the form of saying that nothing real exists outside the complex domain identified by Gauss, Riemann, *et al.*

argument typifies the product of creative reason, which otherwise is key to locating the functional difference between man and beast. This takes us beyond the accomplishments of Vernadsky, into the domain of Riemannian physical geometry. This is also the key to a competent economic science.

The Measure of Economic Value

The assortment of the universe's known principal phase-spaces, among the abiotic, the living, and *noëtic* processes, should be viewed from the vantage-point of the Plato's Cave allegory, contrasting the shadow-world of sense-perception to the unseeable reality, the principled powers which generate the shadowy perceptions of sense-certainty. The relations among those three principal phase-spaces identified as representing the unseen reality, are to be considered in that light. In short, just as the principles of the abiotic domain do not "see," but are affected by the principle of life, so the biologist qua biologist does not "see" the *noëtic* principle which produces cognitive behavior in a certain species of living organism, man.

I now introduce the matter of the underlying principles of economics to this review, with relevant comments on those distinctions in physical science which are the foundation for any competent economic, or national-income-accounting doctrine of practice.

As I have reported this fact earlier, the notable difference between my own and Vernadsky's definition of a Noösphere, is threefold. This difference defines my concept governing the measurement of the relative value expressed by physical-economic processes. I now summarize that distinction, as follows.

First, we have phenomena which are produced without the attribution of either a principle of life, or of what Vernadsky terms a *noëtic* principle. The first set of phenomena are those we attribute to the abiotic domain.

It became customary, until now, to define the characteristic feature of the abiotic domain as what the Clausius, Grassmann, Kelvin, *et al.* tradition named *entropy*. The flaw of that assumption should be obvious; the associated notions

of thermodynamic principles introduced by Clausius *et al.*, incorporate an array of largely unstated, *a priori* assumptions. These assumptions include the error of empiricist mathematical dogma associated with the referenced common blunders-in-common of Euler, Lagrange, Laplace, Cauchy, *et al.* These include the fallacy of "energy," derived from the precedent of Plato's famous philosophical adversary, Aristotle: as opposed to the notion of "power" associated with Plato's notions of physical science.³³ Clausius *et al.* also include a general fallacy of composition to which I shall turn attention a short space ahead.

It were better to leave out the issue of the empiricist notion of entropy altogether, and to define the abiotic domain as the domain of actions (i.e., a Riemannian phase-space) from which the principled qualities of life and *noësis* are manifestly absent. I shall clarify the importance of, and basis for that negative definition a relevant short space ahead.

Second, and third, we have the sets of phenomena which are characteristic, respectively, of life and *noësis*. This points to the principles of life as a universal physical principle, and *noësis* is also a universal physical principle. By principles, we should understand *power* in the Platonic sense of Kepler's discovery of gravitation as a representative of the existence of a specific quality of *power*. Life as a principle (*power*), is recognized as both an agency specific to living processes and their specific effects, and as also *anti-entropic*: as I have used the term anti-entropy.

The distinction among the notions of power respectively specific to the abiotic, life, and *noësis*, defined three distinct but multiply-connected Riemannian phase-spaces. *All three phase-spaces are in operation throughout the universe at all times, as well-ordered Riemannian phase-spaces tend to be.* Hence, the anti-entropic influences of life and *noësis* have *always* been present and operating in the universe. Thus, for example, the universe as a whole, the universe in which these three phase-spaces are multiply-connected, is anti-entropic, although most encountered textbook-style physics implicitly assumes the abiotic phase-space to be entropic in the sense of the argument by Clausius, Grassmann, Kelvin, Mach, and Boltzmann.³⁴

33. *Power* equals *work* on that real universe which exists beyond the shadow domain of mere sense-perception.

34. The misreading, by Clausius *et al.*, of the celebrated work of the Ecole Polytechnique's Sadi Carnot, is the result of that practice of fallacy of composition of the evidence specific to the reductionist methods of the empiricists, including the positivists generally. After Fermat's introduction of the concept of quickest pathway of action, rather than Euclidean shortest distance, that further work by Huyghens, Leibniz, Bernouilli, *et al.*, leading to both Leibniz's universal physical-geometric principle of least action, and the anti-Euclidean physical geometries of Gauss, Weber (for electromagnetism), Riemann, *et al.*, we must regard the continued effort of

any relevant professional to locate the elementary principles of action within implicitly Cartesian spaces, as tantamount to fraudulent recklessness. Thus, energetic effects are to be mapped as results of actions within that specific, anti-Euclidean physical-space-time geometry within which the supposedly elementary action occurs. Since this requirement was well known since the relevant work of Gauss, Weber, Dirichlet, and Riemann, there was no excuse for that purely arbitrary, ideological error of the reductionist which was typified by such collaborators of Kelvin as Clausius and Grassmann. As J. Clerk Maxwell conceded his own stubbornly intentional subscription to that "Cartesian" fallacy of composition, when challenged for his omission of his work's debt

That negative definition of abiotic, may appear less shocking, if I now emphasize the following qualifications. Rather than saying that life as we usually agree to recognize the term “life,” as an act of pointing to certain experimental evidence, life, as expressing a universal physical principle, we must, as Vernadsky emphasizes, recognize it as a *physical principle* by its specific production of uniquely relevant physical effects. So, as Vernadsky also argues, the term *noësis* is also a way of pointing toward the existence of a universal physical principle. In neither case are we inferring that the principle appears only in the form of expression we associate with our first-impression notions of the terms “life” or *noësis*; we are inferring principles whose expression is usually recognized by us when expressed to us as a principle of life as Pasteur, Curie, *et al.* defined it, or, for *noësis*, as Socratic hypothesizing. The principle itself, in both cases, must have a broader and deeper quality of significance than we associate with conventional reference to such terms. From the standpoint of a science of physical economy, these principles, in their more general, underlying quality, permeate the universe, its astrophysics and micro-physics included.³⁵

Ironically, our best knowledge of such a three-phase-space Riemannian manifold, comes from appropriate forms of study of the human mind, rather than abiotic physics or biology. This is, admittedly, contrary to the reductionist method; but, that is a virtue, not a fault. We must proceed from the top down, what we actually know about our own ability to make experimentally valid discoveries of principles, rather than the “ivory tower” methods of Euclid’s *Elements* and empiricism.

Plato’s Socratic method of experimentally oriented hypothesizing, is itself a great experiment by mankind. We have wonderful access to that experimental domain, because all of mankind’s progress in knowledge and power as a species, has depended absolutely on the efficient practice of those specifically human powers of hypothesizing. We are enabled to experience the interior

of the *noëtic* processes directly, to observe them consciously, and to confirm those hypotheses experimentally. Our best knowledge of the universe as a whole, is experimental knowledge which we conquer through our consciousness of our sovereignly individual powers of hypothesizing what appropriate experiments show us to be, and to have been, universal physical principles.

Hence, all that we really know about man and the universe is knowledge produced by an understanding of a universal principle of hypothesizing, a higher order of hypothesizing: Plato’s concept of an higher hypothesis. What we know, is what we are enabled to know efficiently by aid of the cognitive processes of Platonic hypothesizing of the experimental domain. It is through those cognitive processes of the mind which set us, uniquely, apart from and above the beasts, that we are capable of actually knowing anything, including biology and abiotic physics. Thus, we can not claim to know anything, except through those processes of *noësis* as I have defined them, yet once again, in this present report.³⁶ It is by validating the functions attributable to those cognitive processes of hypothesizing, that we are authorized to claim any principled knowledge of anything, abiotics and biology included.

To restate the same point in slightly different way, we have the following.

All that we actually know of the universe with the equivalent of scientific certainty, is a product of the hypothesizing activity of the human mind, with its specific power of hypothesizing experimental truths. Where the empiricist attempts to explain the existence of the universe from the starting-point of reductionist notions of sense-perception per se, science knows the universe only through its power to change the shadow-world of sense-perception in ways contrary to reductionist presumptions, as Kepler did in discovering the principle of gravitation. The increase of the human species’ potential relative population-density, from the level of potential of millions, to billions of living specimens, should warn us

to the preceding discoveries of Gauss, Weber, and Riemann, he replied that “we” have refused to acknowledge the existence of “any geometries but our own” Cartesian tradition. The false claims for Hermite and Lindemann of the discovery of the transcendental and the inclusion of “pi,” as by Felix Klein, typify the same ideologically motivated form of elementary disregard for truth. Notably those false claims by such reductionists were premised on the fraud of Euler’s ideological fanaticism, as expressed in Euler’s 1761 *Letters to a German Princess*. The lunatic Ernst Mach and such followers of Bertrand Russell as Wiener and von Neumann exhibit frauds born of those reductionists’ ideological fanaticism, but carried to an extreme.

35. It is unfortunate, that many teachers, and also students, fall victim to the purely neurotic reflex of insisting that the term

they have just adopted is also the “last word” in scientific knowledge. So, the neurotic Lord Kaldor allowed himself to be so deluded by John von Neumann’s clever, but fraudulent claim to explain almost everything about economics, and legions of neurotic fools have been duped by the ostensible cleverness of Professor Norbert Wiener’s sophistry in arguing for “information theory.” “Oh, I know all about that,” is a typical symptom that we are dealing with neurotic fool, one who, perhaps, “just looked it up on the internet.” Knowledge is never a “final event” in a chain, but an ongoing process, a process which increases, rather than diminishes the number of questions yet to be answered.

36. This was the principle, of *De docta ignorantia*, on which modern experimental science was founded by Nicolaus of Cusa.

that all we really know is nothing except that which is known experimentally from the standard of the practice of Plato's method of Socratic hypothesizing.

Now, focussing that line of discussion of Vernadsky's argument upon physical economy as such: *How, by what universal principles, should we then measure the relative performance of societies as physical economies?* Put that pencil and computer away! Before measuring, ask: *What is your conception of that which you should desire to measure?*

From what is written in the preceding pages of this report, *the conception we must choose for measurement must be, in first approximation, the relative physical-economic power of society, as Plato, Leibniz, and Gauss define "power" in ways consistent with Gauss's referenced 1799 report.* We must then refine our definition, to think of measuring the changes in physical effects accomplished by application of the power presently being made available to society's practice. We must then express those *Kepler-like trajectories* of projectable or ongoing changes in effect, in terms of increases (or, decreases) of potential relative population-densities *per capita* and *per square kilometer* of surface-area.

That said, now shift attention to focus on the content of the action by means of which these changes in trajectories are generated: *the adoption of discovered universal physical principles for practice.* This has the connotation of the idea of science-driven technological progress; but it also implies what is usually overlooked in the discussion of such scientific practice, the determining role of a special class of physically efficient social principles, principles typified by valid methods of composition and performance of Classical forms of plastic and non-plastic art, as opposed to the axiomatic irrationalism of Archaic, Romantic, and modern modes of art.

The point may be conveniently illustrated by focussing upon the dividing-line which separates the first establishment of modern European civilization, the modern sovereign nation-state, in opposition to the preceding feudal system. This qualitative change was the fruit of earlier work under feudalism, including the Augustinian harmonics, derived from Plato *et al.*, expressed by the Chartres school of cathedral-building, and the impact of the work of, especially, Dante Alighieri and Petrarch. However, the shift itself was sharply defined in the Europe-wide impact of the internal history of the Fifteenth-century Italy-centered Renaissance.

To discover how measurement of these trajectories is to be made, we must now define the relevant features of that modern sovereign nation-state which first came into existence during Europe's Fifteenth-century, Italy-centered Renaissance.

The Modern Nation-State

No political-economy existed prior to the pioneer models of France under Louis XI and England under Henry VII. Four principles point to the premises for that distinction.³⁷

First, the introduction of the Classical method, in place of the Romantic, as typified by Brunelleschi's successful design of the cupola for the Santa Maria del Fiore Cathedral of Florence.

Second, the birth of modern experimental science, with Nicolaus of Cusa's *De docta ignorantia*, as a revival of the Classical method of Plato.

Third, the birth of the modern nation-state, set into motion by Cusa's *Concordantia Catholica*, the successor to, and supercessor of Dante's *De Monarchia*.

Fourth, the crucial, commonly underlying feature of these revolutionary reforms, was the adoption of the principle of the anti-Roman, anti-feudalistic modern nation-state republic. In the modern republic, the political-moral authority of the sovereign depends absolutely upon efficient submission to the so-called *commonwealth* principle of the *General Welfare* (*agapē, common good*) for both the entirety of the living population and, even more emphatically, its posterity. The supreme principle of the U.S. Federal Constitution's Preamble, the sovereign authority and responsibility of the sovereign nation-state to promote not only the defense of that institution, but the General Welfare of the living and their posterity.³⁸

For these reasons, despite many corrupted models of elected government under which the U.S. has suffered, from time to time, the Federal Constitution of the U.S.A., especially when read as under the controlling principle stated in its Preamble, is the primary, historically existing example of a true sovereign nation-state today. The related problem which accounts for the defects of the systems of Europe and with other parts of Americas, has been, that even after the dissolution of the Habsburg tyrannies, the prevalent form of government and politi-

37. This distinction, as a broad distinction between the imperial tradition of, for example, Venice's alliance with its Norman partners, and the sovereign nation-state, is implied by the referenced work of von der Heydte, and, to a lesser degree by others, but the scientific economic definition of the crucial historic change to actually sovereign nations, has been, chiefly, my own work.

38. Admittedly, both the Hapsburg systems of Spain and Austro-Hungary, and the parliamentary systems built according to the Anglo-Dutch Liberal paradigm, are in violation of, and hostile to these republican constitutional principles. Two central points are to be emphasized on this account. First, the post-Fifteenth-century Hapsburg institutions, and their like, existed within the historical setting of the modern European civilization they struggled to destroy, as through the religious and related warfare of the 1511-

cal-economy in Europe and the Americas today, is the form of parliamentary system, the Anglo-Dutch Liberal model, under which a Venice-like financier oligarchy, represented, typically by an “independent” central banking system, enjoys relative hegemony over the nation’s economic affairs and veto powers over its elected institutions of government. To that degree, whether under the Habsburgs/Hapsburgs or the Anglo-Dutch Liberal system, the state does not exist for the benefit of mankind, but treats the majority of the subject populations as relatively human cattle, as Aeschylus’s Prometheus (and Goethe’s) denounces Zeus and the self-doomed Olympos on this account.

Thus, as I have emphasized above, and in many earlier published locations, the prevalent European economic model today, is that Anglo-Dutch Liberal model whose typical expression is the pro-slavery dogma of John Locke, in opposition to the anti-Locke principles of Gottfried Leibniz, whose influence was dominant in shaping the U.S. 1776 Declaration of Independence and the 1787-89 Preamble of the Federal Constitution. For example, in U.S. history to date, the Essex Junto, Jonathan Edwards and his grandson Aaron Burr, the pro-racist Nineteenth-century Democratic Party of Martin van Buren, Jackson, Polk, Pierce, Buchanan, Cleveland, and Wilson, and the Republican Party of Theodore Roosevelt, Calvin Coolidge, and Richard Nixon, and Associate Supreme Court Justice Antonin Scalia, represent the U.S.’s sometimes nearly fatal infection with the Anglo-Dutch Liberal virus of John Locke.

The domination of many nations, and other powerful institutions by the global power of that Venice style in financier oligarchies, which is typified by the so-called “independent” central banking system, distorts economic reality, by making that monetary and financial power peculiar to central banking systems the determinant of the corrupted political and legal meaning of the term “economics.” The control over “money” by an “independent” central banking system, is the most immediate

source of all corruption of nation-state economies around the world today. This corruption, the substitution of largely fictitious money-systems, for physically efficient economic relations, is the chief factor generating the disasters of the world’s political-economic systems today.

Under what is known alternately as either the American System of political-economy (e.g., Hamilton) or the American System of National Economy (i.e., List), the republic is perfectly sovereign, including its authority over the monetary and financial systems of the nation. Under the sovereign republic, unlike states corrupted by the Anglo-Dutch Liberal model, the role of the Federal government as the only lawful creator of national debt and credit, demands a system of national banking, through which all banks either work, or by which their practices are regulated. In such a national-banking role, or, as under a President Abraham Lincoln or President Franklin Roosevelt, the true public interest, the General Welfare of the present population and its posterity, enjoys absolute preeminence over the influence of finance.

Consider, briefly, the absurdity inhering axiomatically, and also practically, in all monetarist doctrine and comparable practice. Then, consider the scientific alternative. Today, that contrast is being demonstrated by the currently accelerating economic collapse of the world monetary-financial system, a system which has failed, catastrophically, in precisely the way my “Triple Curve” argument presents the relevant evidence.

To restate the working point: All modern economies rely largely on the adopted role of money, as an instrument through which commerce and capital investment are conducted in the small. The difference is, that in the Venice or Anglo-Dutch Liberal model, the essentially fictitious value assigned to money per se is more or less absolute power, a power placed implicitly above the human right to life. Therefore, in the morally degenerate Liberal, financier dictatorships according to the neo-Venetian model of Locke *et al.*, physical values in economy are judged by monetary processes. In the contrary

1648 interval, and, later, through the decline and fall of Prince Metternich’s Austro-Hungary. The role of the Habsburg’s chief rivals, France and the Anglo-Dutch Liberal model, was similarly situated. Second, the character of the globally extended influence of the modern European civilization set into motion by the Renaissance, is defined by the failure of the Habsburgs, and then the Anglo-Dutch Liberals so far, to crush the institutions of sovereignty and scientific-technological progress. The challenge of sovereign states’ resistance to the London-led form of utopian, heathen form of new Roman world empire according to the Venice financier-oligarchical model, still entraps the opponents of the modern state in a world defined by that which the heathen oligarchical followers of H.G. Wells and Bertrand Russell are attempting to destroy, still today. Europe’s long toleration of obscenities such as the Habsburg/Haps-

burg systems, and also the Venice-modelled Anglo-Dutch Liberal system, are illustrations of the principle of Classical tragedy. E.g., Shakespeare’s Hamlet “failed” for two reasons. Primarily the “rotten Denmark” depicted by Shakespeare, and, only secondly, the failure of Hamlet to reject the folly of that national culture. Hamlet’s specific folly, as expressed by the famous Third Act soliloquy, was his fear, not of death, but of what might come to him after he had “shuffled off the mortal coil,” his fear of immortality. So, Jeanne d’Arc was a sublime, rather than tragic figure, because she was capable of doing what was necessary to change her corrupt society without fear of immortality. Thus, overriding devotion to the effects one contributes to the future, as if in the image of Christ, is the mark of the sublime, the mark of the figure qualified to lead society, and to govern it. Solon would have agreed with that.

case, the sovereign nation-state republic, money and its traffic are regulated, as President Franklin Roosevelt understood a gold-reserve system (as opposed to the wicked gold-standard system). The latter regulation is to be through aid of government, to the end of holding relative monetary values within the bounds of relative physical values.

The illustrations used above, and in other published locations, to describe the general lines of economic and moral degeneration of the Americas and Europe over the 1966-2002 interval, show the actual shifts in relative valuations of money, finance, and physical reality over this period, especially since the massive destruction of economy effected during the 1971-1981 interval. It is the fact, that these diverging trends among money, finance, and physical output, are characteristic of the policy-making trends under a radically monetarist form of rule by the Anglo-Dutch Liberal model, which has caused the present global economic collapse of the present world monetary-financial system, to be a systemic (e.g., terminal) process, rather than merely a cyclical one.

The world is presently gripped by an incurable bankruptcy of the existing central banking systems of the Americas, Europe, and many other locations. The effort to maintain these doomed systems would produce effects comparable to Europe's mid-Fourteenth-century New Dark Age, dooming both the financier interest and the nations on which they prey. Only a process of state-directed bankruptcy reorganization of the system, could prevent the virtual doom of most, or even all of civilization for more than a generation to come. Under the urgently needed bankruptcy-reorganization of the ruined monetary and financial systems, the reorganization of national economy and world trade must follow, it will be indispensable to place the monetary and financial processes under the control of scientifically validatable forms of physical-economic determinations of relative values. On this account, much can be learned from U.S. economic history as a whole, the pluses and minuses of the 1933-1945 interval most notably.

The most critical political issue posed from the outset of such a now urgent reform, is that neo-manichean superstition associated with the misleading name of "free trade" which the modern European Physiocrats and Liberals adopted from wild-eyed gnostic cults of "the elect," such as the Cathars. The superstitious cultist, such as Quesnay, Mandeville, Adam Smith, or marginal utilitarians, attributes the "secretion" of economic profit to some mystical agency, such as a magical power invoked by a title of nobility, or other form of property-title, or the bounty given to the undeserving louts of a Jonathan "Elmer Gantry" Edwards "revival meeting."

In physical economy since Leibniz, the generation of gain of wealth produced over that consumed as a prerequisite, is attributable to the generation and application of improvements in human knowledge. The objective is to reverse the relationship among the trajectories of monetary, financial, and real growth, in directions exactly contrary to that illustrated by the set of "Triple Curves" shown above.

Without taking up, yet, those matters of principles of social relations addressed in the coming chapter, the principles of physical-economic profit, are defined in the following, Riemannian mode.

Relative physical-economic profit, as distinct from financial-accounting profit, is defined as the product of the accumulation of applied universal physical principles *per capita* and *per square kilometer* of relevant surface-area. This is relative to the improved or depleted condition of the environment in which the relevant activity occurs. To set the stage for the following summary argument, focus again on the most crucial evidence: That were man a higher ape, the living human population of the planet would not have exceeded some millions of individuals, whereas scientific-technological progress has made possible a population in the order of billions.

The discovery of universal physical principles by individual "free will," as the legacy of Plato's method best defines the notion of such principles, and the transmission of those discoveries into socialized practice of societies, is the category of events which accounts for mankind's increasing power to exist, individually and as society, *per capita* and *per square kilometer*. The combined benefit is expressed in the form of an increase of the potential relative population-density of society, and also of the human species as a whole.

This process is expressible in the language of a Riemannian physical geometry. The accumulation of "revolutionary" discoveries of universal principles, as Gauss's 1799 attack on the axiomatic fallacies of Euler's and Lagrange's method reflects this, is the action by means of which mankind makes possible an implicitly endless accumulation of successive increases in its potential relative population-density. To the degree that society transforms its practice in accord with such scientific progress, the per-capita power of the individual is increased in a way which is reflected as a gain in potential relative population-density.

Mathematically, such a progressive succession of changes has the quality of a change in the Riemannian physical geometry of mankind's functional relationship to the universe. The change has the form of a transformation of a geometry of n universal physical principles, to one of $n+1$ principles. The change in the characteristic

In the modern republic, the political-moral authority of the sovereign depends absolutely upon efficient submission to the so-called *commonwealth* principle of the General Welfare (*agapē, common good*) for both the entirety of the living population and, even more emphatically, its posterity. Despite many corrupted models of elected government under which the U.S. has suffered, its Federal Constitution, especially when read as under the controlling principle stated in the Preamble, is the primary, historically existing example of a true sovereign nation-state today.

Benjamin Franklin with drafting committee of the Declaration of Independence. Its General Welfare standpoint was made explicit in the Preamble to the Constitution.



Prints and Photographs Division, Library of Congress

“curvature” of action within such a succession of changes in numbers of principles being intentionally applied by man, is the location of the increase of the relative physical profit of society *per capita* and *per square kilometer*.

The Role of Basic Economic Infrastructure

Consider briefly the most ironical feature of such a process, the effect of capital and related improvements in basic economic infrastructure.

The most relevant, and ironical of the typical cases of development of basic economic infrastructure, is that in which the productive powers of labor in agriculture and manufacturing are increased by improvements in basic economic infrastructure, without any relevant change internal to operations in agriculture and manufacturing itself. Such are the notable classes of benefits to production of, and quality of produced goods, the which are more or less entirely the benefit of improvements in such features of basic economic infrastructure as water management, transportation, production and distribution of power, urban physical infrastructure, education, and public health-care systems. These benefits from development and maintenance of basic economic infrastructure, have the form of improvements in the area and improve-

ments in the general conditions of life of the population.

Making the deserts bloom, fostering the expansion of managed forestation, as well as the expansion of agriculture and adding new, more scientifically advanced forms of urban life, are typical of the essential elements featured in this example of the phase-relationship of public infrastructure to the productivity of private enterprise.

This is to be recognized as a leading example of the reasons why economic processes can not be understood from any standpoint but what I have summarized, above, as the essential role of a Riemannian physical geometry for understanding how economies actually work.

Under the constitutionally traditional American System of political-economy, as distinct from the folly of the recent decades “post-industrial” trends in philosophy of practice in the U.S.A., and among most of the parliamentary systems of Europe, approximately half of the total national economic outputs and inputs should be associated with the development and maintenance of government-regulated basic economic infrastructure. These activities should be a function of either direct investment and operation by Federal, state, county, or municipal government, or assigned to those government-regulated public utilities which are conducted, partially or entirely, as private enterprise. They complement the constitutional function of “Hamiltonian”

national banking, as opposed to independent, or quasi-independent central banking systems, and general regulation of commerce, in defining the functional framework within which the nation functions as an integral national economy.

How, then, should the relationship of such degrees of public control of basic economic infrastructure to its effects on the productivity of labor in agriculture, manufacturing, *et al.*, be conceptualized? The broad answer is: Think of infrastructure's role in determining the "physical geometry" of the whole area and entire population to which particular firms are attached. Consider the following examples of that point.

The quality of public education determines the corresponding element of trends in productive powers of labor in the labor-force as a whole. Recent U.S. trends in public and higher education and popular entertainment culture, have been a monstrously costly abomination, on long-term economic trends, for such reasons. Public health affects productivity in a related way. Time lost in commuting is a loss of productivity in the economy as a whole, and thus in the enterprises in which persons are employed. Public policies governing real estate will worsen the economy of a region, by increasing physical-economic losses attributable to increased costs and inefficiencies of commuting.

Similarly, for related reasons, high rates of capital-intensive development in production and infrastructure generally, are essential costs of maintaining, as well as increasing productivity. Power-intensive modes are of similar significance. These changes are effected largely through the development of infrastructure, chiefly by government, or government-regulated private ownership of public utilities.

Where does private entrepreneurship fit in? This, among its other uses, answers the question: What went wrong with the Soviet economy, which is attributable to a so-called Marxist form of the pro-"Enlightenment" materialist misconception of man?³⁹ A comparison of the better quality of scientist with the entrepreneur who functions successfully as virtually sole controller of the

internal policies of practice of his or her closely held enterprise, is the clinical case which points most efficiently to the roots of the characteristic intellectual, moral, and related failures of socialist organizations. Why does the all-too-typical management of the successor to such an entrepreneur lead the inherited enterprise to a relative disaster?

The general form of the answer to such crucial questions, appears as approximate answers to such other questions as the following: Why did U.S. corporations tend to degenerate, as they are falling like proverbial "ten pins" now, more or less as the civilian sector of the Soviet economy did, and for the same underlying causes? Why is the closely held private entrepreneurship, a relatively superior form of enterprise than the giant corporation? Indeed, why do typical examples of effective corporate manufacturing enterprises have a crucial dependency on their high-technology vendors from among relatively small, closely-held enterprises? Why is new management, as in the takeover of a private enterprise by the founder's heirs, or by some hired agents of an absentee owner, so frequently a failure?

The general answer to such questions is the following.

The essential quality of the successful closely held, smaller entrepreneurship, typically of between several to a hundred or so employees, lies in the cognitive qualities of the mind of the individual entrepreneur, or the relative handful of entrepreneurs and some among their key associates. These qualities of mind are of the same broad class as those of leading physical scientists. Often, the crucial entrepreneur is either a scientist himself, or relies on one or more key associates who are.

The preferred such entrepreneur would heed warnings from his accountant, if only in matters where the accountant's non-productive role should be heeded, but would not be such a fool as to allow his accountant, or a Harvard Business School product, to run his business operations.

The effective entrepreneur operates on the basis of an evolving sense of some special function his enterprise could, or does perform within the society. He asks him-

39. Typical, in the extreme, are the arguments of Frederick Engels, respecting "the horny hand of labor," his ludicrously incompetent allusions to the "opposable thumb," and his and Social Democrat Franz Mehring's rabidly philistine hatred against the German Classical renaissance of Lessing, Moses Mendelssohn, *et al.* Also typical of sources of incompetence similar to the follies of Engels, are the spread of anti-intellectual "workerist" cults within the Communist Party U.S.A. and the effect of Leon Trotsky's pro-anarcho-syndicalist and pro-Benthamite leanings on the self-inflicted intellectual and moral decay of the Trotskyist movement internationally. The shallow superficiality and related intellectual

dilettantism of these movements' pompous leaders, led, more or less inevitably, to their political, as well as moral bankruptcy, and the subsequent easier takeover of such pathetic organizations by political-police agents, such as the U.S. FBI. In the case of the Soviet Union, Yuri Andropov's passage from Hungary, via the connections to Cambridge's Lord Kaldor, to head of the KGB and Soviet General Secretary, smug cleverness by philosophically shallow-minded, "what's my line?" careerists, created the situation in which the Soviet system was incapable of saving itself from its own follies. When dogma becomes a substitute for science, the frequent result is an increasing labile flight from dogma to dogma, to doom.

self repeatedly, “What is it that my firm does which makes a contribution to the vitality of the national and world economy?” That contribution is some action which expresses power, as Plato, Leibniz, and Gauss define power, contrary to the opinion of Euler, Lagrange, Cauchy, and accountants alike. That is the core of what might be termed his, or her “strategy for management.” His pride in performing not only a useful function for society, but one of relatively unique importance, is the underlying basis for the best entrepreneur’s strategy of management. His successors are, unfortunately, more inclined to focus on “proven” accounting techniques of management, rather than protecting and developing the constantly changing function which makes the enterprise important to society. Often, as a result of that unfortunate shift, the enterprise fails, either only relatively, or absolutely. The successors are, all too often, would-be imitators of the “big boys,” the large corporations.

In the Soviet case, the contrasted performance of the military-scientific and civil-economic functions shows the same principle in a slightly different way. In earlier decades, when I worked as a management consultant, I was fascinated with the Soviet literature’s documentation of similarities of bureaucratic blunders in Soviet state-owned enterprises to the typical sources of fatal or near-fatal decadence in once-lively U.S. business enterprises. In the typical such case, the decadence of the enterprise reflected a cost-and-profit-conscious management’s desire to maintain profits by curtailing the costs of preventing technological attrition. The attrition took such forms as decadence in production technologies, in failing to adapt to qualitative technological changes in markets, or in failing to recognize that the enterprise must adapt to a new market, or new kind of market. Usually, it was the tragically Hamlet-like successors of the enterprise’s founder, and their accountants, who were more prone to such cost-conscious follies of book-keeping.

The secret of competent entrepreneurship, is that what the entrepreneur risks is not his profits, but, rather, like the scientist in the frontier programs of the former Soviet scientific-military programs, puts himself on the line, staking his life on his ability to develop a technology, and to make it work.

From the beginnings of the U.S.A., the foundations of the U.S.’s economic and related resilience and its post-1861 development as the world’s leading model of economic power, focussed upon what I have just pointed out as the type of the true entrepreneur, especially the farmer and manufacturer. The development of basic economic infrastructure proceeded as Treasury Secretary Hamil-

ton’s 1791 Report to the U.S. Congress *On the Subject of Manufactures* argued. The decline of the role of the science-oriented entrepreneur, focussed upon some function for the economy at large, and the replacement of that entrepreneur by the increasingly decadent large corporation and foreign “out-source” has been a crucial factor in transforming the world’s leading producer, into the presently ruined economy.

It has been the specific advantage of the U.S. Constitutional system of political economy, that we did four things which are of immediate bearing on this discussion of entrepreneurship.

1. We provided large-scale basic economic infrastructure, for the population, for the land-area’s development, and to create the preconditions of opportunity for private entrepreneurship.
2. We fostered useful inventions, and protected the inventor more than the invention itself.
3. We defended entrepreneurship against the inhering, predatory impulses of both financier interest and the giant corporation.
4. Under our Constitution, we banned the subversion of our nation’s sovereignty by the existence of so-called “independent” central banking systems, especially those of the Neo-Venetian Anglo-Dutch Liberal model.

We have too rarely lived up to those principles, but when we did, they served us well.

The structural features discussed in the preceding paragraphs, are all focussed upon an essential division between the role of the individual mind in discovering and deploying universal physical principles, and the development of both the general land-area and population in accord with the requirements of those expressions of scientific-technological progress which foster increases of the potential relative population-density of the combined land-area and population as a whole.

This set of relationships within policy-shaping, must be aimed to effect a Riemannian development of the creative mental powers of present and future generations. It is through the Riemannian anti-entropy represented by the accumulation of discovered and deployed universal physical principles, that true economic growth is made sustainable. That margin of physically defined growth is the only true measure of gains in national income, and, therefore, also in the profits expressed by the work of individual enterprises.

In this configuration for physical-economic growth, the general changes, as in public infrastructure, have the

relatively greatest effect in increasing the productive powers of labor. The development of basic economic infrastructure to this intended effect, changes the physical geometry of the domain in which the private enterprise, and the individual person operates. That change in the physical geometry of that environment, effected largely through public maintenance of and improvements of infrastructures, is the principle source of increase of productivity within the society/economy as a whole. However, the continued success of that process relies upon the continuing contributions of individual minds of discoverers and upon private entrepreneurs who meet the standard implied by summary of the case here.

However, a word of warning must be added. We can not predict precisely how much benefit will be derived from the application of a newly discovered, or newly adopted universal physical principle. The gain in anti-entropy assumes what Riemannian physical geometry identifies as a *characteristic curvature* of the entire system which includes this added feature. That value can not be simply calculated *a priori*; as Riemann warned, it must be determined in practice, as is the case for all matters of real-life physical science. We know only, that things will go better. If the gain were less than we have hoped, then add a new discovery, and continue to add new such discoveries until the desired gain is realized experimentally.

2.

Social Systems: Prometheus *Vs.* Apollo and Dionysus

In the preceding chapter, we have focussed upon the situation defined by the role of the relationship between, on the one side, science and the individual thinker, and, on the other side, the changes needed for the development of society. Now, we shift the emphasis in our report, to the

40. According to the legend, Apollo came upon an ancient pagan grotto site, Delphi, which was then devoted to the worship of the Earth Mother and her son-lover, the snake-god Python. Apollo slew Python, chopped him into segments, and buried the remains; but, then, fell into a fit of remorse. Apollo apologized, presumably tearfully, to the Earth Mother, and established the grave-site of Python as the Temple of Apollo, in that international center of usury known as Delphi. On one side of the grave-site, sat a priestess, known by the title of Pythia, who, relative to the fee paid, would reply to questions put, by either plucking stones from an urn, or, for a higher price, babbled nonsensical riddles which were then interpreted, for a price, by the priests of Apollo seated in the first row of places for visitors, on the opposite side of the grave-site. Plutarch, dating from the time

reciprocal functions associated with the social process of development of the thinking individual, to the subject of "Promethean man." By "Promethean man," we should signify winning the cause of man's freedom from the inhuman tyranny characteristic of pantheistic oligarchies, such as that of the pagan gods of Olympus and the Pythian Apollo cult of Delphi; we defend, for example, the Mosaic, and also Christian principle of man in that image of the Creator of the universe.⁴⁰

Therefore, we also signify the topic of those self-inflicted follies by which corrupt societies degrade man to a condition which is less than himself, as, for example, in most contemporary U.S. education, and the recent several decades' so-called "popular culture" generally.

In this report thus far, we have considered the nature of individual man as located, essentially, within what Gauss pointed out as that complex domain for which sense-perception is a world of shadows. In that portrait, we have considered each person as an individual possessed, potentially, with those cognitive powers of individual discovery, by means of which man's power to exist within the universe are increased. That left more or less unstated the way in which a society might be enabled to govern itself according to that conscious awareness of the conception of cognitive man implicit in the physical geometry of Plato, Cusa, Leonardo, Kepler, Leibniz, Gauss, and Riemann.

Now, we ask: How might society, as society, be enabled to see itself as a society of a Platonic form of cognitive species, rather than as if a species which includes some individually clever apes among, perhaps a Nashville Agrarian tribe of higher apes, a tribe which reacts, usually, as it were, as Frederick Engels' species of sense-certainty-bound apes, or, as the existentialist Nazi philosopher Martin Heidegger insisted? Or tribes which might have been, as the utopian circles of H.G. Wells, Bertrand Russell, Aldous Huxley, Leo Szilard, John von Neumann, *et al.* proposed, "thrown" into an alien universe as more or less feral creatures of no intrinsic morality, wretches like Heidegger's cronies, Jaspers, Adorno,

of the Roman Empire, is today the most famous of those priests of Apollo. (According to some certified accounts, the rape of the young priestess filling the role of Pythia, led to the prudent substitution of old crones for the role. A charming sort of religious worship was, obviously, being practiced there.) The British, in the footsteps of Lord Shelburne's Gibbon, and kindred worshippers of the pantheon of the heathen Roman Empire, uphold the Apollo cult as their preference over Christianity, Judaism, and Islam today. Dionysus is a synonym for the cult of Python today. Hence, the efforts of decadent Romantic cultural currents of modern Europe to insist, as Bruno Walter did, upon the duality of Apollo-Dionysus today. The Christian complement to the Mosaic principle, is essentially that emphasized in the Gospel of John.

and Hannah Arendt, feral creatures with neither sense of, nor desire for knowable truth?⁴¹

How were it possible, that entire societies might consider themselves as that superior species Plato's principle of hypothesis implies, and therefore act as such a species, rather than an ape-like clan with the advantage of a few egregiously clever individual intellects among them? In other words, how might social processes be developed, by means of which society, as society, reacts according to a shared conception of man as a cognitive being reigning over nature by means of the cognitive powers expressed by Gauss's 1799 devastating attack on the incompetence shared among Euler, Lagrange, *et al.*?

Do there exist discoverable principles of social relations by means of which society might see itself, as society, as the minds of the greatest discoverers in physical science reveal see the true nature of man's relation to the universe, as in their discovery of universal physical principles? Can society willfully control itself by the recognition that it is a society efficiently unified in its self-conception as the species of Promethean man? Given the great achievements of the Classical tradition of physical science, can society show a quality of insight into the nature of society itself comparable to that which the greatest individual scientific discoverers have shown toward the universe in which our species is situated? What are the faults which tend to lead us into the kinds of relative depravity and ruin which afflict society, most notably the U.S.A. itself, today? What is the cure of such faults?

For example. Few people today realize, that the acquired habits of modes of speaking and punctuation, which have become accepted among post-war generations of secondary-school and university graduates, like the induced fad of "up-talk," cripple the victim's ability to formulate the prose expression of important types of ideas. The relative suppression of the most essential, cognitive function of the comma from written speech, is typical of the virtual inability of the contemporary popular writer to express impor-

41. For a relevant confession of this bitter aversion to truthfulness by the existentialist cronies of Heidegger, Jean-Paul Sartre, Arendt, *et al.*, see Theodor Adorno, Hannah Arendt, *et al.*, *The Authoritarian Personality* (New York: Harper, 1950). The collection of persons in today's U.S.A. who have embraced Arendt's dogma, are among the most degenerate found among so-called "intellectual circles" in the U.S.A. today. The Hudson Institute's presently resident "geek act," Laurent Murawiec, linked through Marc Rich's organized-crime circles to Lewis Libby, and thus to Vice-President Cheney's office, is rather typical of persons of fragile, or non-existent moral qualities, all so easily transformed into a moral degenerate of this specific type of Heidegger-associated existentialists Adorno and Arendt.

tant classes of ideas in a rational way.⁴²

For this crippling of several post-war U.S. generations, the *New York Times*, like the literati among the Nashville Agrarians generally, must bear much of the blame. Often, in working even with people of the post-World War II generations who have developed reasonably good minds, I have seen that their ability to focus upon important classes of ideas, is crippled by their conditioning by speaking and writing habits which actually prevent them from formulating important classes of ideas which they were otherwise capable of comprehending.

Of this, it might be said: Illiteracy afflicting the intestine of speech backs up, and thus stops the digestive channels needed for expressing what Percy Shelley classed as "profound and impassioned conceptions respecting man and nature." It is not the choice of rules of punctuation, and so forth, in and of themselves, which renders spoken or written speech literate; it is the submission of style to the requirements of cognitive forms of ideas being expressed, which imposes forms of effective communication of actual ideas upon whatever previously habituated customs had dictated. All communication of significant ideas depends absolutely on those violations of custom known by the names of irony and metaphor. Therefore, a person who thinks clearly, and has worthwhile new ideas to convey, will compose as Shakespeare composed, tending to punctuate effectively, but in apparent violation of sterile rules of style. A person who puts accustomed formal rules of style, such as punctuation, first, will suffer a corresponding loss of ability to think clearly about important ideas. On this account, the *New York Times'* style book might be justly tried on charges of menticide.

Hence, it is the conventions of oral and written literary

42. The insertion of the comma, by interrupting the run-on mind-flow of babbling of written text, challenges the reader to regard the passage preceding the comma as the integral antecedent of that which follows. For example, Shakespeare's use of "the which," following a comma, is often abbreviated by writing "which" after the comma. This should have two effects on the mind of the reader. First, to utter the statement so composed within one's mind, one must think of the written text as merely the shadow of the relevant prosody to be uttered by the mind of the reader. In the prose of actually literate, thinking writers, one must adduce the intent of the passage by mentally singing the prosody, in an approximation of the Florentine *bel canto* appropriate for uttering (as if singing) a literate form of that language. The principle is the same as for performance of the Florentine *bel canto* of Bach counterpoint, such as the *Well-Tempered Klavier*: the keyboard must sing as a chorus. Habits of speech of university graduates from among U.S. Baby Boomers, for example, tend, therefore to stultify the mind of the speaker, aborting, thus, the capacity for communications of "profound and impassioned conceptions respecting man and nature."

style and interpretation adopted by universities and other relevant institutions, which have virtually destroyed the ability of educated strata to compose, or write important poetry of a Classical quality. Thus, the modes of written and spoken style taught in leading universities, might be usefully classified as either “neo-archaic,” or the “fractured neo-archaic” typified by the advertising writer or rock-concert fan.

True literacy of spoken and written communication, is a right of every child which only a contemptible national culture would deny. As Frederick Douglass would agree, to speak of “democracy” and political “equality,” without providing all of the young mandatory access to true literacy, is a practice of slavery of the mind more valuable to tyrants than shackles on the slave’s hands.

Just as the reductionist methods which Gauss attacked in the follies of Euler and Lagrange, spoil the capacity for scientific insight into physical science, so the lack of insight into cognitively literate use of uttered poetry and prose, impairs the potential of nations and cultures to survive the kind of existential menace now threatening civilization.

The importance of these issues for political-economy today, can be recognized most immediately from recognizing certain broader implications of the way in which the same follies which Gauss exposed in the work of Euler and Lagrange, are at work: follies which cripple the cognitive powers of the mind in the communication of scientific professionals, and also the minds of political leaders today. The case of the addresses of Abraham Lincoln points to the contrast between his mind and the tragic loss of the power of communication of important classes of ideas today.

My recognition of the implications of this problem for a science of physical economy, has been a crucial aspect of all my successful contributions to the science of physical economy. A summary of the way in which I worked through these connections during the 1947-1953 interval, is therefore included as an unavoidable requirement in making the present report.

The Prometheus Theme: Brunelleschi’s Cupola

An extended period of convalescence, during 1953, gave me the enforced leisure which I devoted largely to a tying up and summing up, and also some debriding, of the work done, in scattered clumps, over the 1947-1952 interval. In addition to settling accounts with the relevant essentials of my references to the work of Riemann and Georg Cantor, I composed an argument on the theme of Percy Shelley’s “In Defence of Poetry,” a piece which,

together with Keats’s “Ode on a Grecian Urn” and Shakespeare, I had already, since adolescence, regarded as expressing a world-outlook on the proper use of the English language, an outlook most closely akin to my own. Such reflections on the use of language had been brought into focus by a critical study, in 1947, of William Empson’s *Seven Types of Ambiguity*, whose topics I examined critically against the related role of Classical music’s function in a more strict approach to the subtler, but crucial cognitive functions of English prosody. I am not a follower of Empson’s doctrine, but I owe him much for what he provoked in me.

During that 1953 concentration on these matters, I virtually completed that notion of the functional integration of the principles of so-called physical science and principles of anti-modernist Classical artistic composition, which has remained the kernel of my intellectual life and work since. That integration defines the systemic features of this present chapter. That integration defines my conception of “Promethean man,” as distinct from such explicitly asocial figures as either the legendary Cyclops, or the mis-beknighted “Sir” Alan Greenspan’s Ayn Rand.

The notable included result of that focus on the special cognitive functions of prosody in general, and poetry in particular, was a leading feature of my development of the second set of principled features of my discoveries in the science of physical economy.

In 1953, provoked partly by my still resonating anger against objectionable assertions made earlier by conductor Bruno Walter, in a broadcast radio interview, I crafted a case for the *Promethean* world-outlook in Classical artistic composition, against the contending, pro-existentialist view, expressed by Walter in that interview, that Brahms was an *Apollonian* and Beethoven, by contrast, a *Dionysian*.⁴³ What Walter had said in that interview, went against my whole being, so to speak; it rankled. I had correlated my reaction against Walter’s remarks with the ringing effects of my first hearing, in early 1946, of a recorded performance of Tchaikovsky, conducted by Wilhelm Furtwängler, and also the experience, later, of a startling recorded performance, by Dietrich Fischer-Dieskau, of Brahms’ *Vier Ernste Gesänge* hymns. Both of

43. Walter did not make up that egregious blunder. He was following the standard existentialist line on Nietzsche and the “Frankfurt School” which was also popularized in the aggressively decadent, post-Brahms Vienna of Gustav Mahler and Sigmund Freud. Walter’s conducting of the second movement of Schubert’s *Ninth Symphony*, as to be contrasted with the famous recorded performance under Wilhelm Furtwängler, was also among my grievances against him dated from a half-century ago.

The subject of Classical art, is always the hypothesizing of human relations. By such art, a human cry can be heard across intervening millennia. The message is always the same: ‘We are all, in this way, essentially immortal.’



Chorus of the old men of Argus yearns for justice, in a contemporary production of Aeschylus's 'Agamemnon.'

Nobby Clarke/Channel 4 International

these latter recorded musical performances corresponded to, and greatly improved my insight into the functions of prosody in the communication of a Platonic quality of ideas.

What I have meant, since 1947-1953, by “Promethean,” as defined afresh within this chapter, is already elaborated, if not by that name, within the preceding chapter of this report. As have said over these decades, in Christianity, Judaism, and Islam, as in Aeschylus’s *Prometheus Bound*, the image of Prometheus, as the enemy of both the Pythian Apollo and Dionysus, signifies the Mosaic doctrine, of man and woman made equally in the image of the Creator, and thus endowed naturally with dominion (and corresponding responsibilities for care) over all else in the universe. It is the denial of man’s access to knowledge of and right to practice scientific-technological progress, as the infamous Roman Imperial code of Diocletian does implicitly, which is the satanic-like evil inhering in the tyranny by the Olympian gods. The conception of man as implicitly Promethean, expresses the conception of eternity, God, and man in the Gospel of John, and in Brahms’

44. For me, the most agreeable service to Brahms’ intent is found in comparing the somewhat different approach employed by Fischer-Dieskau and my recently departed friend Gertrude Pitzinger. Conductor Furtwängler’s sometimes referenced use of “performing between the notes,” is of the utmost relevance. One should not perform the score, unless the composition is one not worthy to be performed; one must perform the composer’s intention, which

presentation of the Christian Platonic conception of *agapē* from 1 Corinthians 13, in the fourth of his *Vier Ernste Gesänge*.⁴⁴ A science of culture could not exist on any different basis than that definition of man’s nature and destiny as Promethean.

These and related considerations afforded me an insight into the proper apprehension of a principle of truth underlying all that is justly recognized as Classical principles of artistic composition. By this I mean truth in the same sense I have upheld the truthfulness of Gauss’s attacks on the falsehood intrinsic to the reductionist ideological method of Antonio Conti followers Euler and Lagrange. This is to point out, and emphasize, that the issue of truthfulness is even more an issue of method than of isolated particular facts.

One might say, for example: “The method is the man.” A man may be regarded as a liar, not merely on the basis of a list of his imitations of those displays of that reckless disregard for truth typical of our leading news and entertainment media. That man’s method is a lie, because it is a method which generates false conclusions.

lurks in the score of any musical composition in the Classical genre of J.S. Bach’s creation of the foundations for all Classical musical composition from Haydn through Brahms, as opposed to the Romantic parodies of Classical composition. One must think of honorable Classical musical composition as expressing, as the Bach defended by Kästner does, an essentially Riemannian (e.g., anti-Euclidean) view of the musical-artistic universe.

So, similarly, the existence of truth in art lies, essentially within the domain of method, in the same sense that the method of Leibniz, Gauss, Riemann, *et al.*, is inherently truthful, whereas the reductionist method of Euler, Lagrange, *et al.*, is inherently false.

This equivalence of the issue of truthful method, is related to factual truthfulness in a specifically crucial way: the issue of historical truth.

More simply seen, as in the contrast of Kepler to Ptolemy, Copernicus, Brahe, and Galileo, a truthful method of mathematical physics, if done from the standpoint of the Socratic method of hypothesis, produces a truthful history of science, whereas a contrary method produces a falsified history of science.

The same is true, as I shall emphasize in this chapter, of the role of principles of Classical methods of composition in art. The same is as true of the method with which we speak, as much as what we say in particular. Thus, we may say that the properly identified Classical methods of composition in music, those which Haydn, Mozart, Beethoven, Schubert, Mendelssohn, Schumann, and Brahms derived chiefly from J.S. Bach, are truthful, whereas those Romantics who parodied the Classical more or less skillfully or badly, such as Liszt, Berlioz, and Wagner, produced untruthful art.

Once a self-disciplined, reflective individual mind, has considered the determining role of the individual's progress in scientific progress on the development of the condition of society, the issue becomes that of the character of the available choices among social processes, choices which variously foster, delimit, or frustrate the realization of the benefits implied in scientific progress. The moral and physical decadence of the Americas and Europe, which was largely driven by the post-1964 eruption of Dionysian decadence of such forms as the "rock-drug-sex youth-counterculture," is merely typical of the way in which once relatively healthy cultures plunge into self-inflicted slides toward ultimate, self-inflicted doom. Culturally, the "rock-drug-sex youth-counterculture" was an implicitly satanic orgy of degenerates who had chosen to live a lie.

Thus, the history of science becomes inseparable from its dependence upon the practice of a needed science of history. The only possible form of the required connection between the two, is to be found, as I shall now show once more, in the principles of Classical artistic composition. The question of truth in art, which can be found only in Classical art, and not Romantic or sundry varieties of "modernism," becomes for us, then, the basis for comprehension of the history of science, and the science of social processes of society. It is essential for saving European civilization from today's systemic collapse, that

that case be argued, as I do here.

This connection is illustrated with exemplary appropriateness by a case I have often referenced since 1988, the lesson to be adduced from Brunelleschi's successful construction of the famous cupola of the Santa Maria del Fiore Cathedral of Florence. I continue to emphasize that example, not merely because I succeeded, during 1987-88, in rediscovering a principle which Brunelleschi had used, with his foreknowledge of its success, in effecting a process of construction which had been thought physically impossible. The principle he used to secure that success, was the same catenary principle which Leibniz, more than two centuries later, was first to identify as the expression of the universal principle of physical least action. Here, art and science were the same principle. The otherwise impossible process of construction so effected, was a demonstration of the principle of truth expressed equally as a principle of truth in the triumph of Christian Platonic science and art, over the false, pantheonic tradition and symbols of Latin Romanticism.

Leibniz's principle of least action, which is the basis for Leibniz's discovery of natural logarithms, is expressed by the catenary function, which is the physical curve of "the hanging chain," caused by physical action. This curve was reflected in ancient, pre-Roman Classical Greek sculpture as the principle of continuing motion caught in a midstream moment, as John Keats calls our attention to this equivalence of truth and beauty in his "Ode on a Grecian Urn."

Once again: *Truth is a matter of method!* In this case, the cupola, truth as a method of art, and truth as uniquely a method of physical principle for successful construction, coincide. To succeed in sculpting a figure caught in mid-motion, the mind of the sculptor must feel the impact of what Leibniz defined as a universal physical principle of least action, just as Brunelleschi settled upon the use of the catenary, in the form of a hanging chain, a form of matter in motion even when it appears stilled, to enable the process of constructing the double wall of the cupola. The point was not that the finished cupola reflected the catenary form, but that the ability to construct those walls depended upon the principle of action expressed during each and every momentary phase of the ongoing process of construction of the still yet-to-be-completed cupola.

The distinction I have just emphasized for the case of Brunelleschi's accomplishment, is the same as that between the unscientific astronomy of Ptolemy, Copernicus, Brahe, and Galileo, and the principle of gravitation which keeps the planet in its non-uniform-motion orbit during each interval of that trajectory. The principle was

not a matter of static stability taken statistically from moment to moment, but of an intention rooted not in the sense-perceptual fantasies of empiricists' "ivory tower" fantasies, but rooted in an intention acting efficiently, as a universal physical principle, from the unseen domain from which all universal physical principles exert their tyranny over the shadowy illusions of simple sense-certainty. In Classical art, as in physical science, a principle is *an intention to move, a Platonic power, which governs the movement which it, acting as a universal principle from within the complex domain, effects as the result adumbrated as experienced in the domain of sense-perception.*

Such are the Classical principles of *truthful* architecture, sculpture, and painting, as Leonardo da Vinci's, Raphael Sanzio's, and Rembrandt's masterpieces attest. The same is true of J.S. Bach's discovery of well-tempered counterpoint, which is the basis for all truthfully Classical composition and its performance. Thus, to shallow-minded thinkers, Classical art may appear to be merely a choice of entertainment. It is actually a kind of spiritual exercise, as Plato's Socratic dialogues are, by aid of which the mind is rehearsed in the methods of effectively truthful communication of important ideas. Brunelleschi's successful approach to constructing the cupola, as interchangeably a work of art and science at the same time, is an appropriate illustration of my point. So is Aeschylus's *Prometheus Bound*.

Prometheus and the Sublime

Friedrich Schiller has shown the difference between the tragic and the sublime, far more clearly than any other modern dramatist or historian. For that reason, during recent years, I have used the comparison of the cases of Schiller's Jeanne d'Arc and Shakespeare's Hamlet repeatedly, to point to the historical principle underlying the typical failures of leading political and other influential figures, most notably leading political figures of today. My repeated use of the case of Hamlet for this purpose, in lectures and writings, dates from Spring 1994. More recent acquisition of several among the documented histories of the Jeanne d'Arc case, gave me the confidence to employ a comparison of the historical Jeanne d'Arc to Shakespeare's character of Hamlet, repeatedly, during recent years, as a better way of showing the nature of today's real-life issue of the tragic principle versus the sublime.

The formulation of the concept I have illustrated by those references, date from my work done during the referenced 1952-1953 interval of convalescence. To indicate then the principle which I came to recognize much later as Schiller's concept of the Sublime, my 1952-53 refer-

ences were chiefly my critical view of Goethe's *Prometheus*, and a study of Shelley's *Prometheus Unbound* from the vantage-point of Shelley's *In Defence of Poetry*. So, during 1953, I situated "Promethean man" as a type within the kind of universe implied by Riemannian physical geometry.⁴⁵

If on no other grounds than the implications of Hamlet's Third Act soliloquy, Shakespeare's Hamlet should remain forever a foremost figure of reflection by present and future historians. Hamlet's crucial fear, clearly stated there, is fear of immortality: not fear that there is no immortality, but terror of the thought that he might be confronted with its actuality. So, all existentialists and similar cowards, such as swashbuckling professional warriors, flee into the passion of the momentarily living present, mortal moment, and present popular opinion, hoping thus to dull the excruciatingly painful sensibility that death will not purge them of accountability for what they either do, or fail to do, in the present mortal moment.

Shakespeare concludes the drama with the corpse of Hamlet being borne off stage, while Fortinbras rallies the survivors to continue the same popular folly. Hamlet's friend speaks his soliloquy to the English theater's audience: let us pause, to learn the lesson of this catastrophe while the events leading to this catastrophe are fresh memory.

The lesson of this case is, you, as a living mortal person, are personally responsible for the future of mankind, something for which the future would justly hold memory of you accountable. You are also at least equally responsible, in the same manner and degree, for what you have failed to do as an act of justice toward the lives of earlier generations, the responsibility to make right now, what should have been made right then.

Take the case of Christ's Crucifixion, but find the same principle expressed by the case of the simple farm girl, Jeanne d'Arc: her mission, which made possible the subsequent existence of the first sovereign nation-state, Louis XI's France, and which was a source of inspiration to the Church and other forces of the Fifteenth-century Renaissance. Her devotion to immortality realized in that degree, the aspirations of those in France and elsewhere, who had suffered so much at the hands of Venice and its Norman-Plantagenet-Anjou tools, and contributed

45. To avoid misinterpretations, I shall note the following. It was during that period of 1952-53, that my concept of Shelley as a Promethean figure came together with the notion of a Riemannian universe. The adoption of the theme of Prometheus, and the influence of Shelley and Keats were already fully in progress during 1947-48.

mightily to the existence of the modern nation-state founded under the leadership of Benjamin Franklin.

Contrast her nobility to the case of poor, contemptible Hamlet, who traded away his soul for the sake of service to the corrupt popular opinion among the ruling circles of legendary Denmark in that time. How many modern “Hamlets” are there among the would-be misleaders of our nation, and others, today?

These are noble notions from political history and Classical art, but they are also notions rooted in the notion of physical science associated with Kepler, Leibniz, Gauss’s 1799 paper, and Riemann’s physical geometry. Two points are thus implied. These are, in brief, as follows. First, these notions belong to a domain beyond a poor mere animal’s naive faith in simple sense-certainty; they lie in Gauss’s complex domain as I have addressed that subject, from a Platonic standpoint here. Second, as a consequence of man’s power for accumulating experimentally valid universal physical principles, social relations within the realm of humanity as a whole, humanity past, present, and future, are integrated into what some theologians have defined as “a simultaneity of eternity.” I explain this conception.

If we think of the history of man as ordered according to an accumulation of discovered universal physical principles, and think of this in terms of a Riemannian geometry like that I have described earlier in this report, we can grasp the universe as a whole, past, present, and future, as a physical space-time, as if instantaneously. All events within that space-time exist simultaneously. In place of clock-time, or the lock, we have a sense of direction, a notion we might subsume under the label of “development.” The notion of “development” is that of a Riemannian hyper-geometry so described.

In this physical-space-time, relations are not defined in terms of sense-impressions, but, rather, in terms of functional relations among universal physical principles. This is physical-space-time composed of three, multiply-connected phase-spaces, as I have reported above. We assume, as a matter of limiting ourselves to knowledge to date, that the total array of principles in the first abiotic phase-spaces is fixed, but that the development of subordinate universal principles is not fixed. When we add the universal physical principle which corresponds to life, the self-development of that phase-space acts upon the abiotic as well as internally upon itself. The introduction of the notion of a cognitive principle, Vernadsky’s *noësis*, operates similarly with respect to both the abiotic and living phase-spaces.

As I have underlined this point above, the discovery by mankind of any universal principle from any among the three phase-spaces, changes the universe by the dis-

covery of a conscious principle of creative intervention into the whole universe by mankind.

In this wonderful simultaneity of eternity, with all such beautiful development under way, the mortal existence of each of us occupies an immortal place. In this eternity, we act within the relatively small place which is our mortal life; but, in the larger domain, that form of action associated with the discovery and development of universal physical principles reaches beyond mortality into the relative past and future of mankind.

We know this each time we re-enact the living thought of the first known discovery of a universal physical principle centuries or millennia ago. The scientist or Classical artist who relives such thoughts has an efficient personal relationship to the original discoverer, and the relevant original discoverer now acts upon the society of our own present time, on the basis of our cognitive relationship to them.

Pause here for a moment. Take the case of the contemporary musician who performs a composition by J.S. Bach, Haydn, Mozart, Beethoven, Schubert, Mendelssohn, Schumann, or Brahms. For the purposes of this discussion, we should limit ourselves to the works of composers who have a thorough commitment to the kind of well-tempered counterpoint implicit in the application of a Florentine *bel canto* mode of expression for both human voice and other instruments, and whose intent is to compose works which represent the development of a single musical idea, from the breath a moment before the first tone is sounded, until the breath or two of silence following the final tone. In such a case, one can not play the score; one must perform the composition as an integrated process of development, and as nothing less, nor more. The object of the musician is to mediate the direct relationship between the creative mind of the composer and the minds of both performers and audience.

In Classical music, these connections are implicit in the ABC’s of a well-tempered counterpoint agreeable to the singer of a Florentine model of *bel canto* voice-training, and also to the instrumental performer who imposes the conception of the *bel canto* singing voice on the behavior of the instrument. When a work so composed in the mind of a Classical composer is copied to a score, something essential is lost in print, but not necessarily irreparably. The score must be, so to speak, “decoded,” to discover the original musical intent of the composer. Thus, the qualified performer relives, in one degree or another, the cognitive processes of discovery of the composer, and thus comes to know, at least approximately, the mind of the composer as if to relive his or her mind’s processes in the original composition.

This same point can, and should be made in a second

way. In Classical poetry or music, the idea which generates the composition precedes the development of the composition. It were as if the entire composition burst into existence in the concentrated form of a single act of thought. After that, the composer is gripped by a relentless passion to elaborate that single burst of thought as a worked-out composition. The performer approaches a score attempting to evoke that “burst of thought” which had prompted and guided the elaboration of the relevant composition.

This principle, so illustrated here, is the characteristic feature of all forms of great Classical composition and of their intended relationship to contemporary and future audiences. This expresses the “spiritual” quality of all great Classical art; this strictly defines the meaning of Classical art.

This quality of relationship between the Classical composer and the audience typifies the concept associated with my use of the term *Sublime*. Great Classical art resembles Classical scientific discovery in that it pertains to those powers which exist behind the shadow-world of sense-perception. Classical scientific discovery is also social; but, the subject of science is, primarily, the relationship of the individual cognitive mind to the universe at large. With Classical art, the subject of the *noëtic* processes, is the relationship among cognitive powers of minds, as such.

To situate the subject of Prometheus, recall that the concept of Prometheus as a case of the Sublime, is primarily associated historically with the relevant dramas of Aeschylus and Shelley.

What Are Human Relations?

The elementary expression of human relations, is the process by which one person provokes, intentionally, in another, that act of (Platonic) hypothesizing, by means of which the other recreates the idea called an experimentally valid universal physical principle in his or her mind. On this account, there is but one significant distinction between Classical science and Classical art. In the first case, the subject of the transaction is a principle of man’s relationship to the abiotic domain and Biosphere. In the second case, the subject of the transaction is the act of hypothesizing among persons.

Classical drama is a suitable illustration of the second case. Tragedy, especially tragedy which situates the concept of the Sublime, is the most rigorous expression of Classical drama.

The characteristic subject of tragedy, is the self-destruction of a society at the hand of its own culture, as, for example, by its own prevalent popular opinion. The

more typical tragedy is, like Schiller’s *Don Carlos* or *Wallenstein*, that in which the leading figures of the drama represent the common folly of the culture and those leaders who, in various ways, act out the situation in accord with that culture’s prevalent customs. These more typical cases are contrasted with the cases of Aeschylus’s and Shelley’s Prometheus, and the historical Jeanne d’Arc.

The importance of Classical tragedy for the study of the principles of history, arises from posing the challenge of hypothesis as a life-death issue for the nation or group of cultures considered. The quality of the playwright’s (and, also, the performing company’s delivery), is to be adduced from the degree to which the issue of the relevant hypothesis is presented to the audiences in ways which make the experiencing of the relevant paradoxes and hypotheses a moving one. As Schiller demanded: The spectators must depart the theater, at the conclusion of the performance, better people than had entered it.

Better does not mean learned, or reenforced obedience to some set of rules; rather, as in Paul’s 1 Corinthians 13, as for the Socrates of Plato’s *Republic*, better means *agapē* (i.e., *the General Welfare, the common good*). So, the audience leaving the performances of the *Wallenstein* trilogy, should have a warm appreciation of the influence of France’s Cardinal Mazarin in bringing about that adoption of the 1648 Treaty of Westphalia which ended the Thirty Years’ War. The object of Classical drama is not “happy endings” for the characters in the play, but for the audience which grasps the hypothesis posed.

For related reasons, all great drama is based upon a valid conception of either a dramatic paradox posed by actual history, or a plausible legend which functions as a real history might.

All valid and important Classical poetry, and of Classical-musical setting of poetry to song, is governed by the same role of hypothesis. Good Classical prose aims for the same result.

To serve those same ends as great Classical tragedy, art must employ the same tools of irony and metaphor which are the essential features of hypothesizing in physical science. For example, on the stage, or delivery of Classical poetry, the methods of Florentine-modelled *bel canto* singing-voice training are essential, or, the methods used by conductor Wilhelm Furtwängler. The element of surprise, as otherwise typified by irony and metaphor, must free the mind from a literal hearing of the passage, to hear the paradoxical elements on which the prompting of hypothesizing depends.

The subject of Classical art, is always the hypothesizing of human relations. By such art, a human cry can be heard across intervening millennia. The message is always the same: “We are all, in this way, essentially immortal.”

The Renaissance, and The Rediscovery And the

by Torbjörn Jerlerup

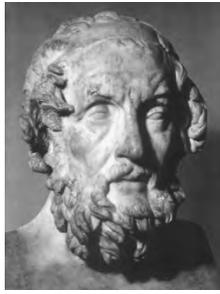


Domenico di Michelino, "Dante Alighieri Reading His Poem," 1465 (detail). The Cathedral of Florence, topped by Brunelleschi's Dome, appears to Dante's left.

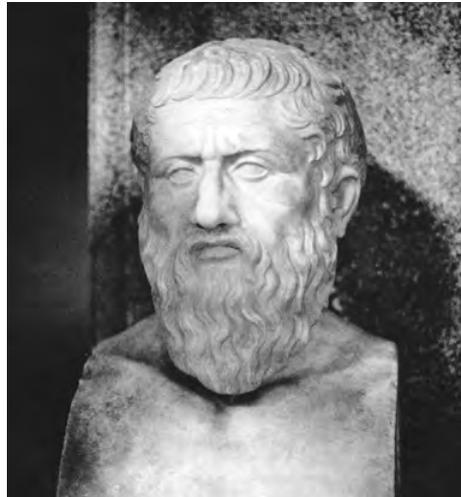
Great minds of ancient Greece (clockwise from top): Homer, Plato, Solon, Aeschylus, Sophocles.

It was in the Midland between the famous rivers Po and Ticino and Adda and others, whence some say our Milan derives its name, on the ninth day of October, in the year of this last age of the world the 1360th.”¹

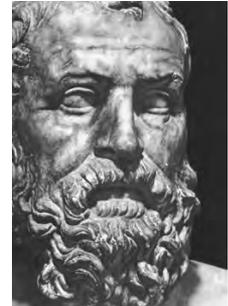
For the people who lived in the Italian city of Milan or in one of its surrounding villages, it might have looked like an ordinary, but cold, autumn morning. It was Friday. The city council and the bishop of Milan were probably quarrelling about the construction of a new cathedral in the city. The construction would not start for another 25 years. The university professors and the barbers (the doctors of the time), were probably worried about rumors of a new plague, the third since the Great Plague in 1348, and the townspeople were probably complaining about taxes, as usual. The farmers, who led their cattle to pasture, were surely complaining about the weather, as it had been unusually unstable.



The Granger Collection



EIRNS/Philip Ulanovsky



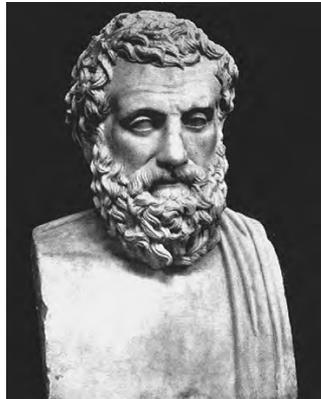
The Granger Collection

of Plato Greeks

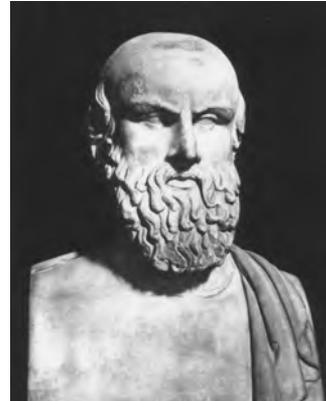
If they were not too busy with their cows, they perhaps caught a glimpse of a monk riding along the grassy, mud-ridden path that was part of the main road between the cities of Florence and Milan. We will never know if they saw him, or if they asked themselves why he smiled.

It was one of the precious moments when human history was about to change. Perhaps the monk knew this, or perhaps he only smiled because he had reached his destination, the house where the poet Francesco Petrarch lived, so that he could deliver the letters he carried and get something to eat, and perhaps even a glass or two of delicious Farnesian wine to drink.

The joyful poet who received the letters knew for certain that it was a historic moment. He had anticipated a particular letter for some time now. As soon as he held it in his hand, he rushed to his quarter in the castle, which was owned by the rulers of Milan, the Visconti family. When finally in one of his rooms, he sat down on a stool in front of a wooden table, lit a candle, and opened the letter. It contained a Latin translation of the first book of the *Odyssey*, by the Greek poet Homer.



www.arttoday.com



The Granger Collection

The Birth of the Renaissance

The word Renaissance comes from French and Latin, and means rebirth. With the letter to Petrarch, one of the first steps was taken toward the rebirth of civilization in the Renaissance. It was the heritage of European civilization that was about to be born again.

In the 1330's, the voice of Homer was dead. Almost no one in Western Europe had ever read the works of Plato. No one knew about statesmen and thinkers like Solon and Xenophon, few had heard of Archimedes or of Pythagoras, the plays of Sophocles and Aeschylus were long forgotten. So, too, was the Greek language. The leaders of the Church could not read the original text of the New Testament, because it was written in Greek, which had been the primary language of the early Church.

Things had gotten worse and worse by the year. Some of the Greek works were known in translations made from Arabic, but sadly, it was mostly those thinkers who contributed to the destruction of Greek civilization, like Aristotle, which had survived and were read. But for a few copies of his *Timaeus*, Plato was known only through anti-Platonist, pagan commentators, and through indirect references to him by Church Fathers such as St. Augustine. Despite his works being almost unknown in the period leading up to the 1300's, Plato's *Timaeus* had been much studied by thinkers including Peter Abelard and Thierry de Chartres, as well as others. But when Petrarch tried to find the *Timaeus* in the 1330's, he could not find a single copy in all of Italy or France!

In the Eastern, Orthodox Church, the situation was a bit better. Greek was the main language used in the Church and diplomatic work. But, in the early 1300's, Orthodox fundamentalists were doing their best to destroy, or hide, books in Greek that were not the Bible, or written by select Christian authors.

A handful of individuals in the East and the West joined hands to revive the Greek heritage, especially the method of Plato, and thus save European civilization. One of the main aims was to create peace and prosperity, by unifying the Eastern and Western Churches, which had been effectively in a state of war for several centuries.

In the East, it was Georgius Gemistos Plethon (1360-1450/1452) who led the effort to revive Platonism and the study of the Greeks. In Western Europe, it was the poet and diplomat Francesco Petrarch (1304-1374), whom we left sitting at his wooden table, who spearheaded the effort to revive knowledge of the Greek language and the tradition of Plato. Petrarch had been in turn inspired by the great poet and humanist Dante Alighieri (1265-1321), whose efforts to create a unified Italian language, and whose works on philosophy and statecraft, were among the main influences on the movement that rediscovered the Greeks and Plato.

A Letter to Homer

After reading the letter, Petrarch ordered his servants to open a bottle of the best wine in the house.

The letter had been sent to Petrarch by the writer and diplomat Giovanni Boccaccio (1313-1375), who lived in Florence. Boccaccio had some time before met a monk, Leontius Pilatus, who had studied the Greek language at the school of a former friend of Petrarch's, Barlaam of Calabria (c.1290-c.1350). Happy to meet a person who spoke Greek, Boccaccio had persuaded him to stay in Florence to translate Homer, and to teach him the language. Pilatus stayed in Florence for three years, and

translated both the *Iliad* and the *Odyssey* into Latin. The text he used was Petrarch's copy of Homer, the only known manuscript copy in all Western Europe. Petrarch had paid for the translation, and now he held the first book in his hand.

After reflecting upon the historical importance of the letter, Petrarch grabbed his feather pen, dipped it in ink, and wrote a letter to the poet Homer himself. His idea was to let a copyist at a nearby monastery copy it, and the translation of Homer, by hand. Then he would send it to all his friends, who eagerly awaited news of the translation. Petrarch estimated that eight copies were needed. He knew of eleven persons, himself included, in all Western Europe, who shared his interest in Homer and the project to revive the Greek heritage. This was according to his own estimate.

"Long before your letter reached me," he wrote to Homer, the "letter" being the first part of the translation,

I had formed an intention of writing to you, and I should really have done it, if it had not been for the lack of a common language. I am not so fortunate as to have learned Greek, and the Latin tongue, which you once spoke, by the aid of our writers, you seem of late, through the negligence of their successors, to have quite forgotten. From both avenues of communication, consequently, I have been debarred, and so have kept silence. But now there comes a man who restores you to us, single-handedly, and makes you a Latin again.

Your Penelope cannot have waited longer nor with more eager expectation for her Ulysses, than I did for you. At last, though, my hope was fading gradually away. Except for a few of the opening lines of certain books, from which there seemed to flash upon me the face of the friend whom I had been longing to behold, a momentary glimpse, dim through distance, or, rather, the sight of his streaming hair, as he vanished from my view,—except for this, no hint of a Latin Homer had come to me, and I had no hope of being able ever to see you face to face. For as regards the little book that is circulated under your name, while I cannot say whose it is, I do feel sure that it is yours only as it has been culled from you and accredited to you, and is not your real work at all. This friend of ours, however, if he lives, will restore you to us in your entirety. He is now at work, and we are beginning to enjoy not only the treasures of wisdom that are stored away in your divine poems, but also the sweetness and charm of your speech. One fragment has come to my hands already, Grecian precious ointment in Latin vessels.²

Petrarch signed his name, and the date, "on the ninth day of October, in the year of this last age of the world the 1360th."

The first step toward Europe's rediscovery of the Greeks had been taken. Petrarch hoped to copy the book, once ful-

ly translated, and spread it, perhaps even to use it to educate a group of youngsters who would learn to read Greek.

Petrarch died before he saw the results of his work, but history can testify that he succeeded. With the Renaissance, the world was lifted out of the great crisis of the 1300's, and the Greek heritage was saved for posterity.

The Renaissance

There is a dangerous tendency among certain layers of popular opinion to simplify and idealize the Renaissance that occurred between 1400 and 1520. Many describe it as some kind of utopia, where beautiful art and architecture surrounded people all the time, and where simple peasants were happily reciting Dante and other great poets while working in the fields. Often, people with the most divergent world-outlooks are lumped together and regarded as progressive "Renaissance men," just because they lived during this time period.

Often, the Renaissance is linked to its splendid visible results. It is linked to painting and other forms of art, which advanced and became more "realistic" than before; to the great discoveries of exploration; and perhaps, even to intense philosophical debate. Some would perhaps even say that the industrial revolution started with the Renaissance, and attribute to it, the rise of manufacturing, or perhaps the rise of modern banking.

Others put the emphasis on negative aspects, like incipient colonialism and slavery, or the expulsion of the Jews and Moors from Spain in the 1400's and 1500's.

But, contrary to popular opinion, the Renaissance was essentially a battle about ideas, especially about the value, and rights, of man. Do human beings have the capacity to understand how the mind of the Creator works? Can men use their acquired knowledge of the laws of nature, to work for the common good of all? This was what the fight was all about.

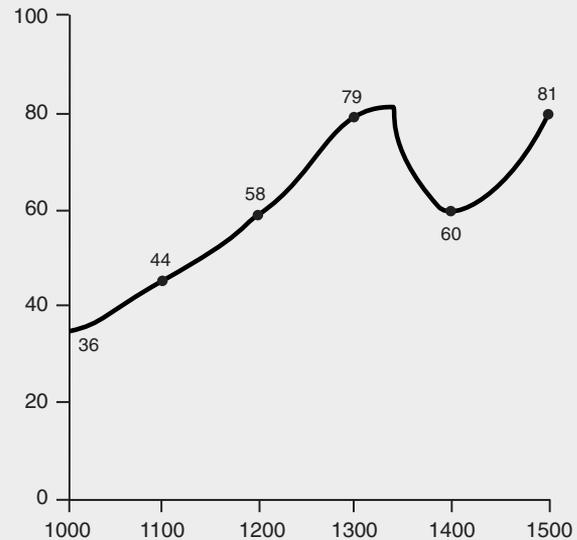
Our journey toward the creation of the Renaissance has already begun, but before we return to Petrarch, we should look at an earlier time.

The Great Plague

The writers Petrarch and Boccaccio lived during the period of the so-called Great Plague, or Black Death. It had hit Italy in 1348, and between one-half and one-third of the population of the country died. Afterwards, the area surrounding Milan was filled with ruined villages, churches, and monasteries.

Boccaccio, whom Petrarch would become familiar with two years later, described the plague in his *Decameron*, as follows:

FIGURE 1. *Population of Europe, A.D. 1000-1500 (millions).*



Source: Colin McEvedy and Richard Jones, *Atlas of World Population History*.

I say, then, that in the year 1348 after the Son of God's fruitful incarnation, into the distinguished city of Florence, that most beautiful of Italian cities, there entered a deadly pestilence.

One citizen avoided another, everybody neglected their neighbors and rarely or never visited their parents and relatives unless from a distance; the ordeal had so withered the hearts of men and women that brother abandoned brother, and the uncle abandoned his nephew and the sister her brother, and many times, wives abandoned their husbands; and, what is even more incredible and cruel, mothers and fathers abandoned their children and would refuse to visit them.

There were dead bodies all over, and all were treated in pretty much the same manner by their neighbors, who were moved no less by fear that the corrupted bodies would infect them than by any pity they felt toward the deceased. They would drag the dead bodies out of their homes and leave them in front of their doors. Things sank to the level that people were disposed of, much as we would now dispose of a dead goat.

Throughout the villages and fields the poor, miserable peasants and their families, who lacked the care of doctors or the aid of servants, died more like beasts than humans, day and night, on the roads and in their fields. . . . Thus their cattle, donkeys, sheep, goats, pigs, chickens, and even their dogs, man's best friends, were driven off into the fields, where the wheat stood abandoned, not merely unharvested, but not even cut.³

Cause and Effect

The Great Plague of 1347-51 is quite well known, but few know that it was man-made, and that the population of Europe had begun declining decades before the

Petrarch: Bringing the Great Minds of the Past to Life

Petrarch's world was characterized by horrors that appeared truly apocalyptic: the worst economic collapse in history; the deadliest pandemic; global combat between Christian and non-Christian; religious schism; and constant war and popular insurrection throughout Europe.

Petrarch's lifetime (1304-1374) coincides almost exactly with the transfer of the Papacy from Rome to Avignon in France from 1309 to 1377. This *de facto* kidnapping was one part of a complex controversy that dominated Christendom in the Thirteenth and Fourteenth centuries, over the limits of the secular power of the Papacy to command kings and, more important, levy taxes. At this time, all Italy was divided into two factions: the partisans of the German Emperor, the Ghibellines; and the Papalist Guelphs. In the city-state of Florence, the Guelphs were further split into the extremist *I neri* (the Blacks) and the moderately secular *I bianchi* (the Whites).

The intellectual leader of the Whites was Dante Alighieri. One of his political subordinates was Petracco dell' Incisa, Petrarch's father. Eventually, the faction fight came to blows. The Whites lost, and their leaders were sent into exile. Both Dante and Ser Petracco wandered from city to city. Francesco was born in Arezzo; seven years later, when the Petracci lived in Pisa, Dante stayed with them. Giovanni Boccaccio (born nine years after Petrarch) was the illegitimate son of Boccaccino di Chelino, onetime Prior (governor) of the Florentine Republic and a partner in the Bardi banking firm. The collapse of the Bardi in 1340 was the proximate cause of the global economic collapse during Petrarch's lifetime. Boccaccio's stepmother was a kinswoman of Dante.

Contemplating Mortality

After legal studies, Petrarch took minor orders (but never the priesthood) and became an ecclesiastical bureaucrat serving the Avignon Papacy. As his literary talent became recognized, he was offered a series of sinecures that allowed him to devote much of his time to poetry. In 1336, he climbed Mount Ventoux in southern France, carrying along a copy of his beloved St. Augustine's *Confessions*. At the summit, contem-

plating his mortality, Petrarch realized that his arduous climb was the metaphor for the remaining years of his life.

Petrarch soon reached a profound understanding: The seeming impotence of humanity to prevent the ceaseless wars and fratricide and political chaos of the time was not the "will of God," but rather the failing of man. For hundreds of years, Christian thinkers had ignored a true understanding of the great ideas of the past that had built civilization, just because those ideas came from "pagans." Had not Augustine stood on the shoulders of the ancients, to become the greatest of all Church Fathers? By allowing the great ideas of the past to "waste and spoil, through our own cruel and insufferable neglect," wrote Petrarch in one of his famous "Letters to Marcus Tullius Cicero," we fail "to cultivate our own talents, thereby depriving the future of the fruits that they might have yielded."

Against the Aristoteleans

The arduous climb to which Petrarch committed the rest of his life was to end the dark period of human ignorance and bring alive again the mental life of all the great minds of the past.

By the end of his life, Petrarch had amassed one of the greatest libraries in Europe, filled with works of Plato and other Greeks not seen in the West for centuries; he personally rediscovered much lost correspondence of Cicero after painstaking research. The Republic of Venice unsuccessfully offered Petrarch a palace in exchange for his library; seven years before his death, Venice deployed several Aristotelean scholars from the University of Padua to befriend the old man, and then attack his reputation for scholarship. Petrarch answered them publicly in "De sui ipsius et multorum ignorantia" ("On His Own and Many People's Ignorance"), his last major work. The Aristoteleans think I am ignorant?, asked Petrarch. Well, "I have sixteen or more of Plato's books at home, of which I do not know whether they have ever heard the names. They will be amazed when they hear this. If they do not believe it, let them come and see."

—Michael Minnicino

plague actually erupted.

The population of Europe had increased by 20 percent in the 1000's, by more than 25 percent in the 1100's, and by more than 30 percent in the 1200's [SEE Figure 1]. Technological innovations like the windmill, the technical and architectural skill of the great cathedral builders, as well as reforms in agriculture, had helped to foster the growth of the economy, aided by advanced products imported from the Arabs and the Chinese.

By the end of the 1200's, however, population growth ceased, and by the beginning of the 1300's, a decline in the number of inhabitants of Europe had begun.⁴ It was because the population was already exhausted, that the plague killed such a large portion of the population when it finally struck Europe.

The reason for the population decline in the early 1300's was that the population could not be sustained when production collapsed as a result of a collapse in the productive capacity of the societies. The price of food rose, owing to speculation on its future price, and the technological level fell because no new improvements were made in agriculture. The reasons for the collapse was simple: speculation!

In a study published in *Fidelio* in 1995, Paul B. Gallagher describes how, when Petrarch was still young, Europe was looted by the financial oligarchs.⁵ Like today, the bankers viewed the payment of debt and interest to be more important than the welfare of the population. Royal revenues were paid directly over to the bankers, who also maintained financial control over all trade.

The example of how this worked in Norway, is typical. While, in Southern Europe, Venice controlled trade and finances, Venice's allies in the German city-state of Lübeck used similar methods in the North. Norway was not self-sufficient in food, and needed to import salt as a preservative, but trade in food and salt was totally controlled by Lübeck. Since they had a monopoly on both trade and banking, they could demand overly high prices for food, and at the same time lend money to the Norwegian traders and king at ridiculously high interest rates. When Norway tried to import cheaper food and salt from England, Lübeck waged war, and Norway was eventually starved into capitulation.⁶

Later that century, in 1343, the financial system in Western Europe went bankrupt, because the two major banking houses of the day, the Florentine Bardi and Peruzzi, collapsed, when England could no longer pay its debts. This greatly increased the effects of the plague.

At the same time, a set of great political disasters

struck the world, as a result of the folly and greed of the leaders of the Church and states. For example, in 1309, the Church in the West was greatly shaken by the so-called "Babylonian Captivity" of the papacy. The seat of the papacy was moved from Rome to Avignon, in France. Soon, the new holy city was transformed into a Babylon of prostitution, debauchery, and "wordly pleasure," according to Petrarch.

Soon a second, and even a third (!) Pope, were installed by political opponents of the Avignon faction, and the Church, which was already divided between East and West, split once again. Things looked dark for mankind.

Francesco Petrarch

The story of the Renaissance begins in Arezzo, northern Italy, where Francesco Petrarch was born in 1304. His family later moved to the papal city of Avignon, where he was raised, and where he lived for almost 25 years, except for studies in Bologna in the 1320's, and frequent travels. Petrarch later described Avignon as the "Babylon of the West," where "heaven and hell converged." It was the center of the wordly power of one of the two Popes at the time, and the decadence of Avignon greatly shocked the young Petrarch. But he benefitted greatly from its rich libraries, and met learned scholars from all over Europe, including diplomats from Orthodox Eastern Europe.

In the 1320's, Petrarch studied the Italian poet Dante Alighieri, who had died in 1321, and began to explore the Italian language. He started to write poems, and soon became a popular poet. In the 1330's, he wrote the famous sonnets to his beloved Laura, who would later die of the plague. By this time he was already famous and beloved for his poetry, and when in 1341 he visited Rome, he was lauded as the leading poet of the age, the "New Dante."

Like his predecessor Dante, from a very early age Petrarch warned that a disaster would strike mankind, if its leaders did not break from their folly. The degeneration of Avignon was used as a prime example of the corruption. Petrarch knew that the only salvation for civilization was to overturn all the existing social axioms, and find a better philosophical foundation for society. He thus proposed to build a "youth movement," based on the rediscovery of the greatest thinkers of the past, the history of past civilizations, and the cultural and scientific achievement of prior times. Above all, the movement should be based on the rediscovery of Plato, and on the development of the individual human mind.

Politically, this meant to unify the Church in the West, and ultimately, all Christianity.

To accomplish this, things had to change. And, to accomplish this change, Petrarch turned to Plato.

St. Augustine and Plato

It was by reading St. Augustine, that Petrarch realized the importance of Plato. In Chapter Eight of *The City of God*, St. Augustine had written:

If, then, Plato defined the wise man as one who imitates, knows, loves this God, and who is rendered blessed through fellowship with Him in His own blessedness, why discuss with the other philosophers? It is evident that none come nearer to us than the Platonists. The Platonic philosophers have recognized the true God as the author of all things, the source of the light of truth, and the bountiful bestower of all blessedness.⁷

St. Augustine emphasized that the Platonists had a superior understanding of how the mind worked, and believed that the aim of moral philosophy, as well as reason, was the Good.

Then, again, as far as regards the doctrine which treats of that which they call logic, that is, rational philosophy, far be it from us to compare them with those who attributed to the bodily senses the faculty of discriminating truth! Those, however, whom we justly rank before all others, have distinguished those things which are conceived by the mind from those which are perceived by the senses, neither taking away from the senses anything to which they are competent, nor attributing to them anything beyond their competency. And the light of our understandings, by which all things are learned by us, they have affirmed to be that self-same God by whom all things were made. . . .

At present, it is sufficient to mention that Plato determined the final good to be to live according to virtue, and affirmed that only he can attain to virtue who knows and imitates God—which knowledge and imitation are the only cause of blessedness. Therefore he did not doubt that to philosophize is to love God, whose nature is incorporeal.

The true and highest good, according to Plato, is God, and therefore he would call him a philosopher who loves God; for philosophy is directed to the obtaining of the blessed life, and he who loves God is blessed in the enjoyment of God.⁸

St. Augustine also recognized Platonism as the way to conduct a dialogue with other religions. He wrote:

Plato himself, and they who have well understood him—Pythagoras and the Pythagoreans, and all who may have held like opinions—and all who have been held wise men and philosophers among all nations who are discovered to

have seen and taught this, be they Atlantics, Libyans, Egyptians, Indians, Persians, Chaldeans, Scythians, Gauls, Spaniards, or of other nations — we prefer these to all other philosophers, and confess that they approach nearest to us.⁹

Homer

But, in order learn from the Greeks and to revive Plato, one had to be able to read Greek, and Petrarch found no one in the Church in the West who could read even a few sentences of Greek. It was also necessary to have Greek texts, and almost no Greek manuscripts were to be found.

This is where the fun began!

Petrarch got help from some co-thinkers in the Orthodox, Eastern Church. While visiting Avignon, Petrarch met with the Platonist Orthodox monk Barlaam. Barlaam had read St. Augustine, as well as Plato, and shared the view that Platonism could become a bridge between East and West. The two met for the first time in 1339, and later they would meet again in Naples, in 1342. Barlaam became the teacher of Petrarch, who attempted to learn Greek. As a “textbook,” Barlaam used his beloved Plato, and gave Petrarch a book with sixteen dialogues, telling him to practice with them. And, although he did not learn to read it, the very possession of the valuable book inspired Petrarch to help others to read Plato in the future.

In 1350, Petrarch, while in Rome, met Giovanni Boccaccio. The two men became friends instantly, and Petrarch soon afterwards visited Boccaccio in Florence. Inspired by Petrarch, Boccaccio decided to help him in the Greek translation project.

Around this time, Petrarch was involved in diplomatic work, and conspired to get the Pope to move from Avignon to Rome. He frequently visited Avignon for this purpose. During one such visit in 1353, he met with the Byzantine diplomat Nikolaos Sigeros, whom he asked to search for Greek manuscripts, and Latin manuscripts of Cicero, in the East. Sigeros did not find any works by Cicero, but he found something far more precious for Petrarch, a copy of Homer’s *Iliad* and *Odyssey*.

This was the manuscript from which Petrarch commissioned a translation. Petrarch wrote back to Sigeros, after receiving the volume:

Your present of the genuine and original text of the divine poet, the fountain of all inventions, is worthy of yourself and of me: you have fulfilled your promise, and satisfied my desires. Yet your liberality is still imperfect: with Homer you should have given me yourself; a guide, who could lead me into the fields of light, and disclose to my wondering eyes the spacious miracles of the *Iliad* and

Odyssey. But, alas! Homer is dumb, or I am deaf; nor is it in my power to enjoy the beauty which I possess. I have seated him by the side of Plato, the prince of poets near the prince of philosophers. . . . I am delighted with the aspect of Homer; and as often as I embrace the silent volume, I exclaim with a sigh, Illustrious bard! With what pleasure should I listen to thy song, if my sense of hearing were not obstructed and lost by the death of one friend, and in the much-lamented absence of another. Nor do I yet despair; and the example of Cato suggests to me comfort and hope, since it was in the last period of age that he attained the knowledge of the Greek letters.¹⁰

Petrarch told his friend Boccaccio about the book, who decided to help him, and even to try to learn Greek himself. A few years later, Boccaccio befriended Leontius Pilatus (d.1366), with whose help they could begin the project of translating Homer; and soon, Petrarch received the first chapter of the *Odyssey* in a letter from Boccaccio, as we have already seen.

While translating, Pilatus read the *Iliad* and the *Odyssey* aloud to the stunned Boccaccio. In a letter to Petrarch, he described how proud he was to be the first individual for hundreds of years in “the Latin-speaking world” (Western Europe), who “heard Homer speak.” “I feel sorry for the Latin-speaking world, which has neglected the study of Greek so much that no one even can read the Greek alphabet,” he wrote.

In the mid-1360’s, Boccaccio presented Petrarch with the finished Latin translation of Homer. Pilatus had translated both the *Iliad* and *Odyssey* into crude Latin prose. The translation was terrible—Pilatus was not at all used to writing in Latin. But Petrarch and Boccaccio were happy, for at last they could read the works of Homer.

Boccaccio looked for more Greek manuscripts. He had heard that a few Italians living in southern Italy still spoke Greek, so he travelled to the famous monastery at Monte Cassino, to see what he could find. The writer Benvenuto da Imola describes the terrible condition in which Boccaccio found the library there:

[H]e found the room which contained this treasure without a door or key, and when he entered, he saw grass growing in the windows, and all the books and shelves covered with a thick layer of dust. When he turned over the manuscripts, he found many rare and ancient works with whole sheets cut out, or with the margins ruthlessly clipped. As he left the room he burst into tears and, on asking a monk whom he had met in the cloister to explain the neglect, was told that some of the monks, wishing to gain a few *soldi*, had torn out whole handfuls of leaves and made them into Psalters, which they sold to boys, and had cut off strips of parchment, which they turned into amulets to sell to women.¹¹

Boccaccio saved a few manuscripts and returned to Florence.

A few years later, Petrarch gained his largest political victory. His friend and ally Guillaume de Grimoard had been elected Pope in 1362, taking the name Urban V. In 1367, after many years of negotiations with France and with the Holy Roman Emperor in Vienna, in which Petrarch played a crucial role, Urban V moved to Rome. The first step toward reunification of the conflicting parts of the Church in the West had been taken. Fifty years later, the schism was over, and the process of unifying the Western and Eastern Churches had begun.

Academic Life

Academic life in the 1300’s was more than miserable. At its worst, individuals like William of Ockham (1280-1349), a teacher at the University of Paris, and his school of Nominalism, could gain fame. Ockham denied the capacity of the human mind to discover anything, since ideas were an illusion, existing only as abstract, logical “signs.” Thus, Ockham defended the absolute predominance of the Divine will. According to Ockham, human beings were slaves, who had no free will and were evil, while God was a dictator whose word was law, and who could turn black into white, right into wrong, any time he so wished.

Petrarch identified Aristotle as the source of this misery, and predicted that Plato in his writings, once they could be read, would prove that this was wrong, and that the relationship between God and man was more than that of a tyrant to a slave.

“The multitude of men praise Aristotle, the greater men praise Plato”—so wrote Petrarch in his treatise, “On His Own and Many People’s Ignorance” (“De sui ipsius et multorum ignorantia”), in 1368.¹² Petrarch and his later followers reacted against the view Aristotle had of God and man. A common theme of all the critics of Aristotle at the time, was that Aristotle did not view God as a Creator, but only as a kind of magician, an “unmoved mover.”

Why was this important? Because of the view of man! Whether man is created “in the image of God.” What happens to man, if we are created in the image of a Creator, or in the image of an “unmoved mover”? If God is a Creator, then mankind is created to help God in the act of Creation; the work of man makes the world better and more beautiful. But, with the “unmoved mover,” everything was created perfect in the beginning, and the works of man only act to destroy what God created perfect. Thus, the Aristotelean view, that man can only register

the works of Creation though the senses, classify them, and logically investigate them—but never *know* them, so as to participate in their further development!

Why Plato?

Plato viewed God as a Creator, which is why there was such interest in his worldview in the Renaissance.

In a Jan. 28, 2003 webcast, Lyndon LaRouche was asked what the human soul is. He answered by reference to Plato:

We can know the truth of the existence of God, as a Creator. We can verify things, that we get as a matter of knowledge, by the same principle, developed by Plato in his collection of Socratic dialogues. . . .

We have the ability to have certain knowledge, of things that some people call “spiritual,” “religious,” and so forth, without relying on any particular teaching, book, or anything else. We can know that, the same way, that we know any other principle, that I just illustrated, crudely in other places, this principle of gravitation. You find a contradiction to what the senses teach you. And you solve the contradiction, and you demonstrate experimentally, that you found the solution. This becomes known as a “universal principle.”

What’s this question of the soul? Which is dealt with so admirably by Plato, and by Moses Mendelssohn. One should read these things, and study them. Because, one should know, rather than learn. We have too much learning, and not enough knowledge. . . .

Mankind, by his ability to make discoveries of principle, and intervene in the Biosphere, through that knowledge, is able to change the universe, in ways that the universe would otherwise not change itself.

And, through this, man increases his power to exist in and over the universe, and incurs responsibilities for the universe, which are commensurate with this knowledge. Therefore, we know that discovery, Platonic principle of hypothesis, is a universal physical principle in the universe, because it is physically efficient in the universe, in changing the universe.¹³

Petrarch, in his time, did not have the same idea of Plato as LaRouche, but he knew that the importance of Plato lay in his method.

A friend of Petrarch’s in the academic world once identified Plato as being merely a poet, while on the other hand he described Aristotle, who was commonly called “The Philosopher” by the medieval scholastics, as more important. Petrarch answered him:

And then, what am I to say of Plato, who by the consensus of all the greatest judges is not a poet at all, but the prince of philosophers? Turn to Cicero, to Augustine, to other writers who speak with authority, as many of them as you please, and you will find that wherever in their books they

have exalted Aristotle above the rest of the philosophers, they have always taken pains to declare that Plato is the one exception. What it is that makes Plato a poet I cannot imagine, unless it be a remark of Panaetius, quoted by Tullius [Cicero], where he is denominated the Homer of philosophy. This means nothing more than chief of philosophers; as preeminent among them as Homer among the poets. If we do not explain it so, what are we to say of Tullius himself, when in a certain passage in the letters to Atticus he calls Plato his God? They are both trying in every possible way to express their sense of the godlike nature of Plato’s genius; hence the name of Homer, and, more explicit still, that of God.¹⁴



EIFRNS/Michael Minnicino

In the rest of this letter, Petrarch told his friend that his view of learning was wrong. Sense perception and mere learning by memorizing facts, have nothing to do with true knowledge, he wrote.

In all his writings, Petrarch showed that the poetical capacity to discover and to inspire—and not sense perception and rote memorization—was the best talent for a teacher, and for people in general. Human beings should be creators in the small, in the living image of the Creator, God. Only in this way could mankind fulfill its destiny.

Petrarch’s main attack on the Aristotelean cult of “senses and memory” was delivered in 1367, when he answered a slander by a group of Venetian scholastics. They claimed that he was an ignorant man who hated learning, since he did not obey the Aristotelean rules of the academic world.

To answer them, Petrarch wrote *On His Own and Many People’s Ignorance*. With harsh words, he attacked the professors who taught Aristotelean logic and philosophy, as “prostitutes who delight in worrying about futile questions of words.” They should revive the study of



Statues in the portico of the Uffizi Palace, Florence (left to right): Dante Alighieri, Francesco Petrarca, Giovanni Boccaccio.

Plato instead, who was called “the premier philosopher,” by ancient scholars like Cicero, Virgil, Pliny, Plotinus, St. Ambrose, St. Augustine, St. Jerome, and others.

Greek Is Revived

Petrarch died in 1374, Boccaccio in 1375, but their work did not die with them. Their collaborators, especially those in Florence, continued their work, concentrating on finding ancient manuscripts and on reviving the Greek language. After the death of Petrarch, it was the Florentine statesman Coluccio di Piero di Salutati (1331-1406) who led the effort. He had befriended Petrarch at the end of the 1360's, and they continued to exchange letters until Petrarch's death. After 1374, Salutati purchased parts of Petrarch's library, which was the largest private library in Europe at the time.

In 1375, Salutati was summoned to Florence to be Chancellor (Prime Minister) of the Republic, which office he held until his death. He was able, after awhile, to implement some of Petrarch's ideas. Firstly, he reformed the schools in Florence, and personally sponsored and guided promising young men. He often helped youngsters who did not come from the rich elite, looking to their competence, not their status in society. Secondly, he recruited a Byzantine scholar who knew both Latin and Greek, Manuel Chrysoloras (1350-1415),

a pupil of the Greek scholar and Platonist Georgius Gemistus Plethon, to come and work in Florence as a teacher. At the age of 65, Salutati even sat with the youngsters and took Greek lessons, in order to read the manuscripts he had inherited from Petrarch!

Chrysoloras began teaching in Florence in 1396. After four fruitful years, he left Florence and moved to Pavia, to teach at its university. He later taught in Venice, Rome, Florence, and Verona, as well as Padua. As a part of his work, he wrote the first Greek grammar in Latin, *Erotemeta*, which was printed in 1484. A lexicon was later prepared by the monk Giovanni Crastone of Piacenza, and printed in 1497. But both books were copied by hand by the students, long before they could be printed. Chrysoloras did several translations, among

them the first translation of Plato's *Republic* into Latin.

Chrysoloras travelled back and forth between Italy and Constantinople several times. The sources tell us that his main mission, besides teaching Greek, was to promote a union between the Churches in the East and West. We will return to this subject soon.

Another colleague was John of Ravenna (1356-1417), a personal friend and student of Petrarch from a very early age, until 1374. In 1397 John was appointed professor of rhetoric and eloquence at the University of Florence, and he taught at other universities as well, including Padua. Although he left no writings, he did much to encourage the study of Latin and Greek among his students.

The Translators

With the students of Chrysoloras, Plato was finally translated into Latin. Leonardo Bruni, as well as some other students of Chrysoloras such as Uberto Decembrio and Cencio de Rustici, translated ten dialogues; Bruni personally translated the *Phaedo*, *Crito*, *Apology*, *Phaedrus*, *Gorgias*, and the *Letters*. In the following generation, the *Republic* was translated twice, by Uberto Decembrio's son Pier Candido, and by the Sicilian Antonio Cassarino. The Milanese Francesco Filelfo translated the *Euthyphro* and some of the *Letters*, while in Rome the papal secretary Rinuccio Aretino rendered the *Crito*, *Euthyphro* and *Axiochus* [mistakenly

attributed to Plato–Ed.] into Latin. George of Trebizond (1395-1486), a papal secretary from Crete, translated the *Laus*, *Epinomis*, and *Parmenides*. In 1462, Pietro Balbi, an ally of Nicolaus of Cusa (1401-1464) and Johannes Bessarion (1403-1472), translated Proclus's *Platonic Theology*. In Florence, Lorenzo Lippi da Colle translated the *Ion*. The translation activity of the humanists culminated in the work of Marsilio Ficino, who in 1484 published the first complete Latin version of the works of Plato.

As for Homer, the first poetic translation was commissioned by Pope Nicholas V in the mid-1450's, and was done by Filelfo. Filelfo was, by the way, married to the daughter of his teacher, Chrysoloras.

Leonardo Bruni

But it all began with the youth movement organized by Salutati, Chrysoloras, and John of Ravenna. The mission they gave it, was to search for, translate, and copy old Greek, Latin, and Arabic manuscripts, as well as to promote Greek learning. This movement was known in Italy as the “book-hunters” or, as the movement that propagated a unity between the fractions of the Roman Church and other Churches, like the Orthodox Church.

Perhaps the most important student of Chrysoloras was Leonardo Bruni (1369-1444). He was born in Arezzo, the same town as Petrarch. As a young student he studied law at first, but later, influenced by Salutati and Chrysoloras, he turned his attention to the study of the Classics.

In his autobiography, Bruni vividly describes the arguments he encountered from Salutati and Chrysoloras. Just think about how joyful it would be to hold daily conversations with Plato, Homer, and all the other Greek philosophers and poets, they told him. “For 1,700 years, no one in Italy has understood Greek, and despite this, all would agree that everything we know originates from the Greeks.”¹⁵ After some sleepless nights, while thinking about the matter, he decided to give up his law studies and study Greek instead.

From 1405 onwards, Bruni was apostolic secretary to several Popes, with responsibility for correspondence with the Orthodox Church. He also wrote the first history of Florence, and became Chancellor of the city in 1427. Bruni translated several works of Aristototele, Plutarch, Demosthenes, and Aeschines. He was also the author of biographies in Italian of Dante and Petrarch.

Bruni was way ahead of his time. He recommended that women be allowed to educate themselves and play an important role in the movement to revive the Classics, a revolutionary concept in his age. In a letter to a young woman, Baptista di Montefeltro, he used examples from history to show that, often, women in Greek and Roman

antiquity had been scientists, politicians, and important artists. Bruni wrote to Baptista:

Whilst, alas, upon such times are we fallen that a learned man seems well-nigh a portent, and erudition in a woman is a thing utterly unknown. For true learning has almost died away amongst us. True learning, I say: not a mere acquaintance with that vulgar, threadbare jargon which satisfies those who devote themselves to Theology [i.e., Aristotelean scholasticism–TJ]; but sound learning in its proper and legitimate sense, viz., the knowledge of realities—Facts and Principles—united to a perfect familiarity with Letters and the art of expression.

First amongst such studies I place History: a subject which must not on any account be neglected by one who aspires to true cultivation. For it is our duty to understand the origins of our own history and its development; and the achievements of Peoples and of Kings. For the careful study of the past enlarges our foresight in contemporary affairs, and affords to citizens and to monarchs lessons of incitement or warning in the ordering of public policy. From History, also, we draw our store of examples of moral precepts.

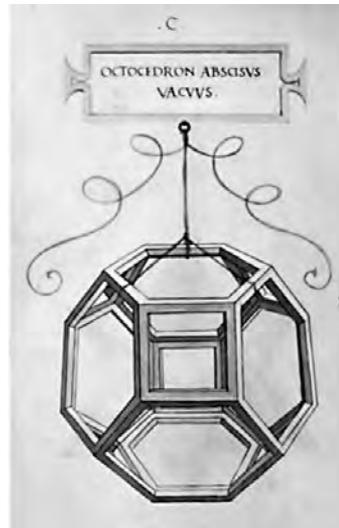
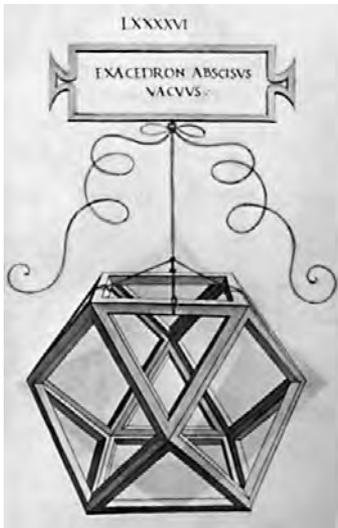
Hence my view, that familiarity with the great poets of antiquity is essential to any claim to true education. For in their writings we find deep speculations upon Nature, and upon the Causes and Origins of things, which must carry weight with us both from their antiquity and from their authorship. Besides these, many important truths upon matters of daily life are suggested or illustrated.¹⁶

The ‘Book-Hunters’

Bruni and Francesco Poggio Bracciolini (1380-1459), another student of Chrysoloras and Salutati, led a scientific committee for some years, under the sponsorship of the Pope. This committee directed the search for manuscripts, but also worked to bring about the union of the Churches. They were especially active during the Council of Basel in the 1430's.

Poggio learned Greek, as well as Hebrew, and came to direct much of the search for manuscripts. In 1429, he brought to Rome twelve unpublished comedies of Plautus which he had found. Like Bruni, he also served as Chancellor of Florence, between 1415 and 1422.

One of their friends was Giovanni Aurispa (1369-1459). As a youth, he was sent to Constantinople to study Greek under Chrysoloras and the colleagues of Plethon. He returned to the West in 1423 with 238 manuscripts, among them Aeschylus, Sophocles, Plutarch, Plato, and Xenophon. So industrious was he, that he was charged before the Greek Emperor with emptying the city of all its valuable books. He brought the first copy of Sophocles to the West, and for the first time in more than a thousand years, Sophocles was read in Italy. Later, Aurispa



Illustrations to Luca Pacioli's "De divina proportione" by Leonardo da Vinci, 1497.

The youngster answered "to enjoy myself": Niccolo said to him, that it was a shame that he did not know anything about his-

became a professor of Greek and taught at several universities. In 1441, he was appointed secretary to the Pope, a post he held until the end of his active life.

In the 1390's, Salutati recruited Guarino da Verona (1370-1460) and Niccolo Niccoli (1363-1437), both of whom studied Latin under John of Ravenna. Guarino later went to Constantinople, where he studied Greek for five years in the school of Manuel Chrysoloras. In 1408, he returned with more than fifty Greek manuscripts. The rest of his life was spent teaching Greek and lecturing on history in different Italian cities. He acted as an interpreter at the watershed Council of Florence in 1438-1439.

In addition to writing an elementary Latin grammar, Guarino translated the whole of Strabo from Greek, and some fifteen of Plutarch's "Lives," besides some of the works of Lucian and Isocrates. "Without a knowledge of Greek, Latin scholarship is, in any real sense, impossible,"¹⁷ he wrote, in direct opposition to the Aristoteleans, who claimed that it was enough to read Latin. Guarino was perhaps the most important second-generation teacher of Greek.

A friend of Guarino, Niccolo Niccoli, was to take over the role of Salutati as a patron of young students. He worked closely with Cosimo de' Medici (the Elder) (1389-1464), the most well-known financier of the humanistic revolution in Florence. Both had been educated by students of Chrysoloras, such as Roberto di Rossi, and both had studied Greek. Cosimo also knew Hebrew and Arabic. Both of them sponsored students, built libraries, and financed scientific expeditions to look for manuscripts.

Niccoli was a great polemicist. There are several reports that have survived about how he used the polemical method to get youngsters to study antiquity. It is reported that he once approached a rich young man on the street and asked him what he thought the meaning of life was.

tory, or could not read Latin or Greek. "If you do not learn it, you will be good for nothing, and as soon as the flower of your youth is over, you will be a miserable man without virtue." The boy, named Piero de Pazzi, stopped fooling around and started to study Greek and Latin.

Bruni, who was a good friend of Niccolo, wrote a book in 1402 that reports his friend Niccoli's arguments against some stubborn Aristoteleans:

Take philosophy—to consider especially the mother of all the other liberal arts, from whose fountain is derived all this human culture of ours. Philosophy was once brought from Greece into Italy by Cicero, and watered by that golden stream of eloquence. But since a great part of those books has perished, and the remaining ones are so faulty that they are not far from death, how do you think we are to learn philosophy at this time?

But there are many masters of this knowledge who promise to teach it. O splendid philosophers of our time, who teach what they do not know! I cannot wonder sufficiently at them, how they learned philosophy while being ignorant of letters; for when they speak they utter more solecisms than words. And so, I should rather hear them snoring, than speaking. But if anyone should ask them on whose authority and precepts they rely in this splendid wisdom of theirs, they say: The Philosopher's, by which they mean Aristotle's. And when there is need to confirm something or other, they bring forth the sayings in these books, which they claim to be Aristotle's—words harsh, awkward, dissonant, which would wear out anyone's ears. The Philosopher says this, they tell us. It is impious to contradict him, and for them *ipse dixit* has the force of truth, as if he had been the only philosopher, or his sayings were as fixed as those which Pythian Apollo gave forth from his holy sanctuary.

Not that I say this to censure Aristotle; I have no war with that very wise man, only with the folly of these Aristoteleans. If they were simply ignorant, they would be, if

not praiseworthy, at least to be tolerated in these wretched times. But now, when so much arrogance has been joined to their ignorance that they call and esteem themselves wise, who could bear them with equanimity?¹⁸

Ambrogio Traversari

Ambrogio Traversari (1386-1439) studied Greek and Hebrew in Florence under Chrysoloras and John of Ravenna. He later worked closely with Nicolaus of Cusa, who became the most important philosopher of his time.

Traversari translated the Fathers of the Church anew from Greek and, inspired by Petrarch, he collected manuscripts. Many of these were later given to Cusa, and are still to be seen in his library at Berncastel-Kues. In the 1420's, Cusa began to gather a group of activists and humanists around himself, including Niccolò Niccoli, Paolo dal Pozzo Toscanelli (1397-1482), Giuliano Cesarini (1398-1444), and Aeneas Sylvanus Piccolomini (1405-1458), who later became Pope Pius II. Almost all the important figures of the Italian Renaissance were connected to this circle.

For example, Toscanelli was the mathematics instructor of Filippo Brunelleschi (1377-1446), the architect of the Dome of Florence and the founder of modern architecture. Later, Leonardo da Vinci became a good friend of Toscanelli's. Among the topics of great interest in Traversari's group was geography. Toscanelli, and others, studied a recently acquired manuscript of Ptolemy's *Geography*, in an attempt to find a new sea-route to the East, outside the control of Venice. The map had been brought to Europe by another pupil of Chrysoloras, Palla Strozzi (1372-1462), who found it in Constantinople in 1400. Later, Toscanelli drew the map used by Christopher Columbus on his voyage of discovery. Columbus copied this map into one of the books he always carried with him, the *Universal History of Facts and Deeds*, by Aeneas Sylvanus Piccolomini. It should also be noted that the uncle of the explorer Amerigo Vespucci, after whom the continent America was later named, belonged to this same group. His name was Giorgio Antonio, and he was a Latin scholar and known Platonist. Some sources contemporary to Vespucci also report that he knew Toscanelli.

The Orthodox scholar Georgius Gemistos Plethon also belonged to this circle. He had long discussions with Toscanelli on the works of the ancient geographer Strabo. Later, they asked Guarino da Verona to translate Strabo, which he did.

One of the scientists sponsored by the group was the artist Piero della Francesca (1416-1492), who lived in Florence at the time of the Council. He was an outspoken Platonist, who revolutionized the art of painting and developed a mathematical system of linear perspective.

He wrote a treatise on perspective, "De prospectiva pingendi," drawing heavily on the earlier work of Brunelleschi. He wrote the "Trattato d'abaco" ("Treatise on the Abacus") on algebra and the measurement of polygons and polyhedra (solids), and "De quinque corporibus regularibus," on the five regular (Platonic) solids.

His work would later be continued by his student, Luca Pacioli (d.1509). Together with Leonardo da Vinci (1452-1519), Pacioli wrote *De divina proportione* (*On the Divine Proportion*) in 1497. Three years before, he had completed aspects of Piero della Francesca's work in another book, *Summa de Arithmetica, Geometria, Proportioni, et Proportionalita*. This work came to be instrumental in the development of modern arithmetic and algebra, and inspired the great mathematician Cardano. The works of Piero and Pacioli contributed to the crucial discoveries of the astronomer Johannes Kepler, in the early 1600's. Modern engineering also derives from their work, since linear perspective is crucial to engineering.

Traversari made his greatest impact on world history through his collaboration with Nicolaus of Cusa. Cusa had studied theology and Greek in Padua from 1417 to 1423. At that time, Guarino da Verona and his student Vittorino da Feltre led the teaching of Greek there, and got to know both Traversari and Toscanelli as young students. The latter was Traversari's teacher for, among other things, mathematics.

Cusa and Traversari were perhaps the most important Western Europeans behind the Council of Florence, at which the Orthodox and Roman Churches were reunited—a unification that was made possible through the help of the Platonic concept of the infinite value, and dignity, of man.

The Council of Florence

The project to revive Plato and the Greek heritage cannot be separated from the attempt to reunite the Christian Churches of East and West.

An attempt had been made to do so in the 1200's, but it failed completely, with the collapse of the Roman Church as one result. Petrarch personally led the effort to unify the Roman Church from the schism of the 1300's. After this was accomplished at the Council of Constance in the early 1400's, when a single Pope was restored, the Platonists reached out to the East. Already, at the Council of Constance, Bruni and Poggio Bracciolini had made an attempt to start a discussion of unification with the Orthodox Church.

After many years of negotiations and frequent diplomatic exchanges, a window of opportunity opened in the 1440's, owing to the great crisis of the Byzantine Empire, center of the Orthodox Church and the last

remnant of the Roman Empire.

Cusa and Traversari prepared the ground for the Florentine Council, by organizing and leading a delegation to Constantinople.

In 1437, the delegation, with Cusa as its intellectual leader, arrived in Constantinople, and began negotiating with the Orthodox Church. Eventually, 700 Greeks, including about 40 high-ranking dignitaries, among them the Emperor John VIII Paleologue and Joseph II, Patriarch of the Orthodox Church, journeyed to Italy, with the aim of uniting the Churches. After long negotiations in Florence, all the Orthodox delegates but one, St. Mark of Ephesus, accepted and signed the Union document, either for themselves or, as was the case for some, for the Patriarchs whom they had been entrusted to represent. The signing, on July 5, 1439, was accompanied by a triumphal service, with the solemn declaration of the Union read out in Latin and Greek.

East and West

The Council of Florence has often been described as a Western project, but, in fact, the Council was to a very large degree a creation of Orthodox thinkers. In fact, without the crucial interventions of Eastern Platonists, the Council would not have occurred at all, and the Renaissance would probably have died in the 1430's. Just as the Orthodox Platonists supplied the West with teachers of Greek and Platonic manuscripts, so too was the cooperation of East and West essential at the Council.

The Platonist revival in the East started with Theodore Metochites (c.1294-c.1360) and the teacher of Petrarch,

Barlaam. Both are controversial figures in both Eastern and Western Church history. Barlaam was involved in diplomatic negotiations with the Roman Church, on behalf of Constantinople. He became controversial after he proposed a union based on the philosophy of St. Augustine, and was ultimately expelled from the East. But, until the end, he viewed himself as Orthodox, even during his life as a refugee and priest in the Roman Church.

Their main follower was Georgius Gemistos Plethon, whom we have already encountered, and Plethon's student, Johannes Bessarion. Both participated in the Council of Florence.

To study the work of these Eastern Platonists is fascinating. They reveal that the most crucial question at the Council was not the doctrinal issue of the use of the "*Filioque*" in the creeds of the Churches, as this is usually described. For, underlying this theological debate about *Filioque*—whether the Holy Spirit proceeds from both Father and Son as one Principle (as the Roman Church said), or only from the Father (as the Orthodox claimed)—was a more fundamental debate on method and the value of man. It was when the Platonists showed that the Platonic interpretation of *Filioque*, using the principle of the One and the Many, would be acceptable to both Churches, that unification could take place. Thus, man's potential to participate in God's work of Creation, was acknowledged as a universal principle.

The Orthodox Church was allowed to keep, and use, its creed, and it was not required to insert the Western phrase about *Filioque*. In the same way, other disagreements were overcome. For example, the Orthodox were allowed to use leavened bread in the service, while

Benozzo Gozzoli, "Journey of the Magi," 1459 (detail). The fresco subject was chosen to celebrate the 1437 Council of Florence, and portrays the gathering together of the Council participants from both the West and the East.

Below: Portrait medal of the Byzantine Emperor John VIII Paleologus, by Antonio Pisanello (1438/39).



Latins were to continue to use the unleavened. All in the spirit of “unity in diversity.”

Plethon

Plethon, who was born around 1360, was educated by Jewish and Muslim scholars. He led a group of scholars who were looking to Platonism as a way of reforming the Orthodox Church. He wrote several books in defense of Plato, and even chose the pseudonym “Plethon,” which is a variant of “Plato.”

Plethon studied several religions, including the ancient Hellenistic religion and Zoroastrianism. He was searching for a way to start a dialogue between the religions, to ultimately unite them. As his enemy George of Trebizond (Trapezuntius)—who had been a Platonist earlier in his life—wrote in the early 1450’s:

It is known that he was so much a Platonist that he claimed that nothing other than what Plato believed about the gods . . . was true, and he dared to write it without restraint. I myself heard him in Florence—for he came to the Council with the Greeks—asserting that the whole world would in a few years adopt one and the same religion, with one mind, one intelligence, one teaching. And when I asked: “Christ’s or Muhammad’s?” he replied: “Neither, but one not differing from paganism.”¹⁹

Plethon would hardly have used the word paganism, but Platonism; but, for the slanderer Trapezuntius, Platonism and paganism were one and the same concept. This same author later wrote: “Plethon wants to transform Christianity into some kind of Platonism. Plato, the pagan!”

After the Council, in 1441, Plethon returned to the Peloponnese, and there he died. Plethon’s most important works are the *Laws*, written in imitation of Plato’s *Laws*, and “On the Differences between Plato and Aristotle,” a treatise which in the 1440’s became the most debated work in all Europe.

On the Differences was based on a series of lectures that Plethon delivered against Aristotle during the Florentine Council. It began by stating: “Our predecessors among both Romans and Greeks esteemed Plato much more highly than Aristotle. But most people today, especially in the West, who regard themselves as more knowledgeable than their predecessors, admire Aristotle more than Plato.”²⁰

Plethon began by describing the difference between Plato, who viewed God as a Creator, and Aristotle, who did not view God as a creator of anything, but only as “the motive force of the universe,” i.e., an “unmoved mover.” Plethon related this difference to two different views of the soul: Does a close connection exist between the Many (souls) and the One (God)? And is the One,

that towards which the Many strive?

The connection between the One and the Many is the the Platonic “ideas” (*eidei*), or “forms,” Plethon wrote.

The Orthodox Church had traditionally talked about the difference between the “essence” (*ousia*) and the “power” or “energy” (*energeia*) of God, or what are sometimes described as the nature, and the will, of God. A difference is established between God as he really is, and God as he reveals himself to man. God’s nature is infinitely different from man’s, they say, and therefore “incommunicable.” Man can, however, strive towards God, and understand his works, by following the will, or “energy,” of God. Ultimately, man can become “deified,” which does not mean that we become gods, but that we let the will of God guide us, and we become “children of God.”

Plethon and his followers had the view that the Platonic ideas, or forms, were a part of the “energy” of God, as we can comprehend him. That is, man is closely related to God in our capacity to more and more fully comprehend God’s “energy,” through the help of *ideas*.

Petrarch’s friend Barlaam was involved in a dispute with a monk from Athos, Gregorius Palamas, on this subject, already in the mid-1300’s. The subject of the argument was the “light of God.” Palamas characterized the essence of God as “incommunicable,” while the energy was the “uncreated light of God,” through which God communicates with creation *via* faith and grace. Barlaam agreed on the issue of the light of God, but added that reason had to be included. Palamas disagreed, because it placed man too close to God.²¹ The view the Orthodox Platonists had on this difference between the essence and energy of God, is very similar to the view Cusa later came to develop. We cannot know the Truth, he wrote, but we can strive towards it. Cusa used the metaphor of the circle and the polygon, showing the species difference between the two: Even if a polygon has an infinite number of sides, it cannot become a circle. Such is the nature of the relation between man and God. Everything we know about God can only be known as approximation, Cusa wrote, just as the polygon can only approximate the circle.

What was the importance of this for the debate about the *Filioque*? Well, the Orthodox said that the the Holy Spirit proceeded only from the Father. Plethon’s view in his *On the Differences* and other writings was, that the Orthodox view is not so different from the Roman one, that the Holy Spirit proceeds from both Father and Son. The true nature of God is always hidden from man, he explained. The Trinity and other “attributes” of God are not the true nature of God, but God-given revelations that help us human beings get an approximated understanding of a mystery so great that it cannot be grasped by us otherwise.

Thus, in reality, all parts of the Trinity—Father, Son,

and Holy Spirit—proceed from the hidden essence of God. But, as the created energy of God, the Holy Spirit can be said to proceed from the Son as well as from the Father.

Bessarion

The student of Plethon, Johannes Bessarion, delivered a famous lecture in favor of Union, on April 13-14, 1439, based on Platonic principles. Bessarion got a great deal of help from his teacher Plethon, as well as their good friends in the West, Traversari and Cusa, but the arguments were his own.

The importance of this lecture was that Bessarion came up with a solution, which made it possible for the parties at the Council to agree.

Before Bessarion came up with this solution, the delegates were quarreling about whether the Orthodox Church should rewrite its Creed and transform itself into an exact copy of the Roman Church. The Orthodox representatives were against this, of course.

Since the main point of difference was that the Orthodox Church admitted only one source of the Holy Spirit, the Father, and the Roman Church two, Father and Son, Bessarion proposed that “two should be looked at as one.” Or rather, that the Greek and the Latin Creeds should be viewed as “the same,” even though the *texts* “were different.” After his discourse, the Eastern representatives agreed to a reinterpretation of their Creed, in accordance with the Platonist interpretation of the *Filioque*. The Trinity being the Creator, the Creative Christ, and the Created Holy Spirit, or, as they explained it back then: “two hypostases, one action, one productive power, and one product due to the substance and the hypostases of the Father and the Son.” The Union was accomplished, based on an agreement in principle, while the differences in rites and texts remained.

Bessarion stayed in the West after the Union, continuing to work zealously for unification with the other Churches. First, with the Armenians (1440), then the Jacobites and Ethiopians (1442), the Syrians (1444), and the Chaldeans and Maronites (1445). At this time, he also wrote an article to refute the accusations of Mark of Ephesus against the Council, “De successu synodi florentinae.” He also wrote a defense of Plato, *Against the Opponents of Plato*, and translated Xenophon’s *Memorabilia*, about Socrates, into Latin.

Bessarion worked closely with Cusa and Pope Nicholas V, an example of which can be seen in the translation of the works of Archimedes. The Pope had ordered the translation in the 1450’s. To this aim he used a manuscript that had apparently been imported by Chrysoloras sixty years earlier. Jacobo da Cremona translated it, and two

copies were sent for proofreading, one to Cusa, and the other to Bessarion. Cusa wrote a treatise on geometry, “De mathematicis complementis,” after receiving the translation of Archimedes, and sent a copy of this to Bessarion.

Attacks Against the Union

In the East, the Union of Florence was not publicly proclaimed until 1425, a decade later, in the Church of Hagia Sophia in Constantinople. But on May 29, 1453, the Turks, led by Mohammed II, conquered the city (which was renamed Istanbul), marking the end of the Byzantine Empire. After the fall of Constantinople, the old leader of the Orthodox Church, who was a friend of the Union, was forced out and replaced by Patriarch Gennadios Scholarios, who repudiated the Union. In this, the Patriarch was following the only participant at Florence who did not sign, St. Mark of Ephesus. Mark had been canonized for his refusal, after his death in 1444.

Many of the friends of Union were persecuted when they returned to the East from the Council. The Greek Metropolitan of Kiev and All Russia, Isidore, who had been one of the major architects of Union at the Council, returned to Moscow in 1441 as a Roman Cardinal, but was rejected by both Church and state, arrested, and forced to flee to Lithuania.

The Orthodox Patriarch Scholarios had written several works against Plethon and the Western Platonists even before the rift between the Churches became final. In his *Against Plethon and Against the Greek Polytheists*, he accused Plethon of being a “hedonist,” and proudly proclaimed that Aristotle was superior to Plato. After writing this, he ordered all works by Plethon to be burned, as well as some of those by Plethon’s students.

In the West, the main enemy of the Platonists was George of Trebizond, whose *Comparison of the Philosophers Aristotle and Plato* was written in 1458.

Renaissance and Counter-Renaissance

The Union died, but the fight continued. The Greek project, the revival of Plato, and the work at the Council of Florence survived.

In the 1400’s and the early 1500’s, discoveries were made in the arts and mathematics. The first modern nation-states were founded at the end of the 1400’s by France’s Louis XI and England’s Henry VII; industries and manufactures were promoted; and the “grandchildren” of the book-hunters supported journeys of exploration all over the globe. With the establishment of the first nation-states, the first steps to the industrial revolution, and the hope of creating a world without poverty or

The Arab Renaissance and the Greek

The Greek language was still used in the Eastern Church at the time of Petrarch, even though the Platonic tradition was being kept alive by a only small group of people. In the Arab countries, the Greek heritage was to a large extent also forgotten, even if some continued to read the Arabic translations of Plato, and the writings of Islamic Platonists like Ibn Sina and Al Farabi.

But the Arabs had rediscovered the Greeks also, in the Islamic Renaissance of the Eighth through Eleventh centuries. In A.D. 786, Harun al-Rashid became the fifth Caliph of the Abbasid dynasty. During his reign, a project was started to collect Greek manuscripts, translate them, and copy the translations.

Harun al-Rashid died in 809, and his son al-Ma'mun, the new Caliph, continued the patronage of learning started by his father. He founded an academy, called the "House of Wisdom," where Greek philosophical and scientific works were translated. Most of the the work of the academy consisted in searching for manuscripts to translate. In order to find manuscripts of works by Plato and others, al-Ma'mun sent a team of his most learned men to the Byzantine Empire. The Caliph used his military victories to get more manuscripts: During the war with the Byzantine empire the Caliph captured Byzantine soldiers and demanded manuscripts as ransom for them!

Arabic 'Book-Hunters'

One of the scholars who participated in this book-hunt was Abu Zayd Hunayn ibn Ishaq al-Ibadi (808-873), who rightly can be called the Arabic Petrarch.

Hunayn ibn Ishaq is most famous as a translator. He was trained in medicine, and made original contributions to that subject. However, as the leading translator in the House of Wisdom, he came to have an enormous influence on the mathematicians of the time. His son, Ishaq ibn Hunayn, strongly influenced by his father, is famed for the Arabic translation of Euclid's *Elements*.

Hunayn, who was a Nestorian Christian, learned Greek in Alexandria as a young student, and became an expert in the Greek language. He travelled

throughout the Arab world in search of manuscripts. In cooperation with other book-hunters, translations were made into Arabic, and Hunayn personally translated both Plato and Aristotle.

Other translators included the astronomer Thabit Ibn Qurra, Yusuf al-Khuri al-Qass, who translated Archimedes' now lost work on triangles, and Qusta Ibn Luqa al-Ba'lbakki, a Syrian Christian who translated Hypsicles, Theodosius' *Sphaerica*, Heron's *Mechanics*, Autolycus Theophrastus' *Meteora*, Euclid, and several other works.

Transmission Through Spain

Some of the works translated by the House of Wisdom were later translated into Latin by scholars in Toledo, Spain, which from the 900's onward was a center of Muslim, Jewish, and Christian scholarship. From Toledo, these translations, as well as original writings by Islamic scholars like Ibn Sina and Al Farabi, including the rich treasure of Arabic medicine, were disseminated throughout Europe. But, although this influence was great, it was too limited: Only a very few translations of the Greek Classics, and those mostly of Aristotle, reached Europe. Plato remained unknown in the West, except for some copies of the *Timaeus*, and some commentaries on Plato written by Proclus and Al Farabi.

During the European Renaissance, many writings by Islamic scholars, such as Ibn Sina (known in Europe by the Latinized name "Avicenna"), were translated anew. Many ancient Greek works were also translated into Latin from Arabic. The example of the famous Apollonius of Perga is typical. His *Conics*, which played a crucial role in the development of modern astronomy, was translated from both Greek and Arabic: Its first four Books were translated from Greek, and Books Five, Six, and Seven from Arabic (Book Eight had been lost altogether). Johannes Kepler would later revolutionize astronomy, when he hypothesized that the planets moved along the pathways of elliptical curves described by Apollonius in the *Conics*.

—TJ

hunger, had been taken. Soon, artists like Piero della Francesca, Leonardo da Vinci, and Raphael Sanzio, to name just a few, would revolutionize painting. The arts developed—and although this development lies beyond the scope of this report, it still positively shapes the daily life of all of us, minute by minute.

The tragedy is, that the development of mankind since the Renaissance has been interrupted repeatedly by unnecessary wars and disasters. The evils that followed in the 1500's, during the so-called “little dark age”—the religious warfare, colonialism, and the horrendous series of wars leading to the Thirty Years' War, are such examples. The AIDS disaster and the economic crisis today, and World War II with its Nazi terror, are two recent examples.

Instead of using the Aristotelean opposition to stop the Renaissance, its enemies decided to pervert it from within, by introducing a counterculture among the youth. Similar to the counterculture of the 1960's, they insisted on a “revolution of the senses.” The early Renaissance Platonists' focus on the human mind, was to be replaced by an emphasis on sensuality and extra-sensuous, occult, experiences.

Nowhere can this be seen more clearly than in the arts. The great achievement of the Renaissance was to rediscover linear perspective, and to rediscover ways to portray not only the bodily appearance of people, but also their souls, the “motion of the mind.” After awhile, the Platonic method of painting developed by artists like Piero, Leonardo, and Raphael, was replaced by a sensual revolution. Pornographic painters earned huge sums. It became fashionable to use mythological subjects for the paintings. Why? Because these allowed the painters to depict sexual intercourse between naked men and women, and even children disguised as naked angels!

Many works of the artist Michelangelo clearly show this tendency to emphasize sensuous experience and the athletic appearance of the body, over the mind. Interested readers can compare the paintings of Michelangelo in the Vatican's Sistine Chapel, to those of Raphael, also in the Vatican. Perform a thought experiment: How would Michelangelo have painted Raphael's “School of Athens,” where the great intellects of antiquity and modernity are depicted in a dialogue taking place in “temporal eternity”? Would Raphael have painted Christ, God, angels, and the saints, as naked athletes, as Michelangelo did?

Much of this sensuous revolution was falsely labelled Platonism, as in the case of the unfortunate translator of Plato, Marcilio Ficino, whose occult *Platonic Theology*, was anything but Platonic. The seemingly Platonist “Oration on the Dignity of Man,” of Pico della Mirandola (1467-1533), a student of Ficino, which extols the

virtue of man's creative powers, nonetheless shows this tendency. The oration starts out by referring to the hidden wisdom of God, which only a chosen elite among mankind has the capacity to discover. Thus, the dignity of the whole of humanity, has been perverted into the dignity of the few. Or, as Pico writes:

Openly to reveal to the people the hidden mysteries and the secret intentions of the highest divinity, which lay concealed under the hard shell of the law and the rough vesture of language, what else could this be but to throw holy things to dogs and to strew gems among swine? The decision, consequently, to keep such things hidden from the vulgar and to communicate them only to the initiate, among whom alone, as Paul says, wisdom speaks, was not a counsel of human prudence, but a divine command. And the philosophers of antiquity scrupulously observed this caution.²²

All talk about the differences between Aristotle and Plato should cease, Pico states. “We have proposed a harmony between Plato and Aristotle,” where Aristotle would provide the rational method, and Plato a method for magical, cabbalistic investigations.

The Future

Thus followed chaos upon the Renaissance, as in so many other times in the history of mankind.

Humanity ought to have learned the lesson by now: In order to reverse today's economic collapse and ensure that civilization can no longer be threatened by extinction in the future, we need a rebirth, a new Renaissance. But this time, as Lyndon LaRouche has proposed, the Renaissance must be spread by a mass movement, and not merely by the few. That is, as many people as possible must become fully human, and develop their creative capacities in the image of the Creator. This must be done, in order to make the new Renaissance durable, and avoid collapse of civilization in the future.

But to do this, you would have to start seeing yourself as a true human being, and not just as some kind of cattle. Do you believe that you are powerless to change anything—that somehow, unseen forces, or unknowable, powerful interests are directing everything that happens on this planet, and that you cannot do anything to change the future destiny of mankind?

What would Petrarch, sitting at his wooden table that cold September day in 1360, have to say about that? One can almost imagine him lifting his head and pointing towards you. He had seen the follies of his time. He had seen how popular opinion had tolerated the madness of Church and state, which led to the great disaster of the Black Death. He had witnessed how madness spread as a result of the plague,

its survivors either turning toward frenzy, grasping as much sex and debauchery as possible before the plague hit them, or becoming religious fundamentalists, flagellants trudging naked from town to town, whipping themselves and praying constantly. Few had acted with calm, and even fewer had tried to prevent the disaster.

Does man make a difference? Ask Petrarch. Ask Leonardo Bruni, or Plethon, Bessarion, and Cusanus. Look at them, and then look at yourself in the mirror:

APPENDIX

Petrarch, the Language-Maker

Not only was Petrarch instrumental in reviving knowledge of the works of Plato and Classical Greece, but, together with his older contemporary Dante and his younger contemporary Boccaccio, he actually invented the modern Italian language. As a result of their efforts, Italian became the first literate form of a modern European vernacular, a necessary prerequisite for the development of a national language-culture and, hence, a modern nation-state.

The verb “invented” is not too strong. For thousands of years, both before and after the period of Roman dominance, the people of the Italian peninsula spoke an assortment of vernacular dialects. These were not just differences in accent, as we have in America, but idiomatic and syntactical differences so great that they could stand in the way of communication. Educated people wrote in Latin, and Dante, Boccaccio, and Petrarch were no exception.

Dante realized that the growth of human freedom and the possibility of salvation were hindered by the fact that the most important and elevated thoughts in all of mankind’s history could only be discussed by the learned few in a language almost incomprehensible to the vast majority. Writing with immense courage in his *De Vulgari Eloquentia*, Dante hurled down a challenge before all of Western civilization: the vernacular tongues are “nobler,” said Dante, than the “artificial” language of the Court and the Schools; we must elevate these vernaculars to the level whereat they can express ideas as well as, or better than, Latin or Greek. Dante’s epic *Commedia* embodies that challenge, and scientifically demonstrates the method of solution.

Dante wrote the *Commedia* in his version of Tuscan, the dialect spoken in his beloved home, Florence. His followers Petrarch and Boccaccio continued the exercise brilliantly, creating a language of powerful musicality which was plastic enough to adopt many of the neologisms and usages that flowed from the pens of these three

What would you have done, if Petrarch had asked you to help him in the mid-1340’s? Would you have turned your back to work on the harvest as usual, or joined the never-ending quarrels about taxes and careers? Would you have said that the future is in the hands of God, and that you could not do anything about it?

Petrarch knew that God was not so stupid, as to create human beings who were some kind of impotent cattle, born only to be slaughtered. But, do you?

writers. In 1515, about 150 years later, the Florentine patriot Niccolò Machiavelli wrote a short dialogue to celebrate this achievement. Machiavelli longed for a unified Italian nation, and a unified Italian language to help bring it about. “A common tongue of Italy” had not yet come into being, concluded Machiavelli, but when it did, the “true source and foundation” of it, would be the work of the Florentine writers, “among whom Dante, Petrarch, and Boccaccio hold pride of place, to such a degree that no one can hope to rival them.”

Petrarch, Chaucer, and Shakespeare

The Dante-Petrarch-Boccaccio language project was so successful, that its reverberations were heard across Europe, and no place so loud as in England. During the Fourteenth century, England was undergoing its own linguistic turmoil, as the Latinized French of the old Norman oligarchy was giving way to an evolving English vernacular. The pivot of this transformation was to be the courtier and diplomat Geoffrey Chaucer (?1343-1400). An amateur versifier from his twenties, Chaucer was intellectually reborn by a series of diplomatic visits he made to Italy between 1372 and 1378. It is hypothesized, but not proven, that Chaucer met Petrarch in Padua in 1374.

Exposure to the rich harmonies and strong rhythms of Italian verse, and to the imaginative narratives of tale-tellers like Boccaccio, opened Chaucer’s mind to the heights to which he could take his own vernacular. Chaucer’s borrowings from the Florentine trio are too extensive to describe here; it is sufficient to repeat an accolade from Chaucer’s masterpiece, *The Canterbury Tales*, the founding document of modern English verse:

I wol yow telle a tale which that I
Lerned at Padowe of a worthy clerk,
As preved by his wordes and his werk.

He is now deed and nayled in his cheste,
 I preye to god so yeve his soule reste!
 Fraunceys Petrark, the laureat poete,
 Highte this clerk, whos rethoryke sweete
 Enlumined al Itallie of poetrye.
 [*Clerk's Prologue*, 26-33]

Chaucer's deep public debt to Petrarch inextricably linked English and Italian poetry for years to come. It soon became almost obligatory for an English gentleman with poetic aspirations to complete his education with a tour of Italy. Two of these "Italianate Englishmen," as they were called, were Sir Thomas Wyatt (1503-1542) and Henry Howard, Earl of Surrey (1517-1547) from the period of Henry VIII. Wyatt and Surrey embarked on a project to master Petrarch's poetics, translating and adapting many of his poems.

As a result of their project, the two popularized in English the sonnet form most often used by Petrarch (an

8-line octet followed by a 6-line sestet)—which today we call a "Petrarchan sonnet." Surrey experimented with a variation of Petrarch's sonnet, dividing the 14 lines into three 4-line quatrains, followed by a couplet. At the same time, both he and Wyatt emphasized the need to regularize English meter, pointing to the 10-syllable iambic pentameter as the most felicitous analogy to the 11-syllable line favored by the Italians.

But, the greatest "Italianate Englishman" never went to Italy. Fifty years after Surrey and Wyatt, William Shakespeare was inspired by their Petrarchan verse, and wholly adopted Surrey's sonnet form into what we today call the "Shakespearean sonnet." And, following its development in the dramas of his contemporary Christopher Marlowe, Shakespeare perfected the iambic pentameter line as the means to give voice to the most beautiful and content-laden English ever heard.

—Michael Minnicino

NOTES

1. Quoted in *Petrarch: The First Modern Scholar and Man of Letters*, ed. and trans. by James Harvey Robinson (New York: G.P. Putnam, 1898).
2. *Ibid.*
3. Boccaccio, *The Decameron*, trans. by David Burr, www.majbil.vt.edu/history/burr/Boccaccio.htm
4. Colin McEvedy and Richard Jones, *Atlas of World Population History* (Harmondsworth: Penguin Books, 1978).
5. Paul B. Gallagher, "How Venice Rigged The First, and Worst, Global Financial Collapse," *Fidelio*, Winter 1995 (Vol. IV, No. 4).
6. Johan Scriener, *Hanseatene og Norges nedgang* (Oslo: 1935).
7. St. Augustine, *The City of God*. See <http://www.newadvent.org/fathers/1201.htm>
8. *Ibid.*
9. *Ibid.*
10. Quoted in Edward Gibbon, *The History of the Decline and Fall of the Roman Empire*, 1788.
11. Quoted in Albert C. Clark, *The Reappearance of the Texts of the*

12. Francesco Petrarca, *Opere Latine* (Tornio, 1975).
13. Lyndon H. LaRouche, Jr., "In the Aftermath of January 28th," *The New Federalist*, March 3, 2003 (Vol. XVII, No. 5)
14. Robinson, *op. cit.*
15. Quoted in *Vittorino da Feltre and Other Humanist Educators* ed. by W.H. Woodward (Cambridge: Cambridge University Press, 1912).
16. *Ibid.*
17. Quoted in Gordon Griffiths, James Hankins, and David Thompson, *The Humanism of Leonardo Bruni* (Binghamton, N.Y.: 1987).
18. *Ibid.*
19. Quoted in C.M. Woodhouse, *Gemistos Plethon, The Last of the Hellenes* (Oxford: Clarendon Press, 1986).
20. *Ibid.*
21. See John S. Romanides, *Notes on the Palamite Controversy*, at www.orthodoxinfo.com
22. Pico della Mirandola, "Oration on the Dignity of Man." See translation at www.pinter.com/john/dignity.htm

SELECTED BIBLIOGRAPHY

- St. Augustine, *The City of God*. See <http://www.newadvent.org/fathers/1201.htm>
- Jacob Burckhardt, *The Civilization of The Renaissance in Italy* (London: Phaidon Press, 1960).
- Nicholas of Cusa, *The Catholic Concordance*, ed. by Paul E. Sigmund (Cambridge: Cambridge University Press, 1996).
- Paul B. Gallagher, "How Venice Rigged the First, and Worst, Global Financial Collapse," *Fidelio*, Winter 1995 (Vol. IV, No. 4).
- Edward Gibbon, *The History of the Decline and Fall of The Roman Empire* (1788).
- J.L. Heiberg, *Fra Hellas og Italien 2, Jespersen og Pios forlag* (Kobenhavn: 1929).
- Helga Zepp LaRouche, "Nicolaus of Cusa, Towering Genius of the Renaissance," presentation to the Schiller Institute conference, May 6, 2001, on the occasion of the 600th anniversary of the birth of Nicolaus of Cusa and the dialogue of cul-

- tures, *Fidelio*, Summer 2001 (Vol. X, No. 2). Also at http://www.schillerinstitute.org/conf-iclc/2001/conf_may_2001_hzl.html
- Colin McEvedy and Richard Jones, *Atlas of World Population History* (Harmondsworth: Penguin Books, 1978).
- James Harvey Robinson, *Petrarch: The First Modern Scholar and Man of Letters* (New York: G.P. Putnam, 1898).
- The Routledge Encyclopedia of Philosophy*, ed. by E. Craig (London and New York, 1998), Vol. VIII, Chap. 13, "Renaissance Platonism."
- Barbara W. Tuchman, *A Distant Mirror: The Calamitous Fourteenth Century* (New York: Ballantine Books, 1978).
- Vittorino da Feltre and Other Humanist Educators* ed. by W.H. Woodward (Cambridge: Cambridge University Press, 1912).
- C.M. Woodhouse, *Gemistos Plethon, The Last of the Hellenes* (Oxford: Clarendon Press, 1986).
- Egil A. Wyller, *Lyset fra Bysants* (Oslo: Spartacus Forlag, 1996).

The Joy of Reading *Don Quixote*

How Cervantes used a madman, his crude peasant sidekick, and the method of paradox, to take aim at the evils of Hapsburg Spain

by Carlos Wesley

In a survey conducted in 2002, some of the world's leading writers, representing nearly all continents, from Africa to Australia, Europe, Asia, and the Americas, selected *Don Quixote* as the world's best work of fiction. "If there is one novel you should read before you die, it is *Don Quixote*," said the Nigerian-born Ben Okri.¹

This is a view shared wholeheartedly by our study group, which started reading *Don Quixote* aloud two years ago. We have just completed Part I of Miguel de Cervantes' (1547-1616) Seventeenth-century masterpiece, published in 1605, and are now embarked on Part II, which Cervantes published ten years later, in 1615.

For us, reading *Don Quixote* has been a most joyful undertaking, which some of you may want to consider doing, even if you don't read or speak Spanish; many of the standard English translations are more than adequate.² By doing

so, you would join the ranks of the many others, including America's founding fathers, who have read and enjoyed *Don Quixote*, over a span of nearly four centuries.

Cervantes' novel has been translated into most of the world's languages, one of the first being the 1607 English translation done by Thomas Shelton, who was in William Shakespeare's circles.³

After the Bible, *Don Quixote* is the most published literary work in the world. It has inspired countless movies and works of theatre, poetry, and music, starting as early as the English composer Henry Purcell in the Seventeenth century, and J.S. Bach's very-good friend, Georg Philip Telemann (godfather of Bach's son, Carl Philip Emmanuel), who composed the famous *Don Quixote* suite, and extending to Gaetano Donizetti, Felix Mendelssohn, and many others.

Illustrations to "Don Quixote"
by Gustave Doré.

Holding Up a Mirror to Society

As most everyone knows, the basic plot of *Don Quixote* concerns the adventures a member of the lower landed gentry at the end of the Sixteenth century in Spain, who, having gone crazy from reading too many books of knight-errantry, decides to become a knight-errant himself, and, along with his neighbor, the peasant Sancho



Don Quixote, accompanied by Sancho Panza, agrees to slay a giant for Dorotea (Part I, Chapter 29).

Panza, to whom he promises the “governorship of an isle” in exchange for serving as his squire, undertakes to travel across Spain. Along the way, they meet aristocrats, bureaucrats, and petty thieves, tradesmen, soldiers, priests and monks, dukes, duchesses, and whores, 669 individual characters in all, who are the real people of what Spain was at the time: the most powerful nation in the world,

but fast on its way to inexorable ruin because of the stupidity of its people and the policies of the ruling Hapsburgs, particularly Philip II (1527-1598), and his son, the indolent and venal Philip III (1598-1621). While the former engaged in a cruel, but ineffectual, policy of repression towards the Low Countries, it was during the latter’s reign that the expulsion of Spain’s Muslim population took place, starting in 1609, completing the process of ethnic cleansing begun more than a century earlier, with the expulsion of the Jews during the reign of Philip III’s great-great grandmother, Queen Isabella (1451-1504).

Throughout the journey of Don Quixote and Sancho Panza, besides holding up a mirror in which his contemporaries could see their strengths, and the follies that had brought them to this sad pass, Cervantes shows them (and us) how to get out of the mess, by, among other things, having the Don teach Sancho how to govern—lessons which the latter learns well, as we see later, when he rules the “isle of Barataria” in an exemplary manner. (That is, until confronted with a new situation that does not fit the axioms he has been operating under, when he is unable—or unwilling—to change, and quits the job.)

Many Layers of Meaning

While one can certainly get a lot of enjoyment from reading *Don Quixote* by oneself, there is a heightened sense of joy and understanding that comes from reading it aloud in a group setting, as we have learned in our study circle.

Our group came together in the year 2000, when this author assumed increased editorial responsibilities for the Spanish-language publications of the international movement led by Lyndon LaRouche, and realized there was a need to hone his own language skills, and those of a couple of his younger associates. Having learned from previous experience the salutary effects of reading *Don Quixote*, I proposed that the three of us get together occasionally to study some passages. To my surprise, at the appointed

time for the first meeting, not only did the youngsters show up, but also several other colleagues, who wanted to join in the fun.

Our group at one time exceeded 20 persons—a somewhat unwieldy number—but eventually it settled to a much more manageable level of between 10 and 12 persons.

From the beginning, we established a few simple rules to facilitate participation: That we meet at a set time each week, for no more than one hour; that we start at the established time (most of the time, anyway!), regardless of how many were present; and that we finish at the agreed time. This way, everyone could schedule to participate in the readings, without worrying about disrupting their work or other activity. One other rule was that we go around the circle, and everyone gets to read aloud.

Although it has been over two years, and we are only halfway through the book, it has been so much fun, that no one has been in any particular hurry to finish. “Are you kidding? This is the highlight of my week! This is

what I look forward to,” commented a member of the group once. What better testimony to the power of the book, than the fact that it has held the attention of the diverse composition of our reading circle for so long?

Our group includes (or has included at different times) Hispanic migrant farm workers, with little formal education; native Spanish-speaking elementary-school pupils; high-school or college-educated native Spanish-speakers; and high-school or college-educated Americans, whose command of Spanish ranges from rudimentary to near-native ability. And, although not everyone (how could we?) gets exactly the same things from the book, every one of us enjoys coming together for one

Spain under the Hapsburgs

Under King Philip II (1527-1598), the relatively tolerant policies towards religious dissent of his father, the German emperor Charles V (1500-1558, who counted Erasmus among his official advisors), the first Hapsburg to rule Spain, were reversed, while Charles’ disastrous economic and social policies were made even worse. Spain declared sovereign bankruptcy four times in the Sixteenth century, and most of the gold, silver, and other wealth coming from its colonies in the Americas, went to pay debt to Genoese, Venetians, Dutch, and other foreign bankers.

The privileges of the feudal Council of the *Mesta*, which had the right to drive its herds of sheep over cultivated fields, without paying any compensation to the peasants (who were prohibited from putting up fences), wreaked havoc with agriculture, a situation that was made worse after 1609, when Philip III expelled the Spanish Muslims, called Moors, who were the country’s most skilled farmers, leading to the collapse of the irrigation systems. Manual work—in fact, any productive activity—was considered anathema by the nobility, and by those that pretended to be noble, which was pretty much everyone else. Intellectual pursuits, commerce, science, were also considered a threat to honor, and there were few who engaged in these activities, especially after the expulsion of the Jews a century earlier, in 1492. The *grandees*, the upper aristocracy, were exempt from taxes, but so too were the lesser *hidalgos*, the clergy, and many others, so that the majority of taxes were paid by poor tenant farmers. It is estimated that in

1597, only 17 percent of the inhabitants of the city of Burgos were subject to taxation.⁴

The bubonic plague returned periodically, and some areas of Spain became virtually depopulated. In the Eighteenth century, the Bourbon king Charles III brought in German colonists to resettle the Sierra Morena, the scene of some of Don Quixote’s most memorable adventures.

All government appointments required a “certificado de pureza,” proving one was free of any “taint” of Jewish or Moorish blood.⁵ And then there were the thought-police, the Inquisition. While the Inquisition was active at one time or another in nearly every European country, in Spain it took on a special character: it became a State institution, rather than just an arm of the Church, at times vying even with the monarch for power, and did not disappear completely until the Nineteenth century, although it had been weakened significantly earlier by Charles III. At the height of its power, specially after the Counter-Reformation launched by the Council of Trent (which was instigated and kept going by the Hapsburgs) officially imposed Aristotelean thought-control, the Inquisition “examined man’s religious conscience without pity, even to its innermost spiritual sentiments. With religious fanaticism, and without Christian charity, it rigorously judged and punished any abnormality or deviation from the fixed ideas held by the feared tribunal of the Inquisition.”⁶ And, owing to the “inflexible intolerance of Philip II and the Inquisition, Erasmusian thought soon disappeared from Spain.”

—CW

hour each week, each taking his turn to read a portion aloud, while the group's leader—sometimes this author, sometimes someone else—who has taken the time to research the chapter beforehand, provides the definition for terms that may be unfamiliar (not as many as one may think, as Cervantes' Spanish is remarkably modern), or explains literary, historic, or popular allusions, and such.

The one thing we try to avoid is “explaining” what Cervantes “meant to say,” as we have learned that there are layers and layers of meaning hidden in the ambiguities of *Don Quixote*, that are uncovered as if peeling an onion, as LaRouche would say.

Take this example from Part I, Chapter 9:

This thought made me confused and eager to learn the true and authentic story of the life and marvels of our famous Spaniard, Don Quixote de La Mancha, light and mirror of Manchegan chivalry, and the first in our age and these calamitous times to assume the toil and exercise of knightly arms, to redress wrongs, to succor widows, to protect damsels such as those that go, with their whips and palfreys and with their virginity on their backs, from mount to mount and from vale to vale; and were it not that some ne'er-do-well, or some base fellow with his axe and steel cap, or some enormous giant forced himself upon them, there were damsels in the days of yore, that in eighty years of life, having not once in all of them slept under one roof, went to their graves with their virginity as intact as that of the mothers that bore them.⁷

Some of these ambiguities—such as the Rabelaisian,⁸ “with their virginity on their backs, from mount to mount and from vale to vale”—virtually leap out at any individual reading the book.

However, we have found that additional insight is gained from reading aloud, and from the discussion process that takes place in a group. This is no accident, because Cervantes designed the book to be read aloud—a necessity at the time, since it is estimated that as few as one percent of Spain's population could read and write, and the situation was not much better elsewhere in Europe.

So, throughout Part I of *Don Quixote*, Cervantes describes groups of shepherds in the fields, or travellers coming together at an inn, to hear someone read some book or other. And then, in Part II, Cervantes has people come together to discuss Part I of *Don Quixote!*

Two examples of things we understood better as a result of working together, come from Chapter 52, the last chapter of Part I, entitled “Of the quarrel that Don Quixote had with the goatherd, together with the rare adventure of the penitents, which with an expenditure of sweat he brought to a happy conclusion.”⁹

The first, is Sancho Panza's reaction to seeing his master lying on the ground, after having been beaten by a group of religious penitents, whom Don Quixote had attacked, believing them to be kidnappers.

Fortune, however, arranged the matter better than they expected, for all Sancho did was to fling himself on his master's body, raising over him the most doleful and laughable lamentation that ever was heard, for he believed he was dead. The curate was known to another curate who walked in the procession, and their recognition of one another set at rest the apprehensions of both parties; the first then told the other in two words who Don Quixote was, and he and the whole troop of penitents went to see if the poor gentleman was dead, and heard Sancho Panza saying with tears in his eyes, “O flower of chivalry, that with one blow of a stick has ended the course of thy well-spent life! O pride of thy race, honour and glory of all La Mancha, nay, of all the world, that for want of thee will be full of evil-doers, no longer in fear of punishment for their misdeeds! O thou, generous above all the Alexanders, since for only eight months of service thou hast given me the best island the sea girds or surrounds! Humble with the proud, haughty with the humble, encounterer of dangers, endurer of outrages, enamoured without reason, imitator of the good, scourge of the wicked, enemy of the mean, in short, knight-errant, which is all that can be said!”

Sancho's speech is funny, particularly the part where he describes Don Quixote as “humble with the proud, haughty with the humble,” which seems at first glance to be an example of Sancho's well-known proclivity to mangle the language.

But, is it?

While this author could by no means be classed as an expert on Cervantes, I had previously read *Don Quixote* on my own several times. However, I—and others in the group who had read the book before—had missed the real joke in our prior readings, which only came out in the group's deliberative process: namely, that Sancho is not misspeaking; his description of the Don's behavior as “humble with the proud, haughty with the humble,” is absolutely true!

This is shown earlier, in Chapter 33, “In which is related the novel of ‘The Ill-Advised Curiosity,’”¹⁰ the only instance in Part I where anyone calls on Don Quixote to exercise his calling to knight-errantry.

But while he was questioning him they heard a loud outcry at the gate of the inn, the cause of which was that two of the guests who had passed the night there, seeing everybody busy about finding out what it was the four men wanted, had conceived the idea of going off without paying what they owed; but the landlord, who minded his own affairs more than other people's, caught them going out of the

gates and demanded his reckoning, abusing them for their dishonesty with such language that he drove them to reply with their fists, and so they began to lay on him in such a style that the poor man was forced to cry out, and call for help. The landlady and her daughter could see no one more free to give aid than Don Quixote, and to him the daughter said, "Sir knight, by the virtue God has given you, help my poor father, for two wicked men are beating him to a mummy."

To which Don Quixote very deliberately and phlegmatically replied, "Fair damsel, at the present moment your request is inopportune, for I am debarred from involving myself in any adventure until I have brought to a happy conclusion one to which my word had pledged me; but that which I can do for you is what I will now mention: run and tell your father to stand his ground as well as he can in this battle, and on no account to allow himself to be vanquished, while I go and request permission of the Princess Micomicona to enable me to succour him in his distress, if she grants it, rest assured I will relieve him from it."

"Sinner that I am," exclaimed Maritornes who stood by; "before you have got your permission my master will be in the other world."

"Give me leave, Señora, to obtain the permission I speak of," returned Don Quixote; "and if I get it, it will matter very little if he is in the other world; for I will rescue him thence in spite of all the same world can do; or at any rate I will give him such a revenge over those who shall have sent him there, that you will be more than moderately satisfied"; and without saying anything more he went

to get the permission. Having obtained it, Don Quixote,

bracing his buckler on his arm and drawing his sword, hastened to the inn-gate, where the two guests were still handling the landlord roughly; but as soon as he reached the spot he stopped short and stood still, though Maritornes and the landlady asked him why he hesitated to help their master and husband.

"I hesitate," said Don Quixote, "because it is not lawful for me to draw sword against persons of squirely condition; but call my squire Sancho to me; for this defense and vengeance are his affair and business."

Confronting Spanish Society

In the second example from Chapter 52 of Part I, Cervantes confronts the superstitions, false sense of honor, and other flaws of Sixteenth- and Seventeenth-century Spain, with the gentle irony that characterizes him, to even more devastating effect.

This is the fight with the penitents, which immediately precedes the scene with Sancho described above, as related in the translation by J. M. Cohen.¹¹

The goatherd, who was now tired of pummeling and being pummeled, let him go at once; and Don Quixote stood up,

turning his face in the direction of the sound, and suddenly saw a number of men dressed in white after the fashion of penitents, descending a little hill.

The fact was that in that year the clouds had denied the earth their moisture, and in all the villages of that district they were making processions, rogations, and penances, to pray God to vouchsafe His mercy and send them rain. And to this end the people of a village close by were coming in procession to a holy shrine which stood on a hill beside this valley. At the sight of the strange dress of these penitents Don Quixote failed to call to mind the many times he must have seen the like before, but imagined that this was material of adventure, and that it concerned him alone, as a knight-errant, to engage in it. And he was confirmed in this idea by mistaking an image they were carrying, swathed in mourning, for some noble lady whom these villainous and unmannerly scoundrels were forcibly abducting. Now, scarcely had this thought come into his head, than he ran very quickly up to Rocinante, who was grazing nearby and, taking off the bridle and shield which hung from the pommel, he had him bitted in a second. Then, calling to Sancho for his sword, he mounted and, bracing on his shield, cried in a loud voice to everyone present:

"Now, valiant company, you will see how important it is to have knights in the world, who profess the order of knight-errantry. Now, I say, you will see, by the freeing of this good lady who is being borne off captive, what value should be set on knight-errantry."

Sancho attempts to hold him back:

"Where are you going, Don Quixote? What demons have you in your heart to incite you to assault our Catholic faith? Devil take me! Look, it's a procession of penitents, and that lady that they're carrying upon the bier is the most blessed image of the spotless Virgin. Look out, sir, what you're doing, for this time you've made a real mistake."

Ignoring Sancho's protestations, Don Quixote approaches the procession:

"You who, perhaps because you are evil, keep your face covered, stop and listen to what I am going to say to you."

The first to stop were the men carrying the image, and one of the four priests who were chanting the litanies, observing Don Quixote's strange appearance, Rocinante's leanness, and other ludicrous details which he noted in our knight, answered him by saying:

"Worthy brother, if you wish to say anything to us, say it quickly, for these brethren of ours are lashing their flesh, and we cannot possibly stop to hear anything, unless it is so brief that you can say it in two words."

"I will say it in one," replied Don Quixote, "and it is this: Now, this very moment, you must set this beautiful lady free, for her mournful appearance and tears clearly show that you are carrying her off against her will, and that you have done her some notable wrong. I who was born to the world to redress such injuries, will not consent to your

advancing one step further unless you give her the liberty she desires and deserves.”

Of course, they do not “give her the liberty she desires and deserves.” Rather, they laugh at the Don, provoking his anger; he draws his sword and attacks, and they respond by giving him a beating.

The whole scene is hilarious, and Don Quixote’s confusing the penitents with kidnappers, brings to mind the famous incident where he confuses the windmills with giants. But, again, through the group’s discussion process,

“our Catholic faith,” as Sancho fears, but rather those—including the Inquisition-dominated Spanish Church—who are perverting it by engaging in sado-masochism in its name! That is, the Inquisition, which imposed dogma, thought control, instead of faith based on reason, has, indeed, “kidnapped Our Lady,” and Don Quixote, whose madness frees him to see and say the truth, like the innocence of the child in the story “The Emperor’s New Clothes,” is pointing out the obvious. (This is made even more explicit in Part II, Chapter 9, where Cervantes has the Don say: “We have come up against the church, Sancho.”)



Don Quixote is beaten by flagellants after attempting to liberate the statue of the Virgin (Part I, Chapter 52).

another layer is uncovered. That is, that Don Quixote is correct in saying that those bearing the image, “who, perhaps because you are evil, keep your face covered,” are “carrying her off against her will, and that you have done her some notable wrong,” as “her mournful appearance and tears clearly show.”

That this is, in fact, the case, becomes obvious when one correctly translates the term which most English versions render as “penitents,” but which should be rendered as “flagellants.” This is confirmed by the response Quixote gets from one of the priests, when he confronted the procession: “If you wish to say anything to us, say it quickly, for these brethren of ours are lashing their flesh.” Thus, Don Quixote is not assaulting

In this, Cervantes was following the teachings of Desiderius Erasmus of Rotterdam, who, along with his allies and co-thinkers—including François Rabelais, Thomas More, and the Spanish humanists Luis Vives, Pedro de Lerma, the brothers Juan and Alfonso Valdez, and the scientist Miguel Servet (whom John Calvin burned at the stake for heresy)—sought to do away with feudalism, reforming the Church and ridding it of superstition and hide-bound dogmatism, and thus staving off the twin evils of the Reformation and Counter-Reformation which, launched and controlled by

Venice, bled Europe throughout the Sixteenth century, and even more so during the Thirty Years’ War of the Seventeenth, until the Peace of Westphalia in 1648.

Cervantes was an Erasmian. His first mentor was the Spanish clergyman and educator Juan López de Hoyos, the leading translator of Erasmus during this era. In 1567, Cervantes was a student at the school run by López de Hoyos in Madrid, and it was López de Hoyos who first arranged to have the works of Cervantes (whom he called “my dearest and beloved disciple”) published, in 1569. It was also de Hoyos who arranged for Cervantes to obtain a position in Italy, where he spent the next five years.

Paradoxes and Ambiguities

One of the secrets of Cervantes' greatness is his masterful use of what LaRouche describes as *proper* human communication: that which "is based on ironies, on paradoxes, on metaphors, on ambiguities. So that what you say has a double or triple meaning. Good punning—not stupid word-play punning, but really good punning—is an ambiguity. And what you're doing, is, by posing an ambiguity; you're saying, 'What I say to you is this,' but you're disturbing the person you're addressing, because you're raising an ambiguity. And they say, 'What do you really mean?' And you do the same thing. So, what you do by posing a paradox, you force the mind of the other person to go through the process of *solving the paradox*. And thus, you communicate a *meaning* which is not located in a literal reading of the word, as a succession of object refer-

ences, but a hidden meaning, which the mind of the person on the other end of the conversation is capable of recognizing."¹² Thus, adds LaRouche, "the important part of communication is the ability to create paradoxes in the mode of your utterance which force the mind of the hearer to go search for the meaning of your utterance beyond the literal domain of known perceptual, sense-perceptual objects."

And this is exactly what Cervantes does throughout *Don Quixote*, as can be seen from the examples we have cited.

But, it goes beyond that: Cervantes not only poses paradoxes in nearly every individual scene of *Don Quixote*, but all of his major characters are themselves paradoxes. The Don is a deluded madman, believed to have been modeled by Cervantes on Philip II, a monarch who started with good intentions, but who set Spain on

A Manual of International Statescraft

Cervantes' contemporaries were very aware of the world-historical significance of *Don Quixote*. Márquez Torres, who was assigned by the Vicar General of Madrid to censor Part II, wrote in his 1615 "Approbation," that Part I of Cervantes' masterpiece had had a tremendous impact "on Spain, France, Italy, Germany, and Flanders."¹³

He adds: "I certify as true, that on February 23 of this year, 1615, having my lord, the illustrious don Bernardo de Sandoval y Rojas, cardinal archbishop of Toledo, gone to repay the visit that he had received from the French Ambassador, who had come to deal with matters having to do with the marriage of their Princes and those of Spain, several French gentlemen of those who had come accompanying the Ambassador, as courteous and knowledgeable and friends of good writing as one could find, came to me and to other chaplains of the cardinal, my lord, wishing to know what books of inventiveness were most esteemed, and upon mention of this one, which I was censoring, as soon as they heard the name of Miguel de Cervantes, they started talking about the high esteem in which Cervantes' works, *La Galatea*, which some of them have almost memorized, the first part of this and the novels, were held in France, and in the surrounding kingdoms. Their praises were so numerous, that I offered to take them to meet the author of these works, for which they expressed their gratitude

with a thousand expressions of ardent desire. They asked me in detail about his age, his profession, and his worth. I was forced to respond that he was old, of noble blood, and poor, to which one of them replied in the following terms: 'So, a man such as this is not sustained and made wealthy by Spain's public treasure?' Another one of the gentlemen replied with the following thought, and with much wit said: 'If necessity forces him to write, pray to God that he never has abundance, so that with his works, he being poor, he makes the whole world rich.'"

Cervantes well understood that he was fighting a rearguard action, similar to that of his English contemporary William Shakespeare, to save the achievements of the Fifteenth century Golden Renaissance, and to prevent the religious butchery of the Thirty Years' War, which loomed on the horizon. Thus, *Don Quixote* is, among other things, a political intervention. This is one reason it has been a favorite of statesmen ranging from the Philippines' José Rizal, to Jawaharlal Nehru, the first Prime Minister of independent India and father of Indira Gandhi, to Israel's first Prime Minister, David Ben Gurion, who "laboriously learned Spanish" so he could read *Don Quixote* in the original. Ben Gurion tried to reread it once a year, because he considered that all the secrets of statescraft were contained therein.¹⁴

—CW

the path to decay by his adherence to the attempts to reverse the Renaissance, and to the theocratic dogmas imposed on the Church following the 1563 Council of Trent.¹⁵ But, in everything not having to do with knight-errantry, Don Quixote proves himself to be the wisest individual; for example, as is shown by the timeless advice he gives Sancho in Part II, Chapter 42.

“Rejoice, Sancho, in the humbleness of your lineage, and do not think it a disgrace to say you come from peasants; for seeing that you are not ashamed, no one will attempt to shame you. Consider it more meritorious to be virtuous and poor than noble and a sinner. Innumerable men there are, born of low stocks, who have mounted to the highest dignities, pontifical and imperial; and of this truth I could weary you with examples.”¹⁶

And, on how to be a good ruler:

“Let the poor man’s tears find more compassion in you, but no more justice, than the pleading of the rich. Try to discover the truth behind the rich man’s promises and gifts, as well as the poor man’s sobbings and importunities.

“Where equity may justly temper the rigour of the law do not pile the whole force of it on the delinquent; for the rigorous judge has no higher reputation than the merciful. If you should by chance bend the rod of justice, do not let it be with the weight of a bribe, but with that of pity.”

The Individual Person’s Sovereign Mind

Cervantes’ paradoxes are ontological in nature, in the sense of Riemann’s “domain of physical” science, as LaRouche defines it in “Spaceless-Timeless Boundaries in Leibniz.”¹⁷ LaRouche shows how Eratosthenes’ experiment to test the “flat Earth” assumption—an assumption that the subject of the experiment lay within a two dimensional phase-space—produced evidence that showed a deviation from simply linear extension, requiring the introduction of a three-dimensional phase-space. As in the case of the Eratosthenes experiment, “We are able to show, and that in a fashion to which our pre-established beliefs could not object, that the disturbing fact has the same kind of experimental authority as we have supposed our pre-established hypothesis had had up to this time. However, the efficient existence of the new fact introduced, can not be accepted as valid theorem of the pre-established hypothesis. Thus, these two, equally validated sets of facts, can not co-exist in the virtual universe which we had believed we inhabited. A true paradox.”

It cannot be denied, says LaRouche, that those two kinds of facts inhabit the same universe. “Confronted with such paradoxes, successful original discoverers have

generated ideas which prove to be solutions. If we are able to validate these ideas experimentally, we call these ideas ‘new physical principles.’ The problem is, that although we are able to prove the existence of the discovered principle by experimental methods, we cannot represent explicitly, in mathematics, or in any other medium of communication, the mental process, entirely within the individual mind, by means of which such valid ideas are generated.” What we can do, is “to repeat the discovery within our own sovereign cognitive process.”

Cervantes does not “tell us” the solution, but, as does all Classical art, he provokes us to “repeat the discovery within our own sovereign cognitive process.” While the outstanding feature of progress, says LaRouche, is scientific and technological progress, “the principles of Classical artistic culture have indispensable bearing upon the ability of a population to assimilate, and to generate the benefits of scientific and technological progress.”

Think, for example, of the effect that *Don Quixote*, with its vocabulary of over 9,000 distinct words, had upon a Spanish peasantry whose average vocabulary has been estimated to have been as low as 500 (or even fewer) words! Not to mention the entire corpus of Cervantes’ writings, with a total combined vocabulary of between 15,000 and 20,000 words.

In Praise of Folly

Besides uplifting the vocabulary of his countrymen, Cervantes sought to uplift their souls, to raise them to the level of self-governing citizens of a republic.

It is not known if Cervantes shared Erasmus’ view that there were “hardly any Christians in Spain.”¹⁸ But there is no question that, at that time, Spain was profoundly afflicted by a terrible disease of the soul, which the Spaniards called *honor*. A man of honor did not work; even intellectual work was considered dishonorable if done to make a living. And one had to keep up appearances: Travellers from other parts of Europe marvelled that almost everyone in Spain seem to claim some relationship with nobility. Artisans would show up for work dressed to the nines, work little, take long lunches, and quit as early as practicable. And, as soon as they made a little money, so said the observers, they would buy some title and give up working altogether.

In Part II, Chapter 44, Cervantes’ alter ego, the Moor Cide Hamete Benengeli, in one of the rare places in the book where he speaks in his own voice, exclaims:

“Poor gentleman of good family! always cockering up his honour, dining miserably and in secret, and making a hypocrite of the toothpick with which he sallies out into the street after eating nothing to oblige him to use it! Poor fel-

low, I say, with his nervous honour, fancying they perceive a league off the patch on his shoe, the sweat-stains on his hat, the shabbiness of his cloak, and the hunger of his stomach!"¹⁹

Even more important to honor was *limpieza de sangre* (purity of blood); that is, it was not what virtues a person possessed that determined his or her worth, but the purity of their bloodline, that they came from a family untainted by Jewish or Moorish blood.

Thus, in *Don Quixote*, Cervantes was taking on the historically specific Spanish society—a society that was “upside-down,” that had lost touch with reality, that rejected any new ideas, especially those ideas that it needed to reproduce itself—by counterposing the (apparent) madness of its protagonists, to what passed for sanity in that society. Cervantes forces the reader (as in the case of the cave of Montesinos, where Don Quixote lives through an experience that brings to mind the shadows of Plato’s famous cave) to confront and resolve Pilate’s infamous, “What is truth?”

In this sense, *Don Quixote* is as much in praise of folly, as Erasmus’s famous treatise of that name.

And so are nearly all Cervantes’ other works, whose subject is nearly always the madness of a society that believes in appearances while denying reality. Notably, in the story “The Glass Scholar” and the interlude “The Pageant of Marvels,” in which some townspeople allow themselves to be fooled by a couple of con artists into claiming they can see the biblical Salome dance, because if they admit the truth—that they cannot see her—they will expose themselves as having Jewish blood.

Thus we have Sancho saying in Part II, Chapter 22, “That may hold good of those born in the ditches, not of those who have the fat of old Christian four fingers deep on their souls, as I have.”²⁰ Note Sancho’s proud use of the word *fat* in regard to his soul, an attack on the *Spaniards* of the Jewish and Muslim faiths, neither of whom ate pork.

Earlier, in Chapter 9 of Part II, the same Sancho says: “If I had no other merit save that I believe, as I always do, firmly and truly in God, and all the Roman Catholic Church holds and believes, and that I am a mortal enemy of the Jews, the historians ought to have mercy on me and treat me well in their writings.”

Tilting at windmills because he believes that they are giants, as Quixote does, is certainly crazy behavior, as the Don himself acknowledges in Part II, Chapter 17:

“No doubt, señor Don Diego de Miranda, you set me down in your mind as a fool and a madman, and it would be no wonder if you did, for my deeds do not argue anything else. But for all that, I would have you take notice that I am neither so mad nor so foolish as I must have seemed to you. A gallant knight shows to advantage bringing his lance to

bear adroitly upon a fierce bull under the eyes of his sovereign, in the midst of a spacious plaza; a knight shows to advantage arrayed in glittering armour, pacing the lists before the ladies in some joyous tournament, and all those knights show to advantage that entertain, divert, and, if we may say so, honour the courts of their princes by warlike exercises, or what resemble them; but to greater advantage than all these does a knight-errant show when he traverses deserts, solitudes, cross-roads, forests, and mountains, in quest of perilous adventures, bent on bringing them to a happy and successful issue, all to win a glorious and lasting renown.”²¹

So, who is the true madman? The Don who tilts at windmills? Or the Spanish grandee who gains honor by fighting a bull in front of his king?

The Don, in fact, starts out as a representative of that idle nobility. At the very beginning of the book, he is presented as preferring to live in genteel poverty, rather than work his farmland and endanger his honor. He employs one farmhand and a housekeeper, and keeps himself in books by selling off plots of his land from time to time.

But as the novel proceeds, we see him and Sancho changing for the better, learning from each other, becoming nobler, in the true sense of the word, and in so doing, letting the readers know that we too can change, achieve our full potential, as Sancho does when he learns how to become a good governor.

Remember how in Part I, Chapter 33, Don Quixote refused to take up arms to fight against people of a lower station?

Compare that incident with what happens in Chapter 52 of Part II, when the Don is again asked to exercise his calling as a knight-errant, this time by the mother of a young girl who has been wronged by a cad. “I hereby declare that for this occasion I waive my gentry, lower myself to the meanness of the offender, and reduce myself to his level, thus granting him the right of combat with me; and so I defy and challenge him, though absent, by reason of the wrong he did in defrauding this poor girl, who was a maid and now by his fault is one no longer.”²²

The War of the Braying

One of the stories that best shows how Don Quixote changes as the book advances, is the “war of the braying.” Sancho and the Don come across a man walking with a mule loaded with lances and halberds. Eventually the man explains that the weapons are for a battle between two feuding villages. The feud started when an alderman from one of the villages lost an ass. A fellow alderman says he has seen the missing ass on the mountain, and the

two set out to find it. After searching without results for a while, one of the aldermen says to the other:

“Look, my friend, I’ve just thought of a plan, by which we shall certainly discover the animal, even if he is hidden in the bowels of the earth, not to mention the mountain, and it’s this: I can bray to perfection, and you can do a little in that line. Why, it’s as good as done.”

“A little, you say, friend?” said the other. “Goodness me, I’ll take odds of nobody, not even the asses themselves.”

“Now we’ll see,” replied the second alderman, “for my

This goes on back and forth for a while, with each alderman going around the mountain confusing the other’s braying with that of the missing ass, until eventually they find the animal dead, long eaten by wolves. Even so, says the owner, “I am well rewarded for my labor in looking for him, even though I found him dead, by hearing you bray so gracefully, friend.”

Alas, the story soon gets out, and people from other villages, at the sight of anyone from the braying aldermen’s villages, begin to mock them, “till now the natives

of our braying village are as well known and as easily distinguished as Negroes from whites.” Eventually, they tire of it and decide to take up arms, “and in regular formation to do battle with the mockers.”

On the appointed day of the battle, Quixote and Sancho come upon more than 200 men armed with spears, crossbows, pikes and other weapons, marching behind several banners. One stood out, made of white satin, with

a life-like painting of an ass of the little Sardinian breed, with its head up, its mouth open, and its tongue out, in the

very act and posture of braying, and round it were written in large letters these two lines:

“They did not bray in vain,
Our worthy bailiffs twain.”

From this device Don Quixote concluded that these must be the people of the braying village.

But, instead of joining the battle, as one would expect from his earlier behavior, Don Quixote seeks to be a peacemaker.

“Some days ago I learnt of your misfortune, and the reason which moves you to take up arms in order to avenge yourselves on your enemies; and having pondered your affairs in my mind not once but many times, I find that, according to the laws of duelling, you are mistaken in regarding your-



Prelude to the War of the Braying (Part II, Chapter 25).

plan is that you shall take one side of the mountain and I the other. We’ll make a complete circle of it, and every few yards you’ll bray and I’ll bray. The ass can’t fail to hear us and answer us if he is on the mountain.”

“I think that’s an excellent plan,” replied the owner of the ass, “and worthy of your great mind.”

Then they separated, as agreed and, as chance would have it, both brayed almost at the same time. Now each of them was taken by the other’s bray, and ran to look, thinking that the ass had just turned up. But when they met, the owner of the lost beast said: “Is it possible, friend, that it wasn’t my ass that brayed?”

“It was only I,” answered the other.

“Then let me tell you, friend,” said the owner of the beast, “that in the matter of braying there’s is nothing to choose between you and an ass, for I’ve never seen or heard anything more natural in my life.”²³

Cervantes and Shakespeare

The Englishman William Shakespeare, who was baptized on April 26, 1564, was an exact contemporary of the Spaniard Miguel de Cervantes. In fact, they both died on the same date, April 23, 1616, although not on the same day, since England still followed the Julian calendar, whereas Spain had adopted the Gregorian one.

That Shakespeare knew Cervantes' work is clear, since he co-authored with John Fletcher a play, *Cardenio*, based upon the tale of Cardenio from *Don Quixote*, which was acted at court for the royal wedding of Elizabeth Stuart, daughter of James I. The first English translations of *Don Quixote*, both Part I and Part II, were printed by Shakespeare's publishers. It is quite possible that Cervantes knew Shakespeare's work as well, since Cervantes started and ended his literary career as a playwright (*Eight Comedies and Eight Interludes*). Both he and his fellow playwright Shakespeare sought, through their writings, to uplift their respective populations.

Both were political writers, as all real artists are. This is most notable in Shakespeare's history plays—but also in his works of “legendary history,” such as *Hamlet* and *Macbeth*—where the issue is how a society can deal with its flaws before they lead to tragedy.

Similarly in Cervantes, all of whose works take aim at the tragic flaw in Spanish society: the fantasy state of the “glory” of the medieval feudal past, versus the reality of a decaying empire. Compare Hamlet's crazy behavior, with that of the characters in *Don Quixote*. (“Who is more crazy: he who is thus because he can't help it, or he who is willfully thus?,” asks the peasant Tomé Cecial. “The difference between those two kinds of madmen, is that the one that is crazy by compulsion will always be thus, while he who is willingly crazy can give it up when he wishes.”) What the artist desires is for those who are willfully crazy, to get to the point where they wish to give up their disease.

But, while Shakespeare worked in England, where a nation-state had been established under Henry VII, Cervantes wrote in an environment shaped by the Hapsburg Empire (Castille, Aragon, Portugal, etc., had their own laws, customs, and systems of taxation, although they were ruled by the same monarch). Spanish society had turned its back on the Renaissance, on progress, and had become a racist police-state, rigid in its feudalist outlook. —*CW*

selves as insulted, for no individual can insult a whole village, except by charging it collectively with treason, not knowing who in particular committed the treason which is the subject of the charge.”

Neither, he adds, can one man alone

“insult a kingdom, a province, a city, a commonwealth, or a whole population, [thus] there is clearly no need to go out and take up the challenge for such an insult, for it is not one. . . . No, no! God does not permit or desire that. Prudent men and well-ordered states must take up arms, unsheath their swords, and imperil their persons, their knives, and their goods for four causes only. Firstly, to defend the Catholic faith; secondly, in self-defense, which is permitted by law natural and divine; thirdly, in defense of honour, family and estates; fourthly, in their king's service in a just cause; and if we wish to add a fifth count, which can be reckoned as part of the second, in defense of one's country.”

But,

“the taking of unjust vengeance—and no vengeance can be just—goes directly against the sacred law we profess, by which we are commanded to do good to our enemies and to love those who hate us, a commandment which may seem rather difficult to obey, but which is only so for those who partake less of God than of the world, and more of the flesh than of the spirit.”

Again, paradox, irony, and ambiguity. The first four reasons cited by the Don parody the feudal code of honor. But “the sacred law we profess,” which commands doing good to our enemies, is about a true, generative *idea*. In a sense, Don Quixote, the madman, is defined by his most crucial characteristic, his *mind*; being of the mind, and not of the material world, he is a truly spiritual being, which is why his actions are without guile, and guided (misguided) by love.

Agapē

What Don Quixote has just described, is the principle of *agapē*, the Greek term used by the Apostle Paul in 1 Corinthians 13, which is sometimes translated as “charity,” sometimes as selfless “love,”—love not for a specific person or object, but love such as that of Christ, willing to die for all mankind, or Joan of Arc, who gave her life, in a sublime act of sacrifice, in order to give life to France.

Throughout *Don Quixote*, Cervantes deploys *agapē* against the ethnic and other prejudices of his countrymen, and by lovingly attacking the sins of his characters at the same time as he tells the sinners, “you are better than this,” he shows that his characters—and, by implication, his readers—can be induced to change, can be orga-

nized to rise out of the muck. Cervantes demonstrates this throughout the book, beginning when the Don, in his first foray, addresses the two prostitutes plying their trade at a roadside inn, as ladies worthy of being treated with dignity; or his insistence that the galley slaves—“men forced by the King, going to serve in the galleys,” having being sentenced for a crime—be set free, “for it seems to me a hard case to make slaves of those whom God and nature made free.”

And then, there is the relationship between the *hidalgo* Don Quixote, and his squire Sancho, where the Don seeks to uplift the illiterate peasant to the point he can govern, which he does accomplish; while, at the same time, Sancho teaches the self-proclaimed defender of the

by Cervantes, which explains the popularity of the book after nearly four centuries. Nothing expresses this better than Cervantes’ attitude towards the Muslims. If ever there were someone who could justifiably dislike, and even hate, the Moors, it was Cervantes. He had fought as a soldier against the Turks in several campaigns, including the famous naval battle of Lepanto, where he was wounded and lost the use of his left hand. Returning to Spain from military service, he and his brother were captured by pirates in the service of the Ottomans, and he was forced to serve for five long years as a slave in Algiers, before being ransomed.

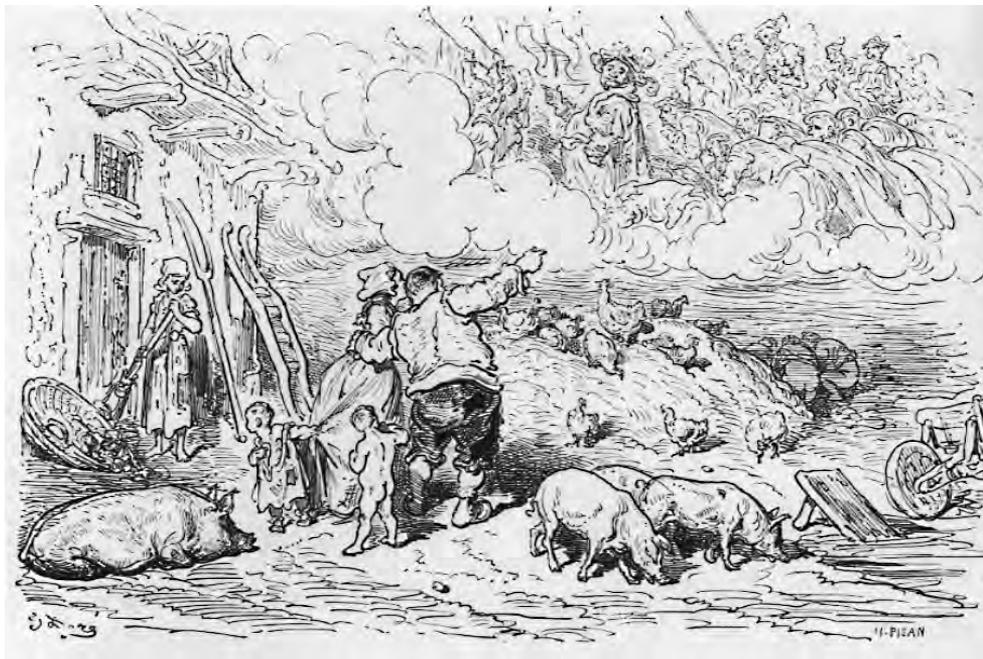
Yet, he attributes the authorship of his book to the “Arabic historian, Cide Hamete Benengeli,” and he claims to have hired a Spanish-speaking Moor from the Alcaná neighborhood of Toledo, to translate it from the Arabic, “and it wasn’t difficult to find there an interpreter of such a language, for even were I to seek one for a better and older tongue [Hebrew–CW], I would have found him.”

He has Benengeli open Part II, Chapter 8, with: “Blessed be the powerful Allah! Blessed be Allah!” And one can well imagine the effect this had in Spain at the time.

When discussing lineages with Sancho, Quixote says that there are four kinds: those who started humble and achieved greatness;

those to the manor born, who kept their greatness; those who inherited greatness and declined, ending like the point of an upside-down pyramid; and the majority, who have had neither a good, nor reasonable, nor middling beginning, and will end the same, without renown, i.e., the lineage of the plebeian and ordinary people. To which he adds, “Of the first, who had a humble beginning, and achieved greatness which they now retain, the Ottoman house should serve you as an example, which starting from a humble and lowly shepherd is at the apex at which we presently see it.”

But, it really gets interesting when it comes to the expulsion of Spain’s Muslims, an event that was taking place at the time Cervantes was writing Part II of *Don Quixote*.



Sancho describes his vision of future glory (Part II, Chapter 5).

feudal order, that serfs are not cattle, but human beings; so that, in the process, they cease being master and servant and become equals, and friends. “What’s more, we’re all equal while we’re asleep, great and small, poor and rich alike; and if your worship reflects, you’ll see that it was only you who put this governing into my head, for I know no more of governing isles than a vulture; and if anyone thinks that the Devil will get me for being a governor, I had rather go to Heaven plain Sancho than to Hell a governor,” says Sancho on the eve of assuming the governorship of Barataria.

“By God, Sancho,” said Don Quixote, “if only for those last words of yours, I consider you worthy to be governor of a thousand isles.”

Perhaps it is this outpouring of *agapē*, of selfless love,

Sancho, now no longer governor, comes across some pilgrims on their way to Santiago de Compostela. One of them reveals himself to him as Ricote, the Moorish former shopkeeper of Sancho's village.

"Don't you recognize me, Sancho?" Sancho looked at him carefully and began to recognize him, and finally he realized fully who he was, and without getting off his mount, he put his arms around him. "Who the devil would recognize you, Ricote, in that clown-suit you are wearing? Tell me: who has made you a Frenchy, and how do you dare return to Spain, where, if you are discovered and captured, it will go very badly for you?"²⁴

Ricote explains that he saw the expulsion order coming, and so he left to prepare a place for his family to settle:

"I left our village, as I said, and went to France, but though they gave us a kind reception there I was anxious to see all I could. I crossed into Italy, and *reached Germany, and there it seemed to me we might live with more freedom, as the inhabitants do not pay any attention to trifling points; everyone lives as he likes, for in most parts they enjoy liberty of conscience. I took a house in a town near Augsburg.*"²⁵ [Emphasis added]

His wife and daughter, although converts to Catholicism, end up exiled to North Africa. "Wherever we are, we cry for Spain, because, when all is said and done, we were born here and it's our natural homeland." Ricote says he has now returned to collect some money he hid when he fled the country, with which he hopes to arrange to get his wife and daughter, Ana Felix, from Algeria, and take them back with him to Germany. He offers Sancho a cut to help him recover the hidden treasure, but Sancho turns him down, saying he is not greedy, and that he believes it would be treason to help the king's enemies, although, in any case, he will not turn in Ricote.

"And let me leave from here, Ricote my friend, that I want to get tonight to where my master Don Quixote."

"God go with you, Sancho my brother; my companions are stirring, and it is also time for us to continue on our way."

And they embraced each other . . .²⁶

Later, after many twists and turns, Ricote and his daughter reunite in Barcelona, and gain the favor of the viceroy and another leading citizen, Don Antonio, in part thanks to their friendship with Sancho and Don Quixote.

Two days later the viceroy discussed with Don Antonio the steps they should take to enable Ana Felix and her father to stay in Spain, for it seemed to them there could be no objection to a daughter who was so good a Christian and a father to all appearance so well disposed remaining there. Don Antonio offered to arrange the matter at the capital, whither he was compelled to go on some other business, hinting

that many a difficult affair was settled there with the help of favor and bribes.

"Nay," said Ricote, who was present during the conversation, "it will not do to rely upon favor or bribes, because with the great Don Bernardino de Velasco, Conde de Salazar, to whom his Majesty has entrusted our expulsion, neither entreaties nor promises, bribes nor appeals to compassion, are of any use; for though it is true he mingles mercy with justice, still, seeing that the whole body of our nation is tainted and corrupt, he applies to it the cautery that burns rather than the salve that soothes; and thus, by prudence, sagacity, care and the fear he inspires, he has borne on his mighty shoulders the weight of this great policy and carried it into effect, all our schemes and plots, importunities and wiles, being ineffectual to blind his Argus eyes, ever on the watch lest one of us should remain behind in concealment, and like a hidden root come in course of time to sprout and bear poisonous fruit in *Spain, now cleansed*, and relieved of the fear in which our vast numbers kept it. Heroic resolve of the great Philip III, and unparalleled wisdom to have entrusted it to the said Don Bernardino de Velasco!"²⁷ [Emphasis added]

This is exquisite irony, indeed! To have the Moor Ricote voice popular opinion in defense of the policy of ethnic cleansing and the probity of Philip III's administration, while two of Spain's leading citizens say outright that the court can be bribed, and that Spain's Muslim citizens and those of Muslim extraction do not present a threat to the country, and thus, by implication, that it is wrong to expel them.

Inside and Outside the Novel

One of the ways Cervantes creates paradoxes that the reader must solve, is through his interpolated or "emboxed" stories, to borrow a term.²⁸ These stories within the story, which are read or told by the characters in the novel—such as the tale of "The Ill-Advised Curiosity"—create another level, which makes the novel's characters "real" for the reader who is reading over their shoulders, so to speak.

In Part II, Cervantes goes one better: he has the characters themselves comment upon their earlier actions which have now become part of world "history," so that from the point of view of the reader, the characters are apparently no longer fictional, but real, flesh and blood people.

Thus, in the second chapter of Part II, having returned from their first journey, Don Quixote asks: "Now tell me, Sancho, my friend, what do they say about me in the village? What opinion have the common people of me, and the gentry and the knights?"²⁹

Sancho replies that, "the common people take your

worship for a very great madman, and they think I'm a great simpleton too." As to the other two classes, the gentry and the knights, their opinion is not too complimentary either, reports Sancho.

To which the Don replies that "virtue is persecuted wherever it exists to an outstanding degree. Few or none of the famous heroes of the past escaped the slander of malice."

Sancho tempers the bad news, by giving Don Quixote an astounding report:

"The son of Bartholomew Carrasco, who has been studying in Salamanca, came home after having been made a bachelor, and when I went to welcome him, he told me that your worship's history is already abroad in books, with the title of *The Ingenious Gentleman Don Quixote of La Mancha*; and he says that they mention me in it by my own name of Sancho Panza, and the lady Dulcinea del Toboso too."

Sancho adds that the book's author is one Cide Hamete Berengena, which means "eggplant" in Spanish, instead of his correct name, Benengeli.

"That is a Moorish name," said Don Quixote. "Maybe so," replied Sancho, "for I have heard it said that the Moors are mostly great lovers of eggplants." "You must have mistaken the surname of this Cide, which means Lord in Arabic, Sancho," observed Don Quixote. "Very likely," replied Sancho, "but if your worship wishes me to fetch the bachelor I will go get him in a twinkling."

While Sancho goes to fetch the bachelor Samson Carrasco, Don Quixote ponders the fact that a book about his adventures has already been published, "though it made him uncomfortable to think that the author was a Moor, judging by the title of 'Cide'; and that no truth was to be looked for from Moors, as they

Don Quixote and America's Founding Fathers

Perhaps no group of statesmen enjoyed *Don Quixote* more than the Founding Fathers of the United States. "Dear sir: I have received your letters of the 29th of October and the 9th of Novr. The latter was handed to me by Colo. H[enry] Lee, with 4 Vols. of *Don Quixote* which you did me the honor to send to me. I consider them as a mark of your esteem which is highly pleasing to me, and which merits my warmest acknowledgment. I must therefore beg, my dear sir, that you will accept of my best thanks for them." So wrote George Washington in a letter, which he addressed from Mount Vernon on Nov. 28, 1787, to Diego Gardoqui, Spain's first ambassador to the United States. During the American Revolution, Gardoqui had functioned as the conduit for the millions of pounds that the Spanish gave to the American cause. Spain's financial contribution to the American Revolution was equal to that of France, with Gardoqui serving as the Spanish counterpart to the Frenchman Caron de Beaumarchais, author of the play on which Mozart's opera *The Marriage of Figaro* is based.

Washington was not able to read the four-volume Spanish set of *Don Quixote* he got from Gardoqui, which can still be seen in his library at Mount Vernon, but he did read an English translation that he obtained soon after. *Don Quixote* was also a favorite of Alexander Hamilton, John Adams (who

travelled with the book in his saddlebag), and Thomas Jefferson.

Jefferson, as he told his son-in-law-to-be, Thomas Mann Randolph, Jr., thought that next to French, Spanish was the modern language "most important to an American," given that "our connection with Spain is already important and will become daily more so. Besides this the ancient part of American history is written mostly in Spanish." Jefferson supposedly taught himself Spanish in a few days in 1784, while crossings the Atlantic on his way to Europe, by means of a copy of *Don Quixote* and a borrowed Spanish grammar, according to what he later told John Quincy Adams in 1804. Adams took the story with a grain of salt: "But Mr. Jefferson tells large stories," wrote Adams in his diary.³⁰ Nonetheless, throughout his life Jefferson was an ardent proponent of *Don Quixote*, insisting that his daughters Martha and Mary read it as part of their learning Spanish.

Benjamin Franklin, America's senior statesman, who organized the French and Spanish contributions to the American cause, listed *Don Quixote* in the first catalogue of his Library Company, in 1741. In his *Autobiography*,³¹ Franklin himself notes that he taught himself the French and Italian languages. "I afterwards with a little painstaking, acquir'd as much of the Spanish as to read their books also." Notably, Cervantes' *Don Quixote*. —CW

are all impostors, cheats and schemers”—another paradox, for if that’s the case, what he says about the Don in the book, will be a lie.

Soon, Samson Carrasco arrives with Sancho, and falls on his knees before Don Quixote, saying:

“Let me kiss your mightiness’s hand, Señor Don Quixote de La Mancha, for, by the habit of St. Peter that I wear, though I have no more than the first four orders, your worship is one of the most famous knights-errant that have ever been, or will be, all the world over. A blessing on Cide Hamete Benengeli, who has written the history of your great deeds, and a double blessing on that connoisseur who took the trouble of having it translated out of Arabic into our Castilian vulgar tongue for the universal entertainment of the people.”

During the course of the ensuing dialogue, it becomes absolutely clear that Cervantes knew exactly the universal significance of what he was writing, that his masterpiece was not the result of happenstance, but that he was consciously creating a work for the ages (something he had already said explicitly in his dedication of Part II of *Don Quixote* to the Count of Lemos, where he jests that the Chinese emperor had sent an envoy to offer Cervantes the job of running a school in China, which would be created specially for him, to teach Spanish using *Don Quixote* as the textbook, but he had to turn down the offer, as the emperor did not send him the money to cover his travelling expenses.)

“So, then, it is true that there is a history of me, and that it was a Moor and a sage who wrote it?”

“So true it is, señor,” said Samson, “that my belief is that there are more than twelve thousand volumes of the said history in print this very day. Only ask Portugal, Barcelona, and Valencia where they have been printed, and moreover there is a report that it is being printed in Antwerp, and I am persuaded that there will not be a country or language in which there will not be a translation of it.”

Since this conversation is taking place in the story just one month after Don Quixote and Sancho have returned home from their first joint foray, it is simply astounding that more than twelve thousand copies were already in circulation, particularly at that time, when books were expensive and few people were literate.

“One of the things,” here observed Don Quixote, “that ought to give most pleasure to a virtuous and eminent man is to find himself in his lifetime in print and in type, familiar in people’s mouth with a good name; I say with a good name, for if it be the opposite, then there is no death compared to it.”

“If it goes by good name and fame,” said the bachelor, “your worship alone bears away the palm for all the knights-

errant; for the Moor in his own language, and the Christian in his, have taken care to set before us your gallantry, your fortitude in adversity, your patience under misfortunes as well as wounds, the purity and continence of the platonic loves of your worship and my lady Dulcinea del Toboso.”

Quixote then asks Samson “what deeds of mine are they that are made most in this history?” And the bachelor replies that

“opinions differ, as tastes do; some swear by the adventure of the windmills that your worship took to be Briareuses and giants; others by that of the fulling mills; one cries up the description of the two armies that afterward took the appearance of two drops of sheep; another that of the dead body on its way to be buried at Segovia; a third says the liberation of the galley slaves is the best of all, and a fourth that nothing comes up to the affair with the Benedictine giants, and the battle with the valiant Biscayan.”

The book is so well written, comments Samson Carrasco,

“that children turn its pages, young people read it, grown men understand it, old folk praise it; in a word, it is thumbed and read, and got by heart by people of all sort, that the instant they see any lean hack, the say, ‘There goes Rocinante.’ And those that are most given to reading it are pages, for there is not a lord ante-chamber where there is not a *Don Quixote* to be found; one takes it up if another lays it down; this one pounces upon it, and that begs for it. In short, the said history is the most delightful and least injurious entertainment that has been hitherto seen, for there is not to be found in the whole of it even the semblance of an immodest word, or a thought that is other than Catholic.”

“To write in any other way,” said Don Quixote, ‘would not be to write truth, but falsehood, and historians who have recourse to falsehood ought to be burned, like those who coin false money.’”

In the context of Spain at the time, this is completely subversive, for claiming that there is not a thought in the book that is “other than Catholic,” i.e., other than the established dogma, opens for the readers the possibility that such ideas do exist.

Nonetheless, says Samson, some people have criticized the author for minor lapses in Part I, such as when in one scene Sancho’s ass is stolen, and shortly after we see Sancho mounted on the same ass. “One of the faults they find with this history,’ said the bachelor, ‘is that its author inserted in it a novel called *The Ill-Advised Curiosity*; not that it is bad or ill-told, but that it is out of place and has nothing to do with the history of his worship Señor Don Quixote.”

“Then I say,” says the Don, “the author of my history

was no sage, but some ignorant chatterer, who, in an hapazard and heedless way, set about writing it, let it turn out as it might.”

In the context of the age, this seemingly innocuous comment is truly a subversive idea: that the book was conceived in freedom by the “sage,” Cervantes himself, according to a lawful principle, one that develops freely from the author’s preconceived plan, and follows its own

to write one that will satisfy and please all readers.” He also promises to take care “to impress upon the author of the history, that if he prints it again,” he should include Sancho’s corrections of the lapses in Part I.

“Does the author promise a second part at all?” said Don Quixote. “He does promise one,” replied Samson: “but he says he has not found it, nor does he know who has got it; and we cannot say whether it will appear or not; and so, on

that head, as some say that no second part has ever been good, and others that enough has already been written about Don Quixote, it is thought that there will be no second part.” [This dialogue is, of course, taking place in the second part!—CW].

If a second part is written, says Samson, it will be for the author to make some money. To which Sancho replies,

“The author looks for money and profit, does he? It will be a wonder if he succeeds, for it will be only hurry, hurry, hurry, with him, like the tailor on Easter Eve; and works done in a hurry are never finished as perfect as they ought to be. Let master Moor, or whatever he is, pay attention to what he is doing.”³³

Let us pause for a moment, for by now you will have made the discovery that had our group bursting with excitement when we got to this point in the book, and you probably need to savor it, and reflect on it.

Let us go back over it together. We start with the Don asking Sancho the opinion of the people of

the village, that is, of other characters in the novel. Then, Sancho brings the news that a book has been published about their adventures, something that is true in the real world, as opposed to the fictional world of the village. We now have the story developing on two planes: the fictional village, and the real world, where there is indeed a book called *Don Quixote*, which you, the reader, have in your hands. Samson Carrasco comes on the scene and confirms that the author is a Moor, Cide Hamete Benengeli, who has written it in Arabic, and that it has been translated into Castilian by a Spanish Christian, so



Don Quixote sings of love, life, and death (Part II, Chapter 68).

internal truth, as life itself does, as opposed to the doctrinal straitjacket that constrained Spain at the time. As one author has noted, Cervantes deploys Plato and the “inquisitive ‘St. Socrates,’” against “the rigid universe erected by ‘St. Aristotle’ and endorsed by the Council of Trent,”³² of dogmatic external structures imposed from above, in which everyone’s place is fixed for all time by bloodlines, and people are told what to think and warned not to stray from doctrine.

Carrasco notes that the author of a book exposes himself to great risk, “for of all impossibilities, the greatest is

now you, the reader, are dealing with three authors, and maybe more, for in Part II, Chapter 5, another “translator” is mentioned: Cervantes, whose name appears on the book in your hands, Benengeli, the Christian, and the translator.

Then you have Samson, Don Quixote, and Sancho, fictional (?) characters, who move between the village and the real world, where they conduct a dialogue with you, as actors on a stage make an aside to the audience, commenting on the book, daring even to criticize their creator, the author of the book.

The play, then—and it is a play—is unfolding on all these different levels, with all these different voices, within the stage that is in the mind of the reader, you, as if it were a polyphonic work by Bach, making you, by turns, one of the characters inside the book, at the same time as

you stand outside, and above, the fictional action and characters.

As noted by William Byron in his biography of Cervantes: “The readers thus become characters in the novel, considering events happening outside its scope. The protagonists speculate on whether there will be a second part to their story and make recommendations to the author (which author?) as to how it should be told—a comment on a written record of events which have not yet happened by protagonists only partly informed of their own pasts. The sequence has been compared with Velázquez’s painting ‘Las Meninas,’ in which the artist, the princess he is painting and the royal onlookers are so placed to put the viewer simultaneously inside and outside the room.”

What we have, then, is a truly philosophical novel, in the Platonic sense, where the folly of a society that believes in appearances, is confronted with the real world, and the readers are taught how to discover reality; a novel that opens the minds of its readers to truth, to *agapē*—which is the same thing—by means of ambiguity, irony, paradox, and metaphor. Quixote is crazy, it is true, because he is crippled by ideology—as the people of Spain were at that time—but, nonetheless, he is conscious that his behavior is bizarre (or, at least, that it would seem so to the outside world).

It is noteworthy that Cervantes wrote *Don Quixote* when he was already an old man; in fact, most of his surviving writings were published in the last decade of his life, starting with the first part of *Don Quixote*, in 1605, followed eight years later by the *Exemplary Novels* (1613); *Voyage of Parnassus* (1614); the *Eight Comedies and Eight Interludes* and Part II of *Don Quixote* (1615); and *Persiles and Segismunda* which he completed just before he died in 1616. After he returned to Spain from his Algerian captivity, he had embarked on a relatively successful career as a novelist (*La Galatea*, which he sold to a publisher in 1584) and playwright (“I composed at that time between 20 and 30 comedies, all of which were staged without an offering of cucumbers or any other missiles; and fulfilled their runs without hisses, boos, or uproars”). But, beginning in 1585, Cervantes published nothing for the next 20 years, during which he worked as a commissary for the Invincible Armada, was excommunicated, and was jailed two or three times for what one would today call “tax irregularities.”

Why? The usual story is that the enormously popular Lope de Vega—whom Cervantes accused of being a *familiar*, i.e., an agent, of the Inquisition—was so successful in imposing his style of play writing, that Cervantes found himself unable to compete, and thus was forced to retire. But, even assuming that Cervantes,

Schiller and Cervantes’ Spain

The great Eighteenth-century German historian and poet Friedrich Schiller dealt extensively with the disastrous rule of Philip II, both in his historical writings, and in his truthful drama *Don Carlos*. Schiller addressed, in particular, Philip’s ineffectual policy towards the rebellion in the Low Countries, first, of doing nothing, and later, of bloody repression, but never attempting to engage his subjects to reach a working solution. In *Don Carlos*, the character Marquis of Posa tells Philip what Cervantes must have wanted to tell the Hapsburgs more than a century earlier: “Give us back what you have taken from us. Thus become among a million kings, a king. . . . Give to us the liberty of thought.”³⁴

There is no question that Cervantes and Schiller held similar views of Philip II. After mocking the elaborate preparations and ceremonies for the obsequies held in Seville on his death in 1598 (“I would bet that the soul of the dead man, to enjoy this place today, has abandoned his place of eternal rest”), Cervantes tags an additional triplet to his satirical sonnet, in which a braggart tells the narrator, the soldier Cervantes: “‘Everything you have said is true, and whoever says the contrary, lies.’ And then, incontinent, he pulled his hat over his head, checked his sword, looked askance, left, and nothing happened.”

—CW

who refused to follow what he considered Lope's anti-Classical style, could no longer find a theater audience, there was no reason why he could not pursue his career as a novelist. After all, *La Galatea* was a pretty successful book.

A more likely explanation is the political climate in Spain at the time. In fact, Cervantes' first notable public literary foray after this long hiatus came right after the death of Philip II, in a satirical poem he wrote on the occasion of the elaborate memorial services held in Seville for the dead king, which were scheduled for November 1598, but were interrupted after they began, called off, and held a month later, in December, because of a dispute between the Inquisition and the civil authorities regarding who had precedence in the seating arrangements! Cervantes took great pride in this poem, as he himself

noted in the *Voyage of Parnassus*.

Don Quixote ends with the death of Don Quixote, who recovers his sanity just before he dies. "I was mad, now I am sane: I was Don Quixote de La Mancha, and am now, as I have said, Alonso Quijano the Good." He wills some money to Sancho, saying, among other things: "If while mad I played a part in obtaining for him the government of an island, now that I am sane, if I could give him a kingdom, I would."

And a kingdom, in fact, is what Cervantes has given us in his book *Don Quixote*—one which, it is hoped, having glimpsed in these pages, you will feel encouraged to visit right away, to open it, read it, and enjoy. And the best way, of course, would be aloud, with a group of friends, with whom to share the love and laughter, and the commitment to change.

1. Reuters, May 7, 2002.

2. Among the good standard translations in circulation are those of Samuel Putnam, J.M. Cohen, and John Ormsby. There is also a more recent one by Edith Grossman.

3. *Cervantes*, by Melveena McKendrick (Toronto: Little Brown & Co. Ltd., 1980).

Thomas Shelton said he undertook to do the translation at the request of "a very deere friend that was desirous to understand the subject" of *Don Quixote*. He finished the translation in just 40 days, using an edition published in Brussels in 1607 by Roger Velpius. After his friend glanced at it, Shelton set aside the translation, and it sat "a long time neglected in a corner," until it was published in 1612 by William Shakespeare's publishers, Edward Blount and William Barret. This was Part I. In 1620 Blount published an English translation of Part II; although the translator is not named, the internal evidence indicates it too was done by Shelton, of whom a brief biography appears in the *Dictionary of National Biography*, Vol. XVIII.

John Fletcher, who with Shakespeare co-authored the play *Cardenio* based on a story from *Don Quixote*, succeeded him as an actor and leading writer of the King's Players. While *Cardenio* has disappeared, it was officially entered on the Stationers Register, an act akin to obtaining a copyright in modern times.

4. Francisco Ugarte, *Panorama de la Civilización Española* (New York: Odyssey Press, 1963).

5. Byron, *op. cit.*

6. Ugarte, *op. cit.*

7. Author's translation.

8. Undoubtedly an Erasmian such as Cervantes read François Rabelais' (1494-1553) *Gargantua and Pantagruel*, probably in the original, as there is evidence that Cervantes knew French.

9. From the 1885 translation by John Ormsby. <http://www.don-quixote.com>

10. *Ibid.*

11. *Cervantes: Don Quixote*, trans. by J.M. Cohen (London, New York: Penguin Books, 1950).

12. Lyndon H. LaRouche, Jr., "Classical Art: The Art of Communicating Ideas," *The New Federalist*, March 17, 2003 (Vol.

XVII, No. 6).

13. Quoted in Miguel de Cervantes Saavedra, *Don Quijote de la Mancha*, Prólogo y Esquema Biográfico por Américo Castro (México: Editorial Porrúa, 2000).

14. Steven Meyer (private communication).

15. Philip II is famous for saying: "Before allowing any deviance in matters of religion or touching upon the service of God, I would rather lose all my dominions and one hundred lives, because I don't want to be the king of heretics."

16. Ormsby, *op. cit.*

17. Lyndon H. LaRouche, Jr., "Spaceless-Timeless Boundaries in Leibniz," *Fidelio*, Fall 1997 (Vol. VI, No. 3).

18. Marcel Bataillon, "Cervantes et l'Espagne," in *Revue de littérature comparée* (Paris: 1937); cited in William Byron, *Cervantes: A Biography* (New York: Doubleday and Co., 1978).

19. Ormsby, *op. cit.*

20. *Ibid.*

21. *Ibid.*

22. Cohen, *op. cit.*

23. *Ibid.*

24. Author's translation.

25. Ormsby, *op. cit.*

26. Author's translation.

27. Ormsby, *op. cit.*

28. The term "emboxed" is used by Visnu Sarma to describe tales within tales, in her translation from the Sanskrit to English of the *The Panchatantra* (New Delhi: Penguin Books, 1993).

29. Cohen, *op. cit.*

30. *Memoirs of John Quincy Adams, comprising portions of his diary from 1795 to 1848*, ed. by Charles Francis Adams (New York: AMS Press, 1970).

31. Quoted in Paul Zall, *Franklin on Franklin* (Lexington, Ky.: University Press of Kentucky, 2002). This book consists of the *Autobiography*, along with selections from Franklin's personal letters and private journals.

32. Byron, *op. cit.*

33. Cohen, *op. cit.*

34. *Friedrich Schiller, Poet of Freedom, Vol. I*, trans. and ed. by William F. Wertz, Jr. (New York: New Benjamin Franklin House, 1985).

Shattering Axioms, Fighting

The Sublime



Beethoven
Symphony No. 9
in d-minor
'Ode to Joy'

Joy, thou beauteous godly lightning,
Daughter of Elysium,
Fire drunken we are ent'ring,
Heavenly, thy holy home!

Thy enchantments bind together,
What did custom stern divide,
Every man becomes a brother,
Where thy gentle wings abide.

Be embrac'd, ye millions yonder!
Take this kiss throughout the world!
Brothers—o'er the stars unfurl'd
Must reside a loving father.

Fall before him, all ye millions?
Know'st thou the creator, world?
Seek above the stars unfurl'd,
Yonder dwells he in the heavens.



Tiananmen
Square



The Berlin Wall falls,
1989



A PowerPoint presentation on "The Sublime," composed by Jenny Kreingold, opened the Conference youth panel. Visual images were accompanied

for Our Future!

A Presentation on the Sublime by the LaRouche Youth Movement
Presidents' Day Conference, Feb. 16, 2003

'One small step
for man,
one giant leap
for mankind . . .'



Lift ev'ry voice and sing,
'Til earth and heaven ring,
Ring with the harmony
Of Liberty!



Oh, freedom!
Oh, freedom over me.
And before I'd be a slave,
I'd be buried in my grave,
And go home to my Lord,
And be free!



Montage re-creation by Alan Yue

by selections from Beethoven's Ninth Symphony and African-American spirituals. Only a portion of the graphic images are shown here.

“Shattering Axioms, Fighting for Our Future!” was presented by the LaRouche Youth Movement at the Schiller Institute/I.C.L.C. Presidents’ Day Conference on Feb. 16, 2003. The panel was moderated by Cody Jones, a leader of the LaRouche Youth Movement from Los Angeles.

Cody Jones: I want to welcome everyone to the final panel of the Schiller Institute meeting. This is the “youth panel,” as it’s called. And I want to welcome everyone who’s on the World Wide Web.

I want people to think big, really big. Think about the universe. Think about, in that universe, the solar system, and in that solar system, a planet, Earth. Think about the biosphere as it developed on that planet Earth. And think about the time interval over which this happened: The type of changes that took place in that solar system on that planet through the biosphere. And then, think about how, at a certain point, the universe, universal cognition, brought into being a reflection of itself—it’s a very loving thing to do—and that’s human beings.

Now, in relative terms, human beings have not actually been here that long (although, talk to some Baby Boomers, they all make you think they’ve been here much too long, they feel a little too old). Think about the type of changes that humanity has brought to this planet, the new levels of organization we have brought to the biosphere through the noösphere. And then, think about the fact that these changes have been the fruits of a relatively small handful of geniuses. And now, think about what it would be like, were we to lift humanity out of its infancy, to a state where the type of genius, as represented in the personality of Lyndon LaRouche, became the standard. Think about where this world would go, and think about the kind of freak-out you would get from all the environmentalists and anti-population people, under those conditions.

The Idea of Genius

This is what we are here to discuss, this idea of genius. How we, as a youth movement—but we can recruit everyone here to the youth movement, it doesn’t really matter how old you are— Think about Lyndon LaRouche: I was really struck by something during his “State of the Union” address. Here we are, on the brink of war, economic collapse, all the terrible things we know, and Lyn, in the middle, starts discussing Kepler, the harmonic orderings of the planets, has a diagram of a planet travelling around the sun. Counterpose that to



George Bush—here’s a guy who’s studying at the John Ashcroft school of fundamentalism, who himself probably still believes that the sun goes around the Earth. This is a problem.

So, we’ve got a challenge before us. It’s a challenge to become sublime leaders, to actually lift humanity up to— In effect, we have to mediate a Renaissance, a revolution that would lead into a global Renaissance. But, it has to be a different kind of Renaissance: What we need is, something that is continuous. In effect, we want to create the condition, whereby society would take on the characteristic of the “hypothesis of the higher hypothesis.” In effect, Lyn’s method. That needs to become the characteristic of humanity as a whole, globally and universally.

On the Sublime

And so, we’re going to begin tonight, to start to take some steps in that direction, demonstrating how we’re doing that, how we intend on bringing that about. And I think the first step is that, we have to, as Plato said, we have to free ourselves from the shadow world, as it appears on the irregular surface of your professor’s rec-tum. You know, it’s a very stinky place to be. And whenever you come out of this situation, the flies that are buzzing around your head are very, very annoying. So, we need to change that.

What we’re going to be presenting tonight is a discussion on the sublime—the sublime as it appears in art, in culture—to get at the quality of mind, which is the emotional quality that’s required for this continuous Renaissance. And then, we’re going to be discussing some of the pedagogical work that we’ve been doing. Because, as Lyn said in his address to the Wiesbaden cadre school, the tendency has been, historically, to have youth movements, which have had too much enthusiasm, and not enough intellect. Well, our mission is to change that. And then, we’re going to present some of the actual, on-the-ground combat we’ve been conducting at the state legislatures, to give people a sense that it’s not just a classroom that we’re operating in, but we’re operating in the real world. And, so I guess without any further ado, we’ll bring up our first speaker here.

'Your heart can actually be opened'

Jennifer Chaine: Hello, my name's Jennifer Chaine, I've been organizing in the Baltimore office for two years. I was a former art major turned truck driver, trying to find myself, and ran into the movement in a truck stop.

I've been grappling with the question of art all my life. My father was an artist. Growing up in an "art house," you grapple with this.

I guess the big question is, what *is* art. A lot of us have been grappling with that question, and grappling with the challenge that Lyn and Helga keep laying out to us, that we have to master Classical art, in order to counteract the collapsing culture which we live in today—if we're serious about creating a new Renaissance that will not fail.

On most campuses today, Classical art and the Classical method are extinct. It's not even an endangered species, it's just not there. Many of us have actually experienced this in our art courses. You just kind of skip over the Classical period. We were taught that the Renaissance is just a period in history, and that we're beyond that; that art is "anything goes." You have your slides, you learn them, pass them for the test, and it's just, "Well, what's that boring stuff, anyway? Let's get to expressing myself." If you're chaotic, you're even more of a genius. That's the way art is taught today.

But, with the different challenges that we're faced with, as LaRouche has said many times, our generation has to ask the question Hamlet did, "To be, or not to be." In order to internalize that challenge, and if we're serious about making LaRouche President and creating a new Renaissance that will not fail, we have to turn to art.

A Shattered Generation

The question we're faced with is, how to develop as leaders, overcoming the fear that tends to hold us back when we look at the world around us. And, I've been thinking, it's sort of like Humpty-Dumpty. It's been referenced several times, that we're a shattered generation. We had Baby Boomer parents. We grew up on MTV, sex, violence—very desensitized. How do you overcome that shatteredness, the brokenness that you feel? And, as to a sense of passion—we've been taught that the most passion we can experience is, like, maybe rubbing ourselves with a collection of rainbow paints and Crisco and whatever else, and then rolling around on a piece of canvas. That's art!



These kinds of infantile feelings are not going to develop our generation into leaders. We need true passion, to be leading armies as Joan of Arc did. And for that change to be lasting, we have to smash the popular opinions about Classical art in this culture today.

Thankfully, we have tools, friends at our disposal, to assist us in discovering what art really is, and how you can put the pieces back together again. Friedrich

Schiller, for example, who is actually cheaper and far better than any therapist that we can go see. Schiller says that art will actually open up the hearts of a broken society, a broken people, and lead to a completeness of character. This is the kind of education we have to master right now.

I'd like to take a look at Rembrandt, who I think represents this Classical method of art, to where your heart can actually be opened, to where you can understand Classical art, and through that, discover beauty and passion, such as what Rembrandt does. But not passion that people think, "Valentine's Day" type of passion.

Rembrandt's 'Lucretia'

We can look at the first Rembrandt slide [SEE Figure 1 and inside back cover, this issue].

This is "Lucretia," Rembrandt's painting. And, obviously, you see, something's happening here. She's about to stab herself. And you're wondering, what in the world is she going to do? I'd like to tell you the story of Lucretia, who is referenced in the *History of Rome* written by Livy.

Lucretia was married to a soldier in Roman times, and the soldiers were gathered around gossiping, or, you know, just having fun, challenging each other, saying, "Whose wife is more virtuous?" They say, "My wife's more virtuous!" "No, mine is!" So they decide to set up a little game to test who is actually right. They sneak up on their wives—it's late at night, and most of the husbands may just find that their wives are partying it up, hanging out, drinking, at the dances. But Lucretia, she's the only wife who proves to be virtuous. She's at home with her maids, spinning her yarn, things like that.

Sextus Tarquinius, a soldier who happens to be the son of Tarquinius, the king of Rome at that time, is very jealous of this fact. When he is again over at the house—they're having a gathering—he gets the idea that he wants to take away that beauty and that chastity, and to dishonor his fellow soldier, Lucretia's husband. So, after

the party, when Lucretia is in her bed, Sextus Tarquinius goes in and starts a brawl with her. He tries to seduce her, but that doesn't work, because she's virtuous and loyal to her husband. So, he says, "Unless you allow me to do what I want to do, I'll kill a slave, slay you with him beside you, and make it look like you cheated on your husband." So, a battle takes place between them, and he winds up violently raping her.

So, all night she's been grappling with what just happened; she's been stripped of her pride and her honor, and the shame is overwhelming her. This is what Rembrandt decides to take up in this painting, which is quite interesting. All of you should go to the National Gallery in Washington, D.C. and sit in front of this painting, you'll get a better sense of what I'm talking about, and even look up other paintings of Lucretia. Because the way Rembrandt handles this— You don't see Lucretia in the nude, she's not in the act of being raped, or just posing with a sword, which many other paintings do. There's something much more dramatic going on here.

It's the next morning. Lucretia is distraught. She's called her father, and husband, and friends to come over, and they're sitting on the bed, and she tells the story to her husband and her father. Now, how do you convey something like that? You know, a rape, what happened to Lucretia. I've seen many representations, where they just have her posing with the sword, or maybe have the act of the rape. Rembrandt does it differently. If you look at the painting—I'm not sure how well you can see it—since she's not in the act of being raped, or nude, how does Rembrandt depict what just happened? Well, there are a few things you can look at: on her bodice there are still strings hanging down, where it signifies that she was raped, you can get that sense of it. There's a certain tension, a certain agony, that she's been in all night; if you go real close up, you can see that her eyes are very red, they're tear-stained. There's a certain "caught in a mid-motion" tension there. And then, also, the way that Rembrandt handles the paint is similar to, I would think, like armor, because the paint is very thick and heavy—he basically paints like with a palette knife. So, you have a certain paradox, where she does have a certain armor on, but at the same time, she is exposed, a defenseless victim of this tragedy.

Because, if you look at the painting, it's obvious that she's innocent. How is Rembrandt handling the light? The way the light is directly placed on her heart, on her chest, the way the light just comes in through the blackness of the background, is a testament of her purity, of her virtue. The way the light comes in and hits the chest on the necklace, the pearl necklace, and the hand that's open, that is caught in mid-motion.



FIGURE 1. Rembrandt van Rijn, "Lucretia," 1664.

The Open Hand

This is the point at which she tells the story. She is about to kill herself. Her father and her husband try to stop her. And she says: "It is for you to determine what is due him. For my own part, although I acquit myself of the sin, I do not absolve myself from punishment, nor in time to come, shall ever unchaste woman live through the example of Lucretia." So, Rembrandt, in this moment of tension, right before she stabs herself, shows us the hand that's open, a testament of her innocence, the light, the way it's held. And you can see, if you look closely, the torment and tragedy she had to go through during the night before. She's been crying all night, grappling with the question, what should she do? Because, she's been violated in such a way, that she feels she has to resolve it by testifying to her innocence, that she did not commit an adulterous deed.

One interesting thing I was looking at, was the relationship of the hands. Shakespeare wrote a poem about the rape of Lucretia, and, if you look at her hands for a second, I'm going to read a short excerpt from this poem. In it, Lucretia says,

"Poor hand, why quiverest thou at this decree!
Honor thyself to rid me of this shame;
For if I die, my honor lives in thee,



The Minneapolis Institute of Art, William Hood Dunwoody Fund

FIGURE 2. Rembrandt van Rijn, “Lucretia,” 1666.

But if I live, thou liv’st in my defame;
 Since thou could’st not defend thy loyal dame,
 And wast afeard to scratch her wicked foe,
 Kill both thyself and her for yielding so.”

I thought this was interesting because, if you look at the hands, the one hand that’s clasping the knife, you know, that she’s saying, this was the hand that couldn’t protect her, therefore that’s the hand that has to atone for that sin. But the other hand is sweeping up; it’s a testament of her innocence, it’s open, it’s in the light; but it’s also, in a sense, to calm the people who are in the audience, her father, her husband and other friends, who are sitting out here, looking at what happened. I thought that was interesting. There are many things you can look at in this painting to figure out what’s going on.

The question is, Who’s the audience? Because, we know that in the story, it’s the father, the husband, people like that. But the way Rembrandt composes the painting, in his composition, you, the viewer, are forced to become the audience as well. Which, you know, with other paintings, you’re not really forced to think about them, you can kind of look at them, and then walk away. But you’re not allowed to be passive in this painting. Think of it! Rembrandt, who’s dead, takes a non-living substance, paint and canvas, and forces you—you know, he’s calling out from the 1600’s, “Hey, I’m human. Hey, I’m grappling with this idea. Grapple with it with me as well.” It’s

a certain relationship between the artist, Lucretia, and yourselves, and us today, which you can’t do in anything besides Classical art. To where you can re-experience the mind of Lucretia—what she went through the night before—while you are also experiencing as the unseen audience; you’re experiencing being in that room with her, being the father, being the husband, grappling with what just happened, wanting to stop her. So, you’re very involved in the painting.

This kind of tension, this motion, right before she kills herself, is like a certain holding of your breath. Rembrandt did a second Lucretia, which you can put up there [SEE Figure 2 and inside back cover, this issue]. As you can see, that’s the “exhale,” that’s the resolve. You know, the tension is settled, she’s more serene, more peaceful. No longer is she tormented, because she has absolved herself of what she considered to be a sin. It’s kind of an atonement for what just happened. And again, you can see this, just through the different representations of the light, how it’s hitting her chest or heart, her virtue, and also the blood of the rape right before that. I encourage you to investigate more on your own, to figure out what else is going on in this painting, which I haven’t said.

Republican Virtue

This incident actually led to the founding of the Roman Republic.

When Lucretia killed herself, seated in the audience that you were looking at before, was Junius Brutus, and he was very disgusted by what just happened. If you remember, the guy who raped her, Sextus Tarquinius, was the son of the king of Rome. And that inspired Brutus to carry her dead body through the streets of Rome. He said, “Something tragic has happened. Soldiers, rise up, get your swords! Don’t just weep and pity, end this act,” by overthrowing the tyranny and the kind of disgusting monarchy that was ruling at the time Lucretia lived. So, by the act of what happened to Lucretia, through her suicide, this led to dumping the kings of Rome and establishing the Roman Republic. And it led Shakespeare to write his poem; it led St. Augustine, in his *City of God*, to deal with the question of Lucretia, which I encourage you to read as well.

I want to read one more thing from Shakespeare’s poem. This is Lucretia speaking.

“My honor I’ll bequeath unto the knife
 That wounds my body so dishonored.
 ’Tis honor to deprive dishonor’d life;
 The one will live, the other being dead:
 So of shame’s ashes shall my fame be bred;

For in my death I murder shameful scorn:
My shame so dead, mine honor is new-born.”

I want to say something in closing. When you look at art, if you walk through discoveries such as Rembrandt’s, it’s the *idea* that has to carry a Classical piece through. And, by re-discovering this idea, you can educate your

passions, educate your emotions, to be able to fight, to be able to do the things that we’re doing today. A lot of people don’t think that they can understand Classical art, but, as with Rembrandt’s “Lucretia,” you can see that you can walk through the discoveries, to understand it, and be able to use it as a political weapon today.

That’s all I want to say tonight. Thank you.

‘Break free of the limitations expected of you’

Alex Getachew: Hello. I wanted to look at the poet Percy Shelley’s “In Defence of Poetry,” and there are some aspects of it which I think are important to thinking about the situation which we’re in currently. It allows us to explore, when looking at history and where we are today, some questions I think are more than relevant. The question which I think continues to ring in a more and more intense way in my mind is, why does Lyndon LaRouche cite Percy Shelley’s “In Defence of Poetry,” particularly the matter of why a revolutionary period in history, creates a circumstance in which people experience a development of their ability to “receive and impart profound and impassioned ideas, which pertain to humanity and nature”?



This is a question which I grappled with for some time, and in the course of struggling with it, I had an image dawn on me. I remembered a story, which Debra Freeman used to tell a lot, about a little boy who competed in a national poetry reciting competition that our movement sponsored. Now, this was a seven-year-old who, like the other young children who participated in this competition, had to select a poem to recite. And for some strange reason, he decided to choose a speech by Martin Luther King. And, this was something, I mean, you could imagine the responses of the panel of judges. Their response was, “Uh-uh, this is not a poem. Go back to the drawing board, find a poem to recite.”

Just think about it. When somebody says “poem,” the first thing that pops into my mind is not a speech by Martin Luther King. And then, another strange thing occurred, which is, that this young man refused to submit, and decided that he was going to convince the judges that this *was* a poem. And he was very persistent and tenacious in his argument. But, you know, the judges’ position was, that this wasn’t a poem.

Well, the end result was, that he convinced them that this was a poem. And, given the tenacity of his argument,

you shouldn’t be surprised that he won the national competition. This young man had, in my view, a very interesting quality. He had a state of mind which, essentially, eagerly broke free from the limitations which were expected of him.

I think that one of the things that helped me, in thinking about this story, was the fact that there’s something in his mind, that’s actually congruent with Percy Shelley’s conception of what a poet is. That, first of all, Percy Shelley’s conception of a poet is, that a poet is someone who intervenes with new ideas, when the old way of thinking fails, breaks down. I mean, this is the quality that Shelley associates with how people in society learn to develop their own ability to overcome these limits, these limitations of the old ways.

Now, the question is, how does a poem do that? That’s a long discussion, and we’re not going to examine it in detail. But, a serious poem, according to Shelley, is one which addresses the divine potentialities in a human mind. The poet sheds light on the never-before-seen relationships between things pertaining to society and nature. This is done, by bringing new ideas, which could never be conveyed by any descriptive mode of communication, in prose writing or speech.

Shelley liked to call poets the “unacknowledged legislators of humanity,” because they develop the quality, the creative potential in people in society, that makes them more fit to govern themselves, and makes them unfit for the oppressive chains of cultural limitations.

Ideas of the American Revolution

This is an important quality to keep in mind. It’s also important to keep in mind the time period in which Shelley lived, and wrote. These were the decades that immediately followed the American and French Revolutions, and Shelley identified himself explicitly as an ally of the American Revolution. I mean, he recognized that, for him, the American Revolution was a recognition of

this universal quality in human beings, that the principle of the inalienable rights, came from this quality that was recognized by the poet to be existent in every human being. It was actually his commitment to this understanding, that caused Shelley to hate the outcome of the French Revolution. When the senseless bloodbaths and chaos of the French Revolution gave birth to tyranny, Shelley knew precisely why. He understood that the French Revolution actually rejected this quality that made human beings human.

Shelley was involved in a very deep struggle to bring the principles and ideas of the American Revolution into Europe. Many poets and artists during his time frame actually had the same view. To name some: Keats, Leigh Hunt, Schiller was around the same time frame, Beethoven. Shelley, along with these individuals, had a very adamant hatred for the oligarchy. He took offense at the degradation imposed on the majority of the human race by certain “folk,” who believed that they were born to rule over more than 95 percent of the human race, by virtue of some in-bred, elite magic. I found something which I thought might be appropriate to read to people, which characterizes how he thought. It characterizes his hatred for what this oligarchical state of mind represented.

This was something he wrote after the death of Napoleon, titled “The Feelings of a Republican on the Fall of Bonaparte,” and you can tell me whether or not there’s any ambiguity in his thinking on this subject.

I hated thee, fallen tyrant! I did groan
To think that a most unambitious slave
Like thou, shouldst dance and revel on the grave
Of Liberty. Thou mightst have built thy throne
Where it had stood even now: thou didst prefer
A frail and bloody pomp, which Time has swept
In fragments toward Oblivion. Massacre,
For this I prayed, would on thy sleep have crept,
Treason and Slavery, Rapine, Fear, and Lust,
And stifle thee, their minister. I know
Too late, since thou and France are in the dust,
That virtue owns a more eternal foe
Than Force or Fraud: old Custom, legal Crime,
And bloody Faith the foulest birth of Time.

This is something which should cause us to ask, what made Shelley so hostile to the oligarchy, what made him such a big friend of mankind? One thing that you could look at, is that he was inspired by Plato—who, by the way, whose works he translated, I believe it’s the dialogue on love [*The Symposium*]. Shakespeare was another; Dante, someone he looked to; and Aeschylus. In fact, Shelley’s worldview concerning the way an individual

fights and succeeds in creating a future worthy of humanity, is best embodied in the figure of Prometheus, which is associated with the play by Aeschylus. Shelley, in fact, depicts the same Prometheus in his own play *Prometheus Unbound*.

Prometheus

For some of you who may not be familiar with Prometheus, Prometheus was the Greek god who was punished by Zeus for his commitment to mankind. He is associated with the image of having stolen fire from the gods, and given it to man. This does not mean he was an arsonist spreading fires. Shelley’s conception was consistent with what Prometheus did; which was, he taught mankind. Prometheus was the first to teach mankind astronomy, geometry, and poetry, among other things. And for this, he was sentenced to being clamped to a rock and having his liver eaten by Zeus’s eagle, which kept flying down, eating his liver, going back. He would wait until the liver grew back, and would come back, and eat it again. This went on for some time, for 10,000 years. It ended up—you should read it yourself—but in Shelley’s drama, this was a model for him, of what a successful political revolution would represent.

Now, I want people to hear a poem that was written about Shelley, by somebody who lived in the last century, by the name of Paul Laurence Dunbar. I don’t necessarily need to say anything more about it, but one thing I will say is, that the person who will be reciting it, is a person who has for many years prior to his recent passing away, inspired many of us here through his recitations and singing, which you will hear very shortly, as William Warfield recites a poem by Paul Laurence Dunbar, about Shelley.

[Audiotape of William Warfield recitation.]

Prometheus

Prometheus stole from Heaven the sacred fire
And swept to Earth with it o’er land and sea.
He lit the vestal flames of poesy,
Content, for this, to brave celestial ire.

Wroth were the gods, who with eternal hate
Pursued the fearless one who ravished Heaven
That earth might hold in fee the perfect leaven
To lift men’s souls above their low estate.

But judge you now when poets wield the pen,
Think you not well the wrong has been repaired?
’Twas all in vain that ill Prometheus fared:
The fire has been returned to Heaven again!

We have no singers like the ones whose note
Gave challenge to the noblest warbler’s song.

We have no voice so mellow, sweet, and strong
As that which broke from Shelley's golden throat.

The measure of our songs is our desires:
We tinkle where old poets used to storm.
We lack their substance, tho' we keep their form:
We strum our banjo-strings and call them lyres.

Given the fact that Shelly inspired such a poem, we shouldn't be surprised that he also inspired many people in the Twentieth century who we should be familiar with, Gandhi being one. According to many reports, he recited Shelley's "Masque of Anarchy" during meetings

'Don't suck up to shadows'

Jason Ross: This is for the West Coast delegation here. We're going to be going over the mental fight for the sublime, or, as we were considering calling it, "Don't suck up to shadows."

Because, in organizing, there's a phenomenon we run into very often. Most of people's lives consist of sucking up to shadows, which they either mistake to be, or fantasize to be reality. And, we have to put an end to this practice, if we're going to have a principled civilization that's going to survive this crisis. Now, this sucking can take many forms, so I'll give you a few examples, so you can recognize the epidemic when you run into it.

- "Well, I know Rev. Moon is a bad guy, but I need the money to run my programs."

- "I've got to be popular with the neighbors, otherwise they might gossip about me."

- "I've been assured that, as soon as I receive my degree, then I shall be allowed to think."

- "Don't you see, you gotta get inside the system, if you wanna change anything."

- "What's this third-party candidacy, come on, run with one of the parties."

- "Of course the New Economy will work. If it didn't, everyone would have been wrong, and my epistemology of truth by popular opinion won't work."

- "Saddam Hussein has Weapons of Mass Destruction and links to Al-Qaeda. I heard so myself from Colin Powell, and he's a good man. Besides all the newspapers say the war is inevitable anyway."

- "Things are never gonna change. The rich just keep gettin' richer."

- "What you are saying is at variance with what I was

that he convened to mobilize against the British Empire. Dr. King, and another person you should know, who is responsible for inspiring the youth movement that is gathered here, Lyndon LaRouche.

I just want to say in closing, that there's one thing that people should be clear about, and that is that we happen to be in a period in which we're faced with the reality, with the type of revolutionary period that Shelley refers to, and attempts to educate us on. This not only means that you need the type of Promethean, poetic personality described by him, but also, there's a certain step that we have to take in rising to the occasion, in like manner.



EIRNS videograb

taught by my highly esteemed professor. Therefore, you must be wrong."

- "I'll go to lots of parties. That way I'll be popular and have lots of friends, and that's happiness, right?"

And,

- "Let me propitiate the backwardness of this person I'm trying to change. That way, he will like me for agreeing with what he currently believes. Then, maybe I can change him."

So, as Plato brings us to know in his *Gorgias* dialogue, to try to make a place for yourself through rhetoric, through trying to get along in a shadowy world, you're going to distance yourself from reality, and also sanity and happiness, and—if you believed in the recent shadow, or the continuing shadow of the New Economy—your money, too.

So, making assumptions about how the universe operates, based on trends and ideas of today, is like—Cody must have re-translated from the original Greek, because I was under the impression that Plato had written about these shadows cast on the irregular wall of a cave, but, I think Cody must have learned Greek, and re-translated— So, if we're going to begin a rigorous study of reality, we've got to beware of the problems in our method of determining the truth.

I'm going to read from Riemann's Habilitation Dissertation, you can put the slide up. So, this is from "On the Hypotheses Which Lie at the Foundations of Geometry":

Plan of the Investigation. It is well known that geometry presupposed not only the concept of space, but also the first fundamental notions for constructions of space as given in advance. It gives only nominal definitions for them, while the essential means of determining them appear in the form of axioms. The relation of these presuppositions is left

in the dark; one sees neither whether, and in how far, their connection is necessary, nor *a priori* whether it is possible.

From Euclid to Legendre, to name the most renowned of modern writers on geometry, this darkness has been lifted neither by the mathematicians, nor by the philosophers who have labored upon it. The reason for this lay perhaps in the fact, that the general concept of multiply extended magnitudes, in which spatial magnitudes are comprehended, has not been elaborated at all. Accordingly, I proposed to myself at first, the problem of constructing the concept of a multiply extended magnitude, out of general notions of quantity. From this it will result, that a multiply extended magnitude is susceptible of various metric relations, and that space accordingly, constitutes only a particular case of a triply extended magnitude. A necessary sequel of this is that the propositions of geometry are not derivable from general concepts of quantity, but that those properties by which space is distinguished from other conceivable triply extended magnitudes, can be gathered only from experience. There arises from this the problem of searching out the simplest facts by which the metric relations of space can be determined, a problem which in the nature of things, is not quite definite. For several systems of simple facts can be stated, which would suffice for determining the metric relations of space. The most important for present purposes is that laid down for foundations by Euclid. These facts are, like all facts, not necessary, but of a merely empirical certainty; they are hypotheses; one may therefore inquire into their probability, which is truly very great within the bounds of observation, and thereafter decide concerning the admissibility of protracting them outside the limits of observation, not only towards the immeasurably large, but also towards the immeasurably small.

I'm going to read one sentence again:

The properties by which space is distinguished from other conceivable triply extended magnitudes, can be gathered only from experience.



FIGURE 3.

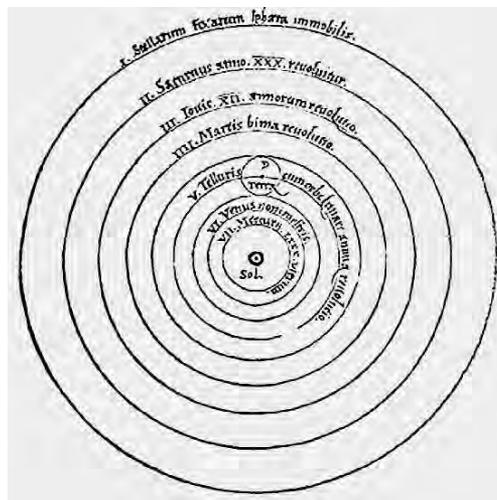


FIGURE 4.

So, we can't take anything for granted. Nor can we determine truth by consensus. You have got to investigate. "Popular opinion," "common sense" (which doesn't have a lot of sense, although it's pretty common), "experiences"—these things aren't going to cut it. So, how *do* we get at the truth? Not, as Lyn was going through, not from collecting facts with our current methods of thought, with a view of finding trends in them. Information is not knowledge. The way you determine the difference between your mental geometry, and the geometry of the universe, is by pushing it, by cracking it, kind of like, if you've got an egg, you have to push it against reality, crack open the shell, to find the difference between your current geometry of how you're thinking the universe is, and how it really works. And you do this, by pushing the boundaries of what you're able to investigate, along the dimensions of what you already know, along what you're already able to think along.

This is different from the "artificial intelligence" of today's scientific inquiry, or most scientific inquiry; which is, that any true discovery, reaches conclusions that are outside the domain of the observations.

Now, compare this to— You know, you can receive a Ph.D. for examining a tiny shadow of the cave, finding a small shadow, finding the trends in how it operates; but, you're going to be even more oblivious to the fact that you're in a cave. Maybe there's a reason that, as Lyn says, that these are called "terminal degrees."

Kepler vs. Ptolemy and Copernicus

To illustrate the difference between shadows and reality, you're going to use Kepler, as compared to the failures of Ptolemy and Copernicus, so let's put up Ptolemy's picture here [SEE Figure 3]. Earth is at the center.

And, this makes sense, right? I mean, don't you every day, depending upon when you get up, see the sun rise? See it go overhead? See it set? You get up the next day, what do you see? Same thing happens. The sun must go around the Earth, right? Except, we know, that's not true, we know about the discovery of Copernicus [SEE Figure 4].

Tell you what, we're too sophisticated for that.

Everybody knows that Copernicus made this brilliant breakthrough, in which he said that the sun is at the center of the solar system, and that the planets go around that. And, we all know that's the case. We learned that in school, we saw it in the textbook, right? We had the flashlight and the tennis ball and the globe, and moved them around. We saw shadows on the moon. So, obviously, we *learned* that, right?

Well, no.

Do you know that the Earth goes around the sun? If you *did*, you'd probably have to have a physical, you would have to have a physical principle for why it takes place. Copernicus didn't know that the Earth went around the sun. He didn't know, he had no physical principle that would generate this action. He didn't say, there are metal hoops that the planets are on. There's no reason that they would act this way. So, being taught, taught *learning*— Learning is a great barrier to knowledge, it's another kind of shadow that you wind up with, because you didn't make the discovery.

Let's put up Kepler [SEE Figure 5].

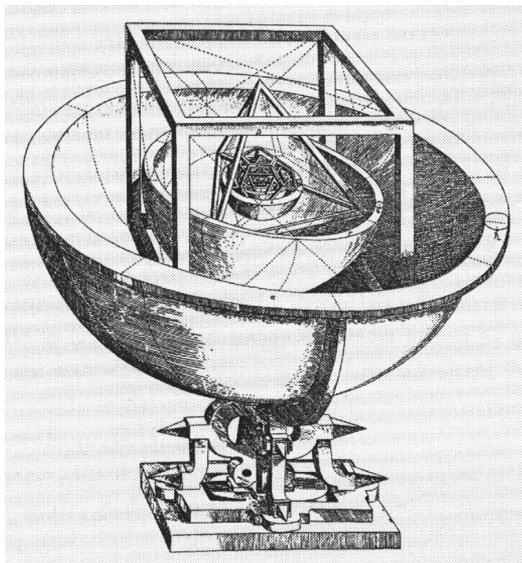


FIGURE 5.

It wasn't until Kepler, that the solar system was understood from the standpoint of principle. Kepler's investigation, he didn't look at, in terms of "what moves around what." Does the Earth go around the sun? Does the sun go around the Earth? He asked a different question. He said, "Why are they moving? What is causing these motions that I'm seeing?"

Now the fact, asking that question, immediately demands something outside of observations, in describing a trend in your observations. You've got to have a motive principle. This beautiful conception, of an orga-

nizing force outside of what we see, is a discovery. You don't see it. You don't see gravity, in your eyes, you don't, somehow, move trends, so that, if you're calculating trends of dots observed in the sky, you're not going to write out the word "gravity" if you arrange the letters properly, or something like that. You only see it in your mind.

So, what is reality? Is it the planets that you see in the sky? They keep moving, the orbits keep shifting. Or, is it the principle that exists everywhere, that is generating the observations that you're making?

Acting on Principle

Now, it comes from viewing the universe as principles, that LaRouche is able to forecast outside of common thought, and to hit these flanks that we've been hitting— McCain-Lieberman, the Moonies, Marc Rich, Libby. Compare this, the results that Lyn has, with— What did we find among the leading Democrats considering running for President? They all got fooled by the British report on Iraq. All got fooled by it.

We're not going to push on shadows, to change reality. You've got to act on the principles. People got all scared of the gigantic shadow of Enron. "Oooh, it's a big shadow. The boogie man is making it, we can't possibly stop it." "You can't put the toothpaste back in the tube, I've got no idea how."

No, you act on principle, if you're going to change things. So, this attempted, this Clash of Civilizations war that's trying to be started, this is the outgrowth of a view of man. It's because of long-standing ambitions and an idea of how the world should be organized. If you're going to win the fight for our civilization's continued existence and a new Renaissance, we're going to require a shattering change of method, not a gaggle of people attempting to banish a shadow by casting spells at it. Please put up the next slide [SEE Figure 6].

That is a shadow, that is not acting on principle, that is not going to make a Renaissance. So, in our mission to create among the population an inoculation against believing in shadows and painting things on your stomach, we're going to find a fun paradox in communicating discoveries. Which is, that you can't describe



FIGURE 6.

them. You must re-enact them. Whenever you discover anything, you're lawfully finding something outside the current theorem-lattice used to investigate the world.

How are you going to somehow project a fundamental change in thinking, that shifts your entire theorem-lattice—how are you going to project that down into your current method of thinking, such that it keeps its essence as a change?

You can't! It's not there. To describe a discovery would be like trying to discover a principle inside of observa-

'Real scientists know where the important cracks are'

Anna Shavin: So, what about music? Is there a reality principle? Is it just some ethereal, abstract idea? Or, is there an actual, truthful method? Or, is it arbitrary?

Now, how would we know this, how can we discover this? What kind of crack do we have to make, to look through?

Our generation really knows only the shadows of music. So, this is what we're going to be investigating, because it comes up a lot in our organizing.

But, at first, in order to investigate this, you have to ask an important question. What is the origin of music? Was it Neanderthal man? Was it Carl Cro-Magnon, running around, banging his head on rocks? You know, finding a tone here, and a tone here, kind of like the Flintstones?

Did it somehow magically evolve?

Did it fall from the sky one time, and hit, just bonk somebody in the head, and say, "Hi, I'm music!"

Actually, civilizations for thousands of years have looked at this idea, and it's not an abstract idea, they've looked at it as one of political importance, as to the conception, the intention, of humans.

The Human Voice vs. the Piano

So, we're going to take up a problem that the Pythagoreans—which was a school in ancient Greece—took up, and they spent some time with this. The question is, what happens when you compare the human voice and an instrument, such as a piano, or the monochord?

tions. It's not there, it's outside. A discovery is a discovery. If you want to learn it, you're going to have to discover it. Otherwise, you're learning something else.

So, tonight, we're going to have an aerial view of working through paradoxes with pedagogies. We're going to look at paradoxes we find even when we're talking about ideas, because you're not safe then either. The method of communicating ideas has its own paradoxes that we can play with, and tonight we're going to get a taste of some through music.

So, Anna?



Anna Shavin (left), Jenny Kreingold (right).

To look at this, we're actually going to go through a physical demonstration. Can I have the first slide? [SEE Figure 7] Jenny, you might want to come up here.

What you've got here are three measures, and each measure is in a relationship of a third, to the last one before it. The first measure starts on a C, the second measure is an E—C-D-E—and the third measure starts on a G-sharp, you know, E-F-G-sharp. It's all over the space of an octave. It goes from a low C, to the high C at the very top.

Now, we're going to see what happens when the human voice sings this, as compared to the piano. So, Jason, can you play the low C. Jenny's going to sing this.

[Jenny Kreingold performs a singing demonstration of the octave as rising thirds.]

So, what happened there? [Laughter]

Jenny: Jenny sang out of tune!

Anna: Was that *just* Jenny singing out of tune? Actu-

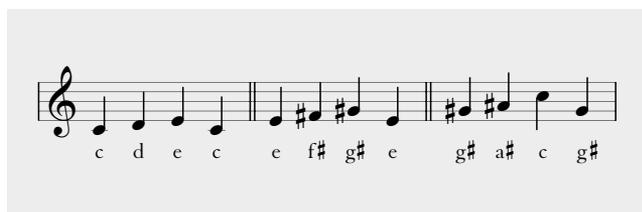


FIGURE 7.

ally, go back, because we're going to do it again. We're going to listen again, and next time, Jason, while she's singing the C, can you play the C on the piano? Let her hit it, and then you hit it.

[Jenny performs a second singing demonstration.]

Anna: Okay, thanks.

So, the last notes, let's just look at the C, the second to last note there [Figure 7]. It should have been the same as what she sang, right, they're both C's. But, they weren't. Now, it might be a little bit difficult to hear the difference, because it's slight, but it *is* there.

Why does this happen? It seems, that the voice does not map neatly onto the instrument; that the piano doesn't adequately or completely describe the principles of the human voice.

This is what is known as the Pythagorean "comma." The comma is the discrepancy that is created, between the notes that were sung, and the notes that were played on the piano. Why the comma?

Well, if you can imagine in your own mind, two circles, one a complete cycle, that would represent the C to the C, the complete cycle of an octave. The other one, not a complete, an incomplete cycle, so you have a kind of a gap, a space, which would represent what Jenny sang, going through the octave by perfect thirds. That gap, is what we just created musically.

Tempering the Intervals

What's going on here? The voice sings this mini-composition, sings the low C, and then the high C that's plucked by the piano. But, in the human voice, it actually *tempers* itself, it tempers the intervals, it changes the intervals, slightly, but it's a non-linear change. And even though it's slight, you can get a sense that the method that's necessary to generate the two, the instrument and the human voice, comes from two different domains. One, the voice, the other, the instrument. Can I have the next slide [SEE Figure 8].

Now, we're looking at this the same way that Kepler did. The same way that Kepler actually hypothesized the orbit of Mars. Does that look like a circle, to most people? Well, it's an ellipse. It's an ellipse by about

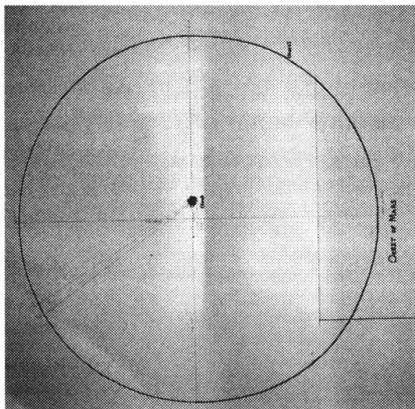


FIGURE 8.



FIGURE 9.

eight minutes of arc. So, you get these slight discrepancies, and the real scientist actually knows where the important problems, the important cracks are, where they should go investigate.

So, you know, this is kind of fun. You got the same thing in music. So, all right. Now we're going to look at this from a new standpoint. Next slide [SEE Figure 9].

This is the monochord. Actually, we have a monochord right here. It's just a hollow wooden box, and it has a string on the top, if you can see, one string, and it's taut.

Now, the monochord is not based on the human voice. Instead, all of the intervals of the scale are created through basically strict divisions of the string on top. For example, if you plucked one-half the string, allowing that to vibrate, and keeping the other half still, you create what's known as an "octave," the interval of an octave. That's also what's producing frequencies, you're creating frequencies when you pluck. Next slide [SEE Figure 10].

The first example is the case of the octave. Likewise, you can generate a "fifth," the second one, by allowing two-thirds of the string, dividing the string up into thirds, plucking two-thirds of the string, and allowing the other third to remain still. And you get the interval of a fifth, which would be C-D-E-F-G, five. The "third"—we're going to look at one more, which is the "third"—which is the fourth one down, where you divide a string up into five parts, and you allow four-fifths of the string to vibrate, and that creates the interval of a third. Which, if you guys remember, is exactly what Jenny was singing. She was singing thirds, perfect thirds.

This right here is a pretty extreme case of a non-living process generating notes, generating tones. So, how do you guys think this is going to describe the human voice? Next slide [SEE Figure 11].

This is a model of a keyboard. If you look at both of them, the same distance, the same number of keys, the same space, is covered by both, from lowest C on the

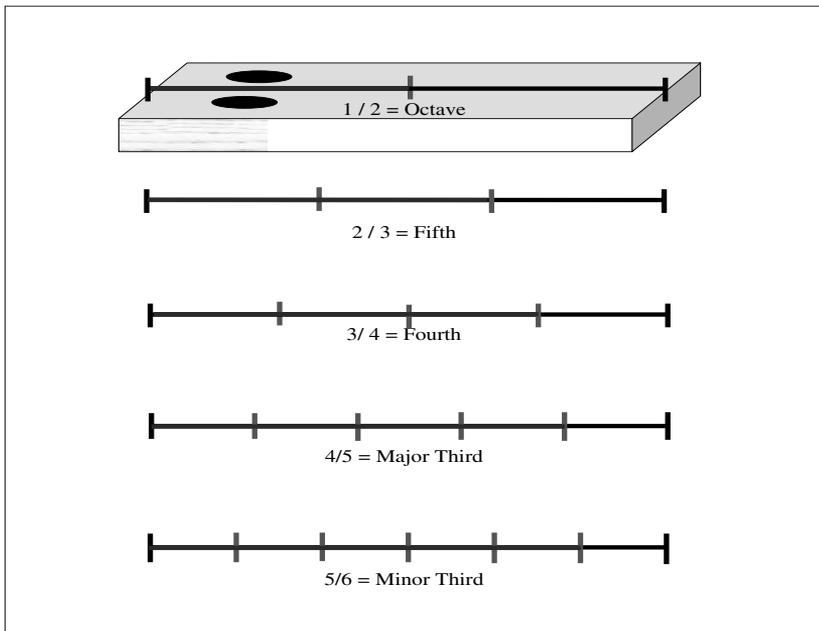


FIGURE 10. *Monochord divisions.*

piano, to the highest C. Except, this is going to be, we're going to create the notes to the divisions of the monochord string, and what you've got between the first and the second one, is, they cover the same amount of space, but the action which generates, the interval which generates the new note, is different. The first one, is generated by fifths, it's called a "circle of fifths," and, what you do, is, you keep dividing the string by two-thirds. So, you get your C at a frequency of 32, then you go up a fifth, you divide the string into two-thirds and you can go up a fifth, and you get a G at a frequency of 48, then D, A, E, B, etc., all the way up to the C.

Numbers vs. Physical Principle

Now, the way that we know the frequency, is that there is a proportional relationship between the frequency and the amount of string that's vibrating. As the amount of string gets less, the frequency gets higher, so it's an inverse relationship.

In this case, in the case of a fifth, since you're plucking $2/3$ of the string, of the whole, the frequency goes up—it's called the "intervallic ratio"—it goes up by $3/2$, the inverse. So you see, you

have C, you start at 32, you act on that 32, by three-halves, and you get 48. Then you multiply it by three-halves, and you get 72, 108, etc., all the way up to the frequency of 4151, and that's the highest C on the piano. So, then let's move to the second one. Mark that down, 4151.

In the second one, you're actually moving through the space by octaves. So, you cover seven octaves. The intervallic ratio would be the inverse of $1/2$. Remember, to create the interval in octaves, we cut the monochord string in half, and we only plucked half of it. You start at a frequency of 32, multiply it by 2, to get 64, 128, 256, 512, 1024, 2048, 4096.

Does anybody see the problem? We're at the same note. But, how can the same note, have two different frequencies? And how can our math be so ambiguous?

If you were tuning a piano, you know, what would you do, how could you deal with this?

Surely, numbers can't replace the physical principle that Jenny demonstrated, but we can know that, within this type of linear system, even that breaks down within itself. The same discrepancy pops out. Now, what's causing this? What can we know of the relationships between the domain of the human voice, and the domain of the instruments?

Rianna?



FIGURE 11.

‘What do my maps tell me about the space I’m projecting from?’

Rianna St. Classis: Actually, I’m going to begin by going back to that Riemann quote that Jason began with, and perhaps we’ll see how it relates to what Anna was talking about, if I do this properly.

So, when Riemann says that “propositions of geometry are not derivable from general concepts of quantity, but that those properties by which space is distinguished from other conceivable, triply-extended magnitudes,” that this can only be gathered from experience—what does he mean?

He also talks about a darkness that persists from Euclid to Legendre. Well, doesn’t Euclid’s geometry work? We learned it in high school, and it seemed to be consistent. You’ve got those points, and you’ve got the line—it’s the shortest distance between two points—and I can take that line and I can extend it forever into space. And I’ve got triangles, and the sum of the angles of a triangle is always 180 degrees, and I can use that property to do all sorts of other cool stuff. Right?

Then I can extend that to physics in high school. Can I have the first image [SEE Figure 12].

It’s our friend, the Cartesian coordinate system. Then, I go from the plane, to three dimensions, and I use this to map motion in space (or other things too), but, what I discover is, that motion up and down is the y axis, motion left and right is the x axis, and back and forth is the z axis. And, any kind of complex motion can be broken down into its component parts, and we can think of those component parts essentially as being independent. Like this box, actually [SEE Figure 13].

Now, if I move to your right, and up, I get here. If I move up, and to the right, I’m back here again.

Okay, I want to do an experiment, because this is what real geometry and physics is about, and if we were actually doing a real pedagogical at one of our cadre schools, then you guys would have to do a lot of work. It would be gruelling, in fact—at least, that’s what I’ve been told. But we’ll do just a little taste of it. So, everybody stand up.



All right. Now, put your arm out in front of you. Actually, we’ll do it this way. Pretend you’re—this is y , this is x , and you’re out in a z . So, move to the right, and move up. Okay. Now, we’re going to start back here again. We’re going to move up, and to the right. Wait a minute. Maybe we should do that again. Right, up; up, right. Wait a minute. I’m ending up at a different point.

Why did that happen? That doesn’t seem to go along with Euclid over here, and Descartes. It seems that, in the demonstration that we just did— You can all sit down, that’s all the work you’ve really got to do, I’ve only got ten minutes—it’s a Baby Boomer pedagogical!—

In this case, it seems as if it matters where I start from. It matters which direction I go first. And it seems that my motions are connected to each other, that the motions that I make are connected in some inextricable way, in a way that you cannot actually separate. It actually looks as if maybe you guys are getting a sniff, that there’s more to space than Euclid and Descartes made out there was.

I’m just going to throw out—this is a pedagogical, right?—I’m going to throw this out at you. You might not be so shocked, if I asked you to think right now of a triangle, the sum of whose angles is greater than 180 degrees. Or, if you’re feeling really wild, less than 180 degrees—but we’ll get back to that.

The problem that you encountered in our little experiment, is similar to, if I were going to set out to demonstrate Euclid’s infinite extension of a line (if you could imagine me walking through walls and across water and everything), and I just started to exit here stage left, which is to your right, and I just kept walking. Eventual-

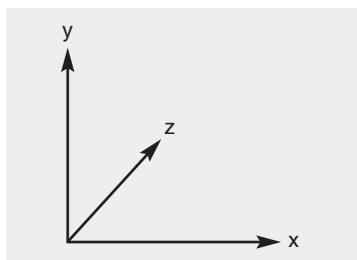


FIGURE 12.



FIGURE 13.

ly, maybe by the Labor Day conference, I'd come back over here, coming from stage right. So, what's really going on?

Well, here's our friend the globe [SEE Figure 14].



FIGURE 14.

Maybe you guys are, let's say, we're kind of here. If I start going east, and I keep going east, and I keep going east, keep going east, all of a sudden I'm coming back from the west! And here I am again.

Now you're beginning to see what part of the cartographer's problem is. I want to map this globe. I want to map something like this sphere, onto a plane. And, one thing that you can take—this is supposed to be an orange, but, you know, you can imagine, because it's a grapefruit. Let's pretend that the skin is the surface of the Earth, and I want to take it off of this, and make it go flat [SEE Figure 15]. I



FIGURE 15.



FIGURE 16.

want to put it onto the plane. Can I get the next image [SEE FIGURE 16].

Well, there's the orange that this isn't, right?

Now, notice something. First of all, you've got this straight line, and you really wouldn't know, where Africa was, and where South America was. I have a hard time determining.

But, notice something else really interesting. When I cut this, I cut it in one direction, clockwise, right. Notice that it curves in two directions, sort of like a treble clef, or an "s." Also notice, that this orange peel, as you can see from the shadow in that photograph, is not actually lying flat. I was cheating a little bit there. If I really wanted it to lie flat, I would have to cut it in thinner and thinner strips, and this could be a pretty tedious process.

The other thing is, that the people who made this cool little sphere to do spherical geometry with, give you a way of making a globe, which is actually a little bit difficult. You have to cut it out from a poster, and you cut it out from strips—we have a picture of it, too [SEE Figure 17]—and I'm supposed to lay it over the sphere, and it holds together and forms a globe.

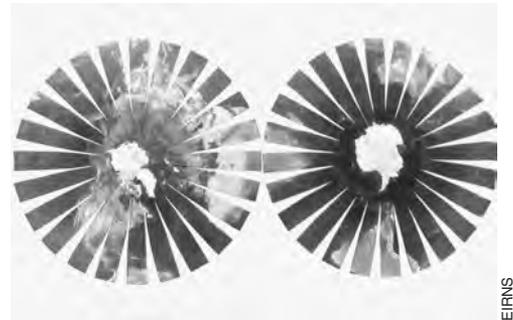


FIGURE 17.

Okay, now notice something about this. Antarctica and the Arctic look pretty good. They flatten out pretty well. But, as I get closer and closer to the Equator, I have to separate, and cut out these bigger and bigger portions, these triangles. The other thing is, that if I were just to lay these flat, and use this as my map, you'd notice that I wouldn't really have a good idea about how to connect them. I can connect Africa there, but then, I don't have a really clear idea about where the connection between South America and say the top of South America, is. Or, what's the relationship between South America and Australia?

Now we're going to get into the really fun part of this, if it works. Let me have the next image [SEE Figure 18], just for a minute. That's a real pedagogical that we did. I don't know if it's going to work out as well in here, because of the lights, but that gives you a sense of how you do a projection. You have a really bright light source,



FIGURE 18.

and these hemispheres.

I'm going to have to go through this really quickly. So, what I would encourage you guys to do, is, if you think that I'm doing a bunch of waves of the hand and magic with this wand over here, then come after this panel, and we'll do the serious work of playing with this stuff, because it's actually really cool and it takes a lot longer than ten minutes.

Let's do a couple of little demonstrations with that one. You can notice certain things right away [SEE Figure 19]. For instance, notice how, in that kind of a pro-



FIGURE 19.

jection, I get this distortion with Australia. Notice that the equator, that thick band, makes a circle, that the Southern Hemisphere is inside that circle, and that the Northern Hemisphere, like Eurasia right there, maps outside it, with massive distortion up toward the North Pole.

All right, can I get the next picture [SEE Figure 20].

This is something of a stereographic projection, which means that I'm doing it from



FIGURE 20.

the pole, onto a plane. You can notice here, that's Greenland over to your left, and notice how totally distorted it is. I mean, it's almost as big as the United States.

I guess you're beginning to get a sense of what the real problem is, when I try to map a sphere onto a plane. This is a really old question, because, when you look at astronomy, for example, and you look at the ancients, who were looking at the hemisphere, the dome of the stars, they have to try to figure out a way of mapping them, a way of retaining information. How do you do it? This also has something to do obviously with cartography, but, as Gauss would tell you, it's really not as simple as mapping a sphere onto a plane. It's actually a *series* of mappings: from an irregular solid onto an ellipsoid, from an ellipsoid onto a sphere, from a sphere onto a plane.

So, I'm trying to do these various mappings from various surfaces, is there a way to retain information? And, is there a way to do it, so that I can limit the number of distortions that I get?

Can I get the next picture [SEE Figure 21].

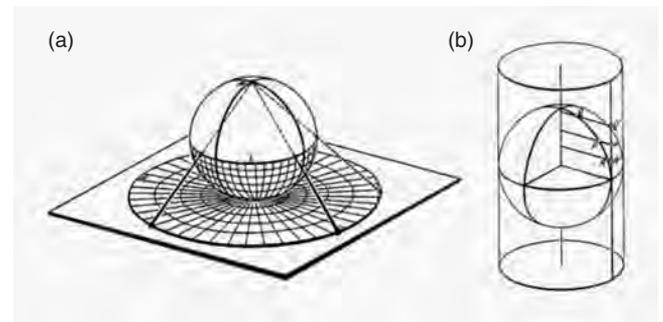


FIGURE 21. (a) *Stereographic projection.* (b) *Mercator projection.*

This is a representation of two different kinds of projections. You have the first one, which I described, the stereographic, where all the things in the Southern Hemisphere map inside the equator; the Northern Hemisphere would map outside. Then, notice the North Pole. Where does the North Pole map? Does anybody have an idea?

The other projection there is sort of a representation of a Mercator projection. The idea is, that I wrap a cylinder around my globe, and project from the inside, from the axis. The question on this one is, where do the South and North Poles project? And also, notice that Antarctica, just a few points on Antarctica, would become an entire strip at the bottom of my map.

Now, let's look at a projection of something a little simpler, so that we can get a clearer idea about these projections. I have to show this really quickly. (I don't know if you guys can see this. Probably no, you'll have to take

my word for it. You'll definitely have to visit me after, because you shouldn't take my word for it!) Here's a triangle drawn on the sphere. He's our friend, the triangle whose angles are greater than 180 degrees. In fact, this is a very special little triangle, whose angles are all 90 degrees [SEE Figure 22].



FIGURE 22.

Let's use this to do a few other kinds of projections. We'll see what we can look at.

First of all, let's look at it as if Sky were holding the light at the South Pole; we were going to do a stereographic projection, to get a sense of what that looks like, because the pictures that I have aren't very good [SEE Figure 23].



FIGURE 23.

Then, a gnomonic projection is from what would be the center of the Earth, along that same axis [SEE Figure 24]. You kind of get a sense of what that looks like. And



FIGURE 24.

then, I'd ask Sky to just kind of go wild, and show you various variations; you know, make that triangle dance.

All right, can I get the next picture [SEE Figure 25].

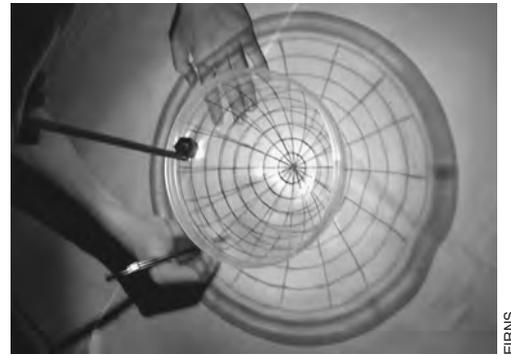


FIGURE 25.

All right, see those hands? It's work! Someone's drawing the stereographic projection, so you can have an idea about it. Next picture [SEE Figure 26].

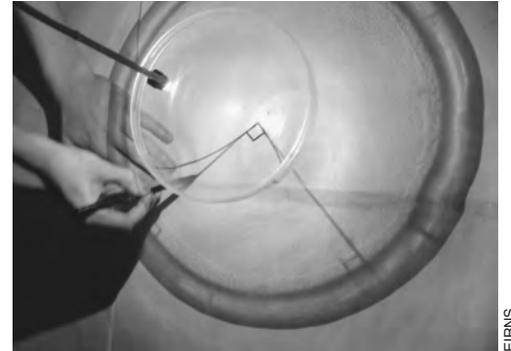


FIGURE 26.

The drawing's not very good, we were bad scientists, we should have redone our data. But, anyway, it gives you a little bit of a sense of the distortion that happens to the lines of that triangle. I'm not going to go any further with that. Next picture [SEE Figure 27].

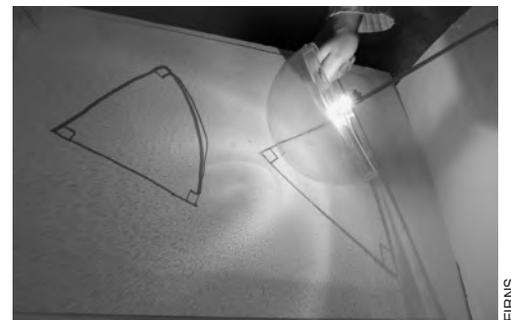


FIGURE 27.

That's a picture of us doing the gnomonic projection, and you can see immediately the difference of the triangle. Next picture [SEE Figure 28].

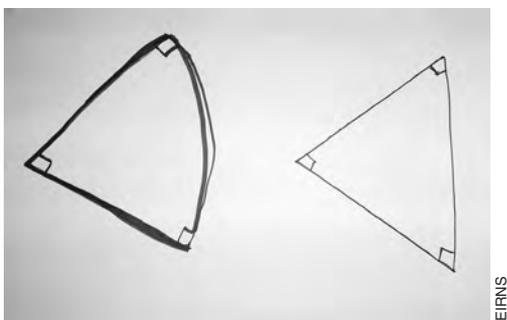


FIGURE 28.

Here you see them together. If I had done this correctly, I could have done even larger variations, so you could see that my maps can be very, very different. It might actually be difficult to know that I was mapping the same thing, from my maps alone. I mean, if I only had the maps, how would I know that I was projecting from the same space? What do my maps tell me, about

the space that I'm projecting from? And, also, notice, that in all those mappings that I did, no matter what I did, I got these distortions. I got these strange points, like the North Pole, or the South Pole, these things we call "singularities"—something that doesn't quite map, even in a distorted way. And, so, aren't these singularities just like the "comma" that Anna was showing us?

So, what is that telling us about the similarities between what's going on with music and the circle of fifths, and what's going on with mapping from different surfaces onto each other?

I bet you guys never knew that Bach had so much in common with a mapmaker. Both of these investigations are getting at how we know about the universe. How do we approach physical problems? How do we approach paradoxes? How do we approach those inconsistencies, so that we can get an idea about what's really going on? About the real nature of space? The real nature of music?

'A paradox is a blessing'

Sky Shields: All right, let's take a look at a finished map right now, from one of the projections that Rianna was working on. Can we get the first picture [SEE Figure 29].

If people recall the first map, where you had the globe inside the cylinder [Figure 21], this is similar to what you'd get. Everything that was mapped on the surface of that sphere, ends up on the side of the cylinder. But, as Rianna said, you get to a sort of weird thing that happens at both poles, which is that one point inside of Antarctica, and one point at the North Pole, ends up taking up the entire bottom strip of our map. So, you end up with Antarctica looking kind of funny at the bottom.

I want people to think for a second. Imagine a scientist or a philosopher, walking around observing the relationships on the surface of this plane here, or any of the planes that we looked at. And, you can imagine that by observing the distortions, and in particular, the paradoxes, he'd be able to discern something about the actual space that he was looking at the shadows of. In this case, a paradox is a blessing, not a problem, as some people like to think about it.

Actually, in this case, it's the paradoxes that have the actual substance, not anything else. Because the paradoxes actually tell you what it is that you're really looking at, or give you some hint of it.



People can tell, for instance, you can get the picture: If you have any two individuals standing on the equator here, walking in parallel straight paths, directly due south, all end up at the same point. Even though, from this perspective, it looks as if they end up at different places along that strip, because, from our projection remember, that one strip is all the exact same point.

Looking at that paradox is what forces the mind, the thinking mind, to a resolution. Now, this should be similar for people—and people should recognize the similarity here, if we can look at the next slide [Figure 11]—between having two different individuals, walking toward the exact same location from the exact same location, only taking different-sized steps, and ending up at a different location—even though it's the same location! That should give you some idea that maybe what you're looking at, isn't exactly what you're looking at: it isn't just a flat plane, or a flat keyboard, as Anna and Jenny showed us.

The Principle of Metaphor

Now, it might be either a surprise to people, or just a little obnoxious, to realize this presentation was really a lot less about Gauss or Riemann, and a lot more about Bach, and metaphor, and counterpoint. But, it shouldn't surprise you. Can we go back to the last picture [Figure 29].

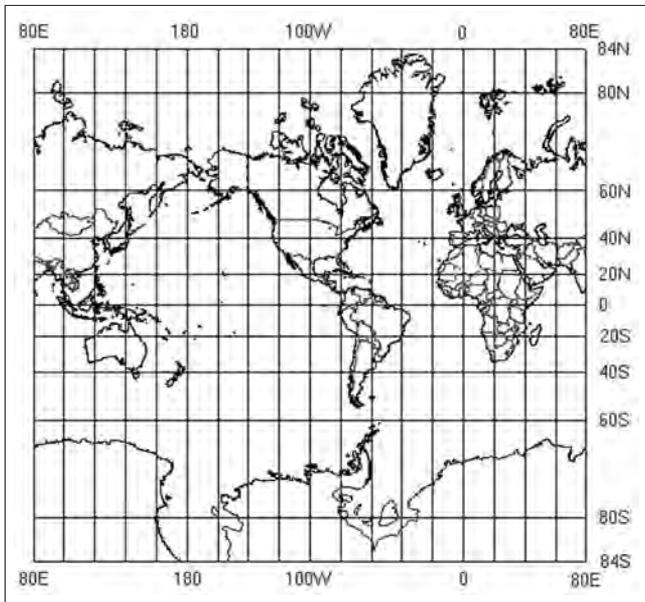


FIGURE 29. Mercator projection.

Because, right here, Antarctica is a metaphor. And, I don't mean that in a figurative sense. I mean, literally, that's what metaphor is. What you've got represented with Antarctica, and what you've got represented with the experience of Antarctica, from the standpoint of anybody who's observing the shadows there, is exactly the same quality of thinking, the same quality of mind, that you have exhibited in any great scientific breakthrough, but also any great breakthrough, any great work of Classical art. Because, it's only in the wielding of paradox, in the form of irony and metaphor, that you can force a mind that's observing this, out of the medium that it's working in, out of what seems to be an abiotic instrument, a non-living instrument, or out of what seems to be a flat plane, and into the place where the idea of what you're actually looking at, actually resides.

It's one way to force somebody out of the dead world of seemingly describing relationships of *frequency*—which we got, if we can see the second picture again [Figure 11]—out of the seemingly dead world of frequency, for which we tried to define a reason with the monochord, and into an actual cognitive domain.

And this, which is what Bach and others discovered, is the only way to get a non-living instrument to express a cognitive idea. Using paradox, using irony and metaphor. And it should demonstrate to people that the principles of beauty *are* universal. They're universal *physical* principles. They're not matters of mere

taste, they're not matters of opinion. This is not some sort of a parallel: they are efficient principles in the universe. Without them, man is incapable of having any kind of efficient effect in the universe; man's incapable of making a breakthrough, man's incapable of changing his environment and gaining control over his environment. Man is incapable of surviving without the physical principles of Classical artistic composition.

Building a Political Movement

We should also recognize that we're also incapable of building a political movement, without the principles of Classical artistic composition.

Why is that the case? And just for further discussion on it, because, in order to escape the shadows that we're looking at, in order to get out of what we see around us, the seeming shadows of sense perception—what we ran through with the discussion of the anti-war movement, what we're looking at here, with what seems to just be, a simple set of relations of frequency, or anything that parallels that, what you just see around you, what you're bombarded with through your senses—you need to develop that character of thinking that actually represents the real universe. There's a lot of debate about that, you know. What shape *is* the actual physical universe? Is it flat? Well, most people would agree with you, it's not that. Is it simply spherical? Is it negatively curved? Is it like a Pringle chip? I'll say no, and I hope we demonstrated that the character of the universe is exactly that same quality of mind that everybody in the audience should be experiencing right now.

Moderator: Okay, so here's Lyndon LaRouche. And he will be discussing "The Rebirth of a Republic."

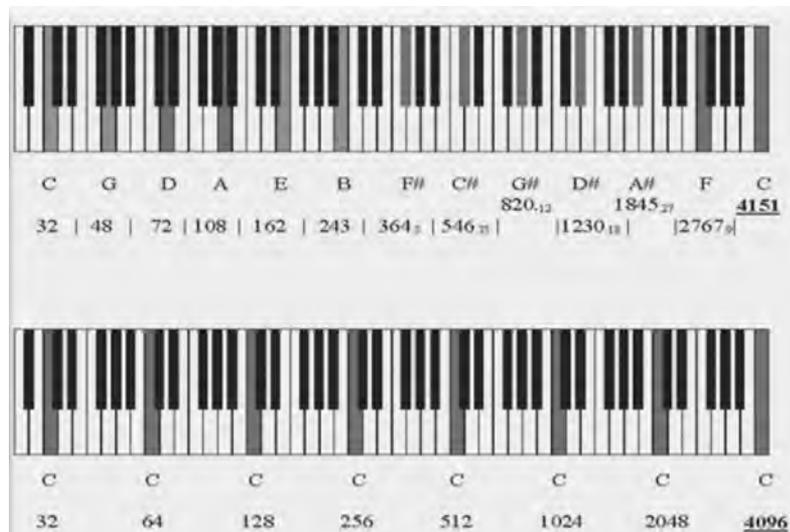


FIGURE 11.

'We must never again become animals'

Lyndon LaRouche: What you have just seen and heard—those are the two senses involved here, unlike some events—are what are called classically, “spiritual exercises.” The function of them is what I shall focus on with a few remarks.

A spiritual exercise reflects something which we can understand better from a modern standpoint, particularly from my critique of the significance of the contributions of Vladimir Vernad-

sky, the founder of biogeochemistry, and the inventor of the concepts of biosphere and noosphere. That, universal principles are divided into three types, experimentally.

First, are those things which are abiotic, which do not require the assumption of a principle called “life.” That constitutes a distinct phase-space of the universe.

The second principle, is life. This concept was given a modern form, through the successive work of, principally, Louis Pasteur, Curie, and Vernadsky, who demonstrated that this was, in truth, a universal principle, which was something Pasteur already suspected, but, by geochemistry, by biophysics, Vernadsky was able to demonstrate this principle as a universal physical principle. That is, there is a principle in the universe, for which there is no equivalent in so-called abiotic processes.

All abiotic processes in crystallization, tend to be perfectly symmetrical. *Living* processes, when they intervene into abiotic processes, distort them, to make them “left-handed.” They turn left-handedly, and that sort of thing.

These things are *known* not by some abstract assumption. They're known by experiment. As Vernadsky said, you can tell what is abiotic, experimentally. You distinguish living processes, and the principle of life, from the abiotic, by the physical effects produced by the presence of living processes, which never are produced by any other means.

Human Cognition

Then, thirdly. We have physical changes in the universe, which are produced only by the intervention of the cognitive powers of the human mind, which were exhibited here in simple demonstrations of elementary pedagogical exercises.

The Classical such exercises are, first of all, the comma, as defined by the treatment of the human voice and monochord attributed to Pythagoras. And, since, as you've seen, we can replicate that, we know that the



report is accurate, *because we can replicate it*. We can demonstrate the principle, as was done here. The principle is there. Right?

We also know, the principle of the doubling of the line. You cannot double a line, axiomatically. Because, if you propose to double a line, you assume that you can double a line without using anything but a line to do so, the same line. You can't. Because, you can't measure it.

The way you do it, actually, is you go to another dimension. You take a circular action, and you can double a line. But that requires the concept of a surface. So you have to go to a higher power, as surface, to double a line. So that, in principle, you have gone into what Gauss defined as the “complex domain,” as he laid this out in the 1799 paper.

You cannot double a square, except by, in a sense, doing the same thing. Which was done in the case of the *Theaetetus* by, in the Plato dialogue on *Theaetetus*, which demonstrated this principle as a power. You cannot double a cube, except by a process which takes you *outside* anything in Euclidean geometry. It's a power, it exists.

Also, the other Classical one, is the only regular solids you can make, inscribed in a sphere.

The Power To Change the Universe

These are the principles which occupied Europe from the Classical period, coming into modern civilization. The treatment of the issue of the five Platonic solids, was addressed specifically, in the Renaissance, by our dear friend Leonardo da Vinci, particularly; it was addressed extensively by our dear friend Kepler, who made a distinction, which was already made by Plato. The distinction is, that this kind of curvature, exists only in terms of living processes, never in terms of non-living processes. And this was Kepler's principle.

So, these examples, these kinds of cases, are called, in theology, “spiritual exercises.” Why? Because, as I've indicated, the universe is divided into three types of phase-spaces: the abiotic, the living, and the spiritual. The spiritual, are the powers of the human mind, which enable us to make fundamental discoveries of principle of the universe, and *to transform the universe*, by taking a principle which existed in the universe before man knew it, and by man's knowledge and use of that principle, which pre-existed in the universe, *we change the universe*. When man's willful power of creativity is applied to the knowledge of the discovery of a pre-existing principle of

the universe, *we gain the power to change the universe.*

And that's what it's all about. And that defines the nature of man, it defines what we should mean by spiritual, it defines the yearning of man to see himself, or herself, as made in the image of the Creator of the universe. We see what we *are*. We see what we must never become *less* than. We must never again become animals, or we must never become, again, something lower than an animal, which is called "an empiricist."

Thank you.

'Ideas shape history, not events'

Brian McAndrews: Hello, my name's Brian, I'm a youth organizer in Philadelphia, Pennsylvania, and what I will address briefly this evening are two aspects of the LaRouche Youth Movement's existence: its organizing deployments, and its history.

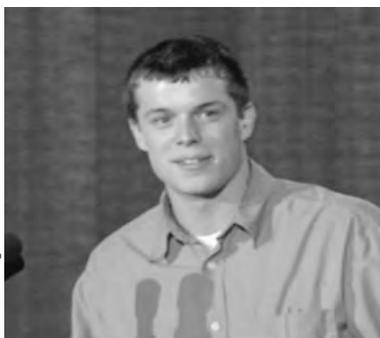
But, before I go into that, based on the proceedings this evening, and the remarks of Mr. LaRouche, you get the sense that we are an integral part of an unfolding process. That we are part of the most historic development in the history of mankind. Every one of us, sitting in this audience, be it either the Baby Boomer, or young person: we are part of the most historic process in the history of mankind, and should see ourselves as that. And organize in that fashion, and look at ourselves in that fashion.

I heard Laurie Dobson earlier today talk about her children, and I think that, if we take those types of moments, and those types of opportunities, all of us in this audience, and see ourselves as part of that historic development process, then we can win.

So, now on to the rest of the presentation.

The LaRouche Cavalry

Lyn has referred to the LaRouche Youth Movement as the "cavalry," and said that it should deploy in the tradition of the great Union general and cavalry commander Philip Sheridan. What he did with his cavalry during the months of September and October 1864, against the Confederate forces that were based in the Shenandoah Valley in Virginia, represented a deci-



EIRNS videograb



Gen. Philip Sheridan

Moderator: That is actually the natural state of man, genius. And, for anyone who sees that as a paradox, we've got a problem. Because a lot of people think, "Okay, well 'natural,' that's what I *feel*. Why would I have to actually go through work, to discover that which is 'natural'?" Well, if that's the way you're thinking, your head is in the cave, and we can talk afterwards.

But now, we're going to take you to the battlefield, to show you how we put these ideas into motion, to shape the universe.

sive contribution to the Union's victory over the British-backed Confederacy. First picture.

Sheridan deployed his cavalry with lightning speed, and concentration at the point of attack. He always looked to hit the enemy in the flank, and take him by surprise wherever possible. By deploying his cavalry strategically, and with great speed and striking power, he was able to amplify its effects in ways

that were disproportionate to its relatively small size. The effects of his strategic deployments radiated far beyond the field of battle, and captured the imaginations of the population in both the North and South. All of his deployments were designed for strategic, not localized tactical, effect. His mission was to win the war, and his cavalry's deployment was imaginatively mobilized for that war-winning purpose, and no other.

We in the LaRouche Youth Movement are taking a few pages out of General Sheridan's book, as we deploy in a variety of theaters of operation. We have made effective lobbying forays into a number of state capitals, including Sacramento, Calif., Salem, Ore., Olympia, Wash., Richmond, Va., Annapolis, Md., Harrisburg, Penna., and Trenton, N.J., and Lansing, Mich. These deployments have resonated with the many lobbying efforts we have made in Congress and other strategic locations in Washington, D.C. In addition to many deployments and interventions which we do on campuses each day, we also conduct political rallies and other high-visibility deployments in downtown areas and busy thoroughfares. We also intervene frequently in Democratic and Republican Party functions—or dysfunctions, as the case may be, state and local budget hearings, trade-union meetings, anti-war events, and many other events that have bearing on LaRouche's

fight for the General Welfare.

To illustrate the nature of some of these deployments, we have some video footage of a big rally that we held at the Federal Reserve offices in Los Angeles last August, after Lyn had addressed the cadre school there. First video.



The mission of the LaRouche Movement cavalry, is twofold: One, put Lyndon LaRouche in the White House in 2004. And, two, launch what amounts to a perpetual renaissance, by creating generations of geniuses, by developing the method of thinking that has been discussed in the panel tonight, and more broadly in this weekend's conference.

I must say, that being a member of LaRouche's cognitive cavalry is quite an experience. While no knowledge of horseback riding is required, knowledge of how to deal with the many varieties of horse's asses that permeate the Baby Boomer generation, is definitely recommended.

Growth of the LYM

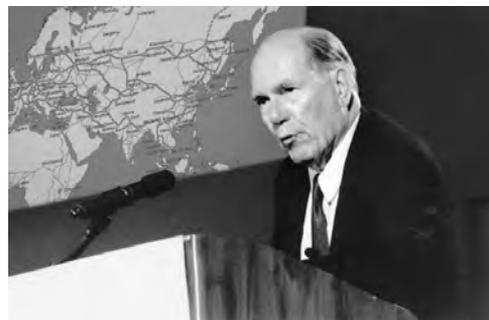
Now, as to the history of the LaRouche Youth Movement, I would like to present you with an overview of our growth. Here is a world map of the youth movement as it existed four years ago [Laughter] [SEE Figure 30].



FIGURE 30.

The youth centers are denoted by red dots. You notice

anything? We didn't have any LaRouche Movement centers. But, even though we did not have any centers, back then, we did have one very important member. Next image.



This movement, at that time, was an idea in the inside of Lyn's mind, and the whole movement, as you will see unfold, is the process of the unfolding of an idea, and proof that *ideas* are what shape history, and not events. Next picture [SEE Figure 31].



FIGURE 31.

Here you see a map of the Youth Movement three years ago. We have the beginning of the movement, in Los Angeles. Next picture.



This is the historic first cadre school, that took place in February 2000, in L.A., with its twenty youth participants. Next picture.

Here is a photo of William Warfield and Sylvia Olden Lee, who have been a guiding presence of the Youth Movement since its inception, helping to lift the youth out of the cultural wasteland that is the United States, and show how profound ideas are conveyed through beautiful art. Mr. Warfield passed last year, but he continues to teach, and uplift the youth every day in this movement. Next picture [SEE Figure 32].



William Warfield and Sylvia Olden Lee

EIRNS/Stuart Lewis

Here is Lyn addressing the cadre school in L.A., in August 2002, which was attended by 80 youth, after which Lyn launched the national youth movement, including the formation of the East Coast pivot of the youth movement, as just mentioned. Shortly before the National Conference in September, we convened our first weekly East Coast Youth Movement meetings in Baltimore, and launched our lobbying effort on Capitol Hill. Here is a part of a tape of our first lobbying effort and rally.



EIRNS/Samuel Dixon

Next pictures.

He occurs youth, hours ... mo



EIRNS videograb

And East a address He school, and next, here is the West Coast cadre school ...



FIGURE 32.

This is a map of the worldwide LaRouche Movement today. You can see from this picture that the growth of the youth movement, nationally and internationally, is pivoted on the East and West Coast wings of the LaRouche Movement in the United States. Los Angeles grew rapidly from its first cadre school in February 2000, and by 2002, Los Angeles had expanded its operations, not only in Southern California, but also into the San Francisco Bay area, and up to Seattle, Wash.

Lyn, in August of last year, mandated the launching of the East Coast youth movement, which would incorporate the lessons learned from the youth on the West Coast. The idea was to capitalize on the great population density that exists in the Washington-to-Boston corridor. Rather than an agglomeration of localized student youth centers, we have been organizing and growing rapidly as the East Coast cavalry strike force, since last August. Next picture.



EIRNS/Doug May/new



EIRNS/Doug May/new

... it's 7:30 in the morning, and they're participating by phone hook-up.

In the course of this process, we launched the interna-



EIRNS/Doug Mayhew

tional LaRouche Youth Movement, with youth from the West and East Coast going to Germany, and to France, to assist Helga and Jacques Cheminade, with their combined campaigns for Chancellor of Germany, and Presi-



EIRNS/Doug Mayhew

dent of France.

Here is a picture of Helga LaRouche, with Mrs.



EIRNS

Amelia Boynton Robinson.

Some youth organizers in Germany, campaigning for Helga.

Here's a picture of Jacques Cheminade, also with Mrs. Robinson.

Young campaigners in France.

More young campaigners in France.

Here we have the youth from the U.S., Germany, and



EIRNS

France, with Lyn, celebrating his 80th birthday.

During this same time, the L.A. office has efficiently



EIRNS

deployed in Mexico and Peru, launching LaRouche Youth Movements in both countries.



EIRNS

Here are some of the participants of the Peruvian cadre school that was addressed by Lyndon LaRouche.



EIRNS

Here's Lyn addressing a Mexican youth meeting.



EIRNS

Here we have Lyn addressing a cadre school in



EIRNS/Michelle Rasmussen

tions in Detroit. We intend to replicate this process that is going on in Detroit, in a number of other Midwestern



EIRNS

Copenhagen.

Here we have the East Coast Youth Movement deploying into Canada. This was a cadre school in Montreal that occurred last month.

Here we have Lyn on January 5, addressed a meeting



EIRNS

cities in the coming months.

The Baby Boomer Syndrome



EIRNS

of students in Wiesbaden, Germany. And, while we have no photo, the East Coast Youth Movement has opened up



EIRNS videograb

At this point, I would like to take a moment to illustrate what it is that we are battling in Congress and on the streets. The Baby Boomer way of thinking is what we have waged war against for the last three years. Walking into these offices, is like a teacher walking into kindergarten. Sometimes we have to ask ourselves, "Should we be talking to them about the triple curve, or potty training?"

We see in these elected officials, the same small, degenerate, immoral corruption, that we see in our parents, our professors, and the American media. The topic of each discussion may vary from one visit to the next, but the subject never does, and that is, the leadership of Lyndon LaRouche. We are conducting Socratic dialogues with these offices, and these Baby



EIRNS/Ismael Monge

a Midwest center of LaRouche Youth Movement opera-

Boomers themselves, who can barely remember what it means to be human. By insisting that they respond to the economic breakdown crisis, we are socratically challenging their axioms, and are demonstrating to them, that the LaRouche Youth Movement is growing by leaps and bounds. By so doing, we are bringing hope for humanity's development, and even into the ranks of some of these Baby Boomers. And we are recruiting a number of their non-Baby Boomer aides, to organize *them*, after we've left. So, when you consider the juxtaposition of the bankruptcy of the Baby Boomers, to the potential of the LaRouche Youth Movement, we can better appreciate the Leibnizian concept, that there is no evil that does not contribute to a great good.

So, out of the wasteland of the Baby Boomer generation, given the leadership of LaRouche, a youth movement that is capable of saving this nation, launching a renaissance, and even redeeming the lives of those very same Baby Boomers. And this has been brought into being by Mr. LaRouche.

Now, I will, with the help of my friend, the Classical artist Goya, illustrate a few of the typical manifestations of this Baby Boomer syndrome. Note that Goya created these drawings in 1799, thereby demonstrating the power and efficiency of his understanding of the human soul that spans the simultaneity of eternity. First we will view Goya's insight into the impact of the Baby Boomers' love affair with airline deregulation, on air transportation [Laughter] [SEE Figure 33].



FIGURE 33. Francisco Goya, from "Los Caprichos," 1799.



FIGURE 34. Francisco Goya, from "Los Caprichos."

What you see here, is the Baby Boomers' preferred method of air travel. The accountants on Wall Street see quite a future in this mode of air transportation. They are said to be quite impressed with its low fuel costs. Next picture [SEE Figure 34].

Recognize this? Here we see the effects of the Baby Boomers' love affair with deregulation, as expressed in the medical field. This is a picture of a perfectly functioning HMO. Here, the Baby Boomer is receiving the benefits of his HMO bargain premium. Next picture [SEE Figure 35].

Recognize this? This is a picture taken from the "shareholder values" family album. This is a typical scene on the floor of Grasso's New York Stock Exchange. These are the guardians of the financial bubble, who are sweeping out the daily procession of the chicken



FIGURE 35. Francisco Goya, from "Los Caprichos."

Baby Boomer believers in the bubble, who have been thoroughly fleeced and plucked. The reason that they're hunched so low, is that they're trying to find the remains of their 401(K). Next picture [SEE Figure 36].

Ah, culture! This is Baby Boomer music. Here we have a Baby Boomer rock concert. Now, the question is, can you tell which one is the Baby Boomer?

Victories

Now, we'd like to mention a couple of the important victories the Youth Movement has won over the Baby Boomer generation the last few years.

- The first victory is the takedown of Enron, the \$80-billion corporation

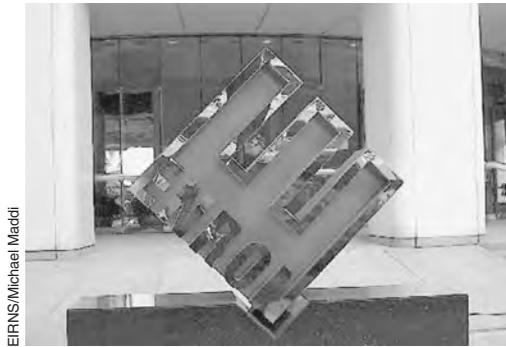


FIGURE 36. Francisco Goya, from "Los Caprichos."

that was considered to virtually “own” the White House. This was the corporation that no one dared to take on, but LaRouche did. Next picture. Now, most people think that this is the crooked “E” of Enron. But it is really the crooked “E” of the Baby Boomer infantile ego.

- Our second major victory, was our successful effort to delay the war against Iraq. This was a function of our lobbying of Congress last fall. And we can see where that led to internationally this past week, as Lyn discussed in his presentation yesterday, and Helga outlined in her speech this morning.

- Our third major victory, was expressed in the overturning of the deregulation vote, that was made by the



California Public Utilities Commission in April 20, 1996. Just recently, the California Public Utilities Commission has repudiated the deregulation of 1996 as a disaster, and mandated re-regulation. This is, of course, what Lyn said to be absolutely necessary if we are to make any progress in the economic realm.

Dialogue

Moderator: So, I think we’ve discovered a new universal principle in the communication of ideas: Make fun of Baby Boomers!

I don’t know about you guys, but I’m pretty damn excited. Hopefully, people can see now why Lyn says that we *can* win, and we must win. And so, therefore, we *will* win.

And for all those who may be inclined to acknowledge that welling-up feeling, sort of in the lower portion of your belt, which is eagerly begging you to run away from your immortality, just remember: Lyndon LaRouche and his youth movement are waiting by the exit, so you’re going to have a hell of a time getting out.

So, unless there’s something I’m not aware of, I guess we can open up for questions.

Question: We were talking over like the last week or so,

In closing, I would like to play a portion of a video from a Harrisburg rally that was carried out January 27. This is how LaRouche’s cavalry sweeps into the state legislatures, and other organizing situations, and has a lasting, reverberating effect. Play the video.

You have to have fun!

So, to conclude, I would like to invite all of you to join with the LaRouche Youth Movement in its quest to put LaRouche in the White House in 2004. And we will!



or a couple weeks, about this conference, this youth panel, this stuff being something that would change history for 500 years, or 1,000 years, something that would change history into the next millennium. And, I have to say, I got that sense from this, from this whole conference, that we’re actually sitting in history. And, I was kind of thinking about what you were saying, the whole thing, but looking at this kind of room, at what we’re doing, from the perspective of the whole universe, or the whole solar system. I mean, where would you rather be, but right here, and in history? And, then, I was then wondering about the Riemann paper. Could you put that first one back up there again? The very first slide, I think it was the Riemann Habilitation—

I want to know, just generally, what he meant by “quantity”? I can’t remember the sentence. When he

talks about, something about, okay, in order to do something like this . . . What does he mean by “quantity”?

Rianna: I have an idea, but, I mean, it’s just an idea. It seems to me that it has to do with the ability to make a measurement, within whatever the given parameters you have. Like what Lyn was saying earlier about actually trying to double a line. How do you actually measure a line? How do you have some idea about the quantity of that line? So, I think that it’s actually from this basic idea of measurement, that we begin to elaborate conceptions of space. But, that’s just my *idea*.

Jason: Well, one thing to add, is, that the point Riemann is making in this, is that, instead of just looking vaguely at quantities and trying to imagine dimensions, like the Cartesian thing you had put up, with the x , y , and the z —that the only dimensions that you have, or that you can measure, or really look at, are based on the principles you have discovered. That those make up the dimensions of the universe.

Sky: I can use this as a chance to make some recommended reading, I guess, two things together.

There’s one, in the introductory chapter, on mathematics generally and its teaching, in Kästner’s *Anfangsgründe*, where Kästner says, that that which is capable of increase or decrease, is called a magnitude. But, then he goes into something, which is somewhat parallel to what you get in Schiller’s “Aesthetical Estimation of Magnitude,” where he goes through, from the standpoint, kind of what we ran through today, that the concept of quantity—and I guess Cusa does it too, in the beginning of his “On Conjectures”—that the concept of quantity, and the concept of numbers, are something that you can’t take away from a certain cognitive process. Like Schiller said, it’s an aesthetic process. And, I don’t have more to say on that, but I think that’s a better way to look at it, it’s a better way to start approaching it, than just going at it from the idea of, as Rianna’s saying, rather than the idea of simple length, or rather than the idea of anything else, temperature, whatever people would want to call quantity. I don’t know if that answers the question, but, I got to plug three things that I think will be good for folks.

Question: I have a question on the musical comma. And that is, as you show that there is a distinction between the human singing voice and an instrument, discrepancy that’s created. My question is, because, as anybody who’s ever been in a chorus, people have a tendency often to sing either flat or sharp, and you’re constantly trying to bring your voice in coherence with the piano. So, how do you know what the natural placement of the human singing voice is? Or, how would you approach knowing

that? Because, it seems to me, that, on the one hand, we kind of brainwash our voice, in a certain sense, to try to cohere with the piano. So, how do we know what the natural placement is, as opposed to simply that it’s not just conforming to the piano itself? Or, how would you go about knowing that?

Anna: Is your question, how would we go about knowing what the natural placement of the human voice is? Is that it? Well, I think that’s a good question.

I think you have to do a lot more work, I mean, off the top of my head, that’s what we’ve been working on in L.A., just opening up the discussion on the comma. Because, you know, the music question, and the set axioms about where music comes from, exist, and so we’re just opening it up, and trying to figure it out ourselves. But, you know, I would say that the one direction to maybe start looking at from is: What is the intention of the human being, and, what we were going through tonight is, that you actually want to start looking at the physical principles that lie in the human being, the human voice being one of them.

For instance, you have register shifts, which are very natural in human beings, and which someone like Kepler was doing work on showing how they actually correspond to the solar system. But, starting there, ask the question, “How is the human voice developed?,” by figuring out which physical principles it has, like the register shifts. That’s where *we’re* going to start from, but that’s just my, again, that’s just my idea. Does anyone have anything else? Jenny? Okay.

Moderator: On that, it seems like, if we look at it in terms of the cognitive always being what’s ordering the living, and then, hence what’s ordering the non-living; it would seem that the actual, if you know the idea that is intended in the composition, that’s actually what would then probably *order*, where the natural location of the voice would be, for the given piece. And I don’t think it would be as static as the piano.

Anna: [Inaudible.]

Moderator: Anna was just saying, that that was demonstrated when Jenny was moving up the scale. That the idea in her mind is what placed the voice.

Sky: We discussed it, when we were talking about the demonstration to begin with. There’s a possibility, there’s a likelihood, that the voice would try to match the piano— What Cody says is right, that’s the way it should work. The human ear doesn’t hear notes. You don’t hear notes, or frequencies. You hear intervals, but not intervals even defined by the notes. The intervals are from what Cody’s talking about, I mean, those are defined by what the composition requires, what the idea requires. And

then, from that, you can try to bounce somebody to that, by creating the kind of paradox and counterpoint that you get with polyphony within the music. And you can kind of bounce somebody to something higher. And, the idea of the demonstration *was* supposed to be that you'd get that, from the voice, that would be an innate thing the human voice did. But then, I guess it's still worth discussing, about whether or not the voice does that, or, whether it actually does just match the piano.

Question: Mine is a question that relates to your question. Kepler discusses, in the *Harmony of the Worlds*, and from what I've read of Cicero, he discusses this as well. Is that, there's a harmony, a musical harmony's created by the intervals of the planets, the relationships of the intervals of the planets. So, the human voice, is a reflection of that. It's sort of a question: Is the human voice a reflection of *that*, or, are the planets a reflection of the human being? I guess I could ask Mr. LaRouche that question. So, I would say, just that astronomy, and Kepler, is just about one of the best places to start, and that I've learned a lot, I'm sure we all have learned a lot, about music, from Kepler and astronomy. You don't get this in school at all.

Moderator: Just something that always comes to my mind, that's fun to pose to people on this question, is: If, in fact, the planets do produce harmonic relationships, like those harmonic relationships which we use in Classical composition to allow us to transmit *ideas* which increase our power in and over the universe, then that actually gets at the interesting question, what must the nature of the universe be, that it reflects those very principles by which we increase our power in that universe? So, I think that's fun to play with people.

Rianna: Playing off what Sky said: Who's actually making the measurement? Where does that conception even come from? And, who's making the music? Where does the instrument come from?

Question: The question goes to Alex. Just looking at the history of the Civil Rights movement, and thinking about the unique contribution of Dr. King, what Dr. King contributed to the Civil Rights movement, and the measure of effectiveness that his unique contribution to the Civil Rights movement added.

You think, for example, about his conception of non-violence, and the superiority of that conception, to what the so-called Black Nationalists represented. For Dr. King, that was a universal physical principle. It wasn't just an arbitrary, you know, "I'm going to negate"—like Kant would recommend—"I'm going to negate my impulse to strike back at the enemy." But, for Dr. King, it's a universal physical principle which, obviously, he got

from Gandhi, and Gandhi quotes Christ, in defining the non-violent method of civil disobedience, as a way of attacking the menace of the British Empire.

I'm asking the question, because, if you think about the failure of the Civil Rights movement after Dr. King was killed, it is pretty clear that, even though a lot of people who were around him applied the method when he was alive, they really did not understand what he meant, which became evident with the complete disintegration of the Civil Rights movement after Dr. King died.

Now, I'm looking at what Lyn is doing, and this movement around him, as, you look at what you define in terms of the principles of Classical artistic composition, what Shelley, for example, contributes to poetry, and it seems to me that your argument is, that you have to approach the understanding of poetry, for example, or the principles of Classical artistic composition, from a higher standpoint. Now, how would you approach that, to develop within us, as a movement, a self-conscious understanding of what these principles mean, to improve our effectiveness? Because, we're trying to create, not just a bunch of followers, behind Lyn, we're trying to create a bunch of future leaders. I know you've done a lot of work on poetry. How would you approach things, to develop that self-conscious understanding of what these principles mean, and, like Lyn says, they become a part of us? That's my question.

Alex: That's a heavy question.

In terms of developing these qualities, and how you do it, I've recently discovered—my mind kind of argued *against* it, but I recently discovered—that what Lyn was putting forward in terms of the work on Gauss and studying geometry and history, that that is true. My mind was not exactly inclined to dive into the Fundamental Theorem of Algebra, and things of that sort. The reason I respond that way initially, is because of the subject that you brought up initially.

You asked about Martin Luther King. King's commitment was to the *truth*. It was addressing what the actual nature of the universe is. He was committed to being truthful. As soon as you asked the question, I thought of a speech that I recently listened to, in which King addresses the fact that people are questioning him, for meddling in affairs which shouldn't concern a Negro preacher. "Why are you concerned about things, such as foreign policy, and what the United States is doing, from a standpoint of affecting the entire world?" And they were saying, "Well, look, you're meddling in these things, and you're upsetting people, talking about the Vietnam War, and so forth. Why don't you mind your own business? Haven't you noticed that you're not getting as much money and contributions as before? This is

affecting you. Don't you want money?"

And, King's response was a very profound response. He addressed the quality of what a real leader is. He said, "I'm not a leader of consensus." The conception he identified as guiding him, is, *what is right? What is truthful?* Since, I mean, you brought up the Black Nationalists, and so forth. Most so-called Black Nationalists, which were deployed against King, were complete enemy operations. Stokely—"Stroke-me"—Carmichael, and other people of that sort. People who talk about hatred for European civilization, on the basis of some ethnic business. This was a creation, a synthetic cult created by quote-unquote "white people." You know, Tavistock Institute is not run by Black people. They created this stuff, deliberately, to destroy what the Civil Rights movement represented. The principal proof, is that the typical Black Nationalist has no conception of ancient Egyptian history. I talk to these people, what's left of them, today—they know nothing about African history, or any history, for that matter.

And you look at King, on the other hand. He was asked, in an interview one time, what, if he had a choice of any book he could take on a desert island, beside the Bible. And he said, "I would take Plato's *Republic*." His commitment was a commitment to universal history, and to mankind, and I think that that is the principal issue which separates a successful movement, from one that fails.

And, just to address this thing that you brought up, on the influence of Gandhi. That's true, Gandhi did have an influence on King. But, from the standpoint of non-violence, the thing that you want to look at is Shelley, and his approach to the thing—not simply as a tactic, but as a principle of addressing that, before a people can be qualified to demand a form of government which is an expression of justice, they themselves have to express a level of human maturity, which necessitates—which, as Frederick Douglass eloquently put it, "unfits them" to be slaves. And that was the attitude of Percy Shelley. He understood injustice, he understood the evils of the oligarchical method of thinking that dominated the world during his time. But he understood also very clearly, as the case of the French Revolution demonstrated, that if you did not have a policy and a fight to educate the population, and to help, and to make them qualified by uplifting them above the mental status of beasts, above the mental status that today's popular entertainment will reduce us to, unless you educate people beyond this, then you can't demand justice and sanity.

Moderator: All right, we're being told our time is up. So, I guess, Lyn has parted the waters of popular opinion for us. Now it's time for all of us, to choose whether we're going to take up the moral challenge to find the courage to cross.

And we're going to sing.

Sylvia Olden Lee: And when you get, you in the crowd, all of us have an idea how it goes, don't spoil her solo, but when she sings, "He's got *you* and *me*," will you point to them, everybody in this hall should sing this with sincerity: "He's got *you* and *me* right in his hands."

Jenny: I think everybody should join in, every verse.

[Panelists and audience sing the African-American spiritual.]

"He's got the whole world in His hands,
"He's got the whole world in His hands,
"He's got the whole world in His hands,
"He's got the whole world in His hands.

"He's got the birds and the bees right in His hands,
"He's got the birds and the bees right in His hands,
"He's got the birds and the bees right in His hands,
"He's got the whole world in His hands.

"He's got the brothers and the sisters right in His hands,
"He's got the brothers and the sisters right in His hands,
"He's got the brothers and the sisters right in His hands,
"He's got the whole world in His hands.

"He's got everybody in His hands,
"He's got you and me right in His hands,
"He's got everybody in His hands,
"Oh, he's got the whole world in His hands."



LaRouche in Turkey 'My Job Is To Remove Cheney From Power'

Lyndon LaRouche and his wife, Helga Zepp LaRouche, were invited to Turkey June 13-18 by *Yarin* (*Tomorrow*), an independent monthly publication which has a strong orientation to Eurasian development, and which has printed writings by LaRouche over the past year and a half. *Yarin* arranged for LaRouche to keynote a major conference in Istanbul on June 14, co-sponsored by the Cultural Affairs Department of the Istanbul Municipality, on the theme "Eurasia: New Key for Global Development and Peace," and another, on the same theme, hosted by the Ankara Chamber of Commerce, in the capital on June 16. In addition, LaRouche addressed the national press in a number of press conferences and interviews, which generated massive coverage.

LaRouche set the agenda of his discussions, from his very first encounter with journalists, who welcomed him at the Istanbul airport for a short press conference. There, and in a short inter-



Lyndon LaRouche holds a press conference in Turkey.

view on CNN-Turk that evening, LaRouche stated that the current policy of the U.S. Administration was a policy drafted by Dick Cheney back in the early 1990's, and implemented only thanks to the impact of the events of Sept. 11, 2001. Naming Defense Secretary Rumsfeld, Undersecretary of

Defense Wolfowitz, Defense Policy Board member Perle, Cheney's Chief of Staff Libby, and others, LaRouche stressed that this is a small group of fascists, pushing an imperial policy, based on the threat and readiness to use nuclear weapons.

Continued on page 106

Maestro Briano Visits Los Angeles

In a city where Mozart's *Don Giovanni* is performed sans clothing, where Shakespeare is performed in leather, and where the cultural events of the season are movie premiers with pasty, anorexic movie stars teetering in spike heels down a red carpet (made in China), Lyndon LaRouche's Presidential campaign has just carried out a cultural coup d'état. One of the world's leading voice doctors joined us for four days of intense and



Maestro José Briano illustrates the physiological basis for *bel canto* singing.

demanding *work* to develop the natural beauty in all of us (and we're not talking skin tones!).

Maestro José Briano, friend of the Democratic Presidential pre-candidate, "Maestro" Lyndon LaRouche, teaches a full schedule of voice students in Mexico. He joined the LaRouche Youth Movement for four days of voice training in *bel canto*.

Believe it or not, this Renaissance method of "beautiful singing" is absent from virtually every music conservatory in the country. But, according to LaRouche, it is the only rational way to sing, and that is why Maestro Briano was invited to share his experience and

Continued on page 106

Turkey

Continued from page 105

LaRouche then defined his task as the commitment to lead an impeachment drive to remove Cheney, the leader of the “junta,” and the rest from power. Although he acknowledged the international opposition to the Iraq war and to the imperial policy, LaRouche emphasized that, since the U.S. is a nuclear power, the rest of the world cannot stop it; “It is necessary for us inside the United States,” he said in an interview to TV Channel 7, “to pull the string. This,” he went on, “is now happening,” as indicated by the moves by other political figures, from Brent Scowcroft, to John W. Dean, to Lawrence Eagleburger, and leaders in the Senate and House of Representatives, in the same direction.

Once this junta is removed, LaRouche explained, the President can be controlled, and his policy shifted 180 degrees. Regarding the Middle East, he



EIFNS/Muriel Mirak Weissbach

Lyndon and Helga LaRouche meet with former Turkish Prime Minister Necmettin Erbakan (left).

The impact of LaRouche’s visit was immediate and profound. He was the guest of Hulki Cevizoglu, the very popular host of the weekly “Ceviz Kabagu” program on A-TV, on June 14.

The program, the

said, this means reversing the effect of what was done in Iraq, by pushing through implementation of the Road Map, “even if it means pulling down the Sharon government, which the U.S. can do, if necessary.”

top talk show in the country, is broadcast internationally via satellite, and is a favorite among Turks in Europe and the United States. At the same time, the Turkish press began to report on LaRouche’s trip, nationally and abroad.

Briano

Continued from page 105

passion with over 60 organizers and friends in Los Angeles July 27-30.

From Sunday to Wednesday, Maestro Briano taught individual and group lessons to young people with abilities ranging from inexperienced to somewhat advanced. The lessons had groups of 10 to 12 young people. Each lesson was three hours long, which allowed time to both observe and participate. His goal, to any outside observer, is to give us the fundamentals of training in singing, by using exercises and answering questions. But, this is only scratching the surface.

First, in the Mind

Maestro Briano’s calculated, thorough method is provocative. Every time the answer-hungry Gen-X’ers ask him “how to vibrate the voice,” or “how to make a sound,” he forces us to create an image in our minds of what we want to produce, and often, through concentrated work, the sound just emerges. He challenges us to make the

sound as “beautiful” as possible, and bluntly tells us when the sound created is ugly. The mind, he explains, is very powerful, and it orders the body to do what it wants. One must therefore know beauty first, or have a sense of it, in order to create it. Instead of the popular belief that beauty is a magical, external accident which only few are destined to own, beauty becomes an idea, which subsumes the physical parts and is universal.

‘Accidental Genetics’

Many times Briano is confronted with this axiom of “accidental genetics,” and he uses the metaphor of “a champion not being born, but having to work hard in the gymnasium to develop his natural capability.” At the same time, he trains the voice technically, to allow it to keep up with the quality of the idea in the mind. This is an important principle that LaRouche’s youth movement is demonstrating: that ideas are accessible to anyone who fights for them, regardless of background.

His patience was refreshing, and it is

clear that his life’s mission is to create beauty.

As a result of Briano’s work, many young people who previously gave up on the idea of singing, are now excited about “finding their own voice.” Each human being is given the same physiological characteristics as most other people (vocal chords, etc.), but it is up to society to develop the singing voice. What excites young people is the idea that every voice is like a thumbprint, that there is no one else on the planet who shares the same voice. Therefore, the development of your personal voice allows you to communicate ideas in a more profound way than you may do when you are speaking. In this way, Briano’s mastery of the *bel canto* method, and his extraordinary ability to teach—along with LaRouche’s relentless leadership—inspires us to lead every person to discover his own unique ability to create beauty, and therefore, to empower him to shape history.

—Anna Shavin and Jenny Kreingold
LaRouche Youth Movement

Graham Lowry's Historic Mission

Longtime LaRouche associate Graham Lowry died July 28 at Georgetown Hospital in the city of his birth, Washington, D.C., after a long illness. Lowry, who would have been 60 in August, was a leader in the LaRouche movement, a member of the National Committee of the International Caucus of Labor Committees, and—a former history professor who had left that career to work with LaRouche—the author (1988) of a seminal work on the history of America leading up to the American Revolution: “How the Nation Was Won: America’s Untold Story, Volume I, 1630-1754.” Lowry’s work most recently shaped the Spring 2003 Fidelio symposium on “Leibniz and the American Revolution.”

There are certain facts which must be noted, and said by me, at this time, so that we may seize the unique occasion of this moment, to mobilize our commitment to what we must do in honor of fallen soldier Graham Lowry’s importance for our association. We have in our hands an uncompleted mission, a mission for the benefit of humanity which he set into motion with his unique approach, as a working professional historian, to original researches into the Leibniz roots of the American Revolution of 1776-1789. On that account, I must take this moment to do something for our true patriot and historian Graham which he can no longer do for himself.

Graham has combined a sensitive regard for truth, with the addition of an indispensable, creative, personalized treatment of subject, which marks the distinctively irreplaceably personal mark left by the truly professional truth-seekers among historians. Such historians are the soul of the political intelligence profession, and the indispensable inspiration of the conscience of the true statesman. To serve those ends, the true historian’s



ERINS/Stuart Lewis

IN MEMORIAM

challenge is to bring past history to life, as it actually was, as such among the greatest Classical dramatists and historians such as Friedrich Schiller did. So, the true historian brings belated justice to the sufferings and achievements of the past. He, or she breathes fresh life into a moment taken from the simultaneity of eternity. As I know of his state of mind from my discussion of this work with Graham himself, his approach in writing his celebrated book, was just that, and this shows in the reading.

The pioneering quality of his work, parallels that begun at a time before Graham defined his project, by the crucial, pioneering, 1970’s work of our deceased collaborator Allen Salisbury, by the contributions of the late statesman, freedom fighter, and friend Fred Wills, and by the two projects launched in echo of Allen’s work, the parallel undertakings by Graham and Anton Chaitkin. Yet, for more than a

decade, the fundamental contributions to American historiography by Graham, and Allen earlier, lay fallow, unfinished, chiefly because of the takeover of the leadership of the organization in the Americas by a turncoat agent of our own association’s and the U.S.A.’s avowed Synarchist enemy, Fernando Quijano. The moment for justice on that account has come.

When that Quijano delivered his menacing, fraudulent version of world and American history, at a 1990’s conference, Graham, seconded by Chaitkin, had the courage to rise to the occasion to denounce that viciously fraudulent sketch which had been just delivered from the podium. Virtual illiterate Quijano promptly showed his special hatred for Graham’s work, just as Quijano had worked similarly in his attempt to discredit the 1970’s work of Allen Salisbury. In an especially vicious reaction to Graham’s intervention, the same Quijano and his corrupted accomplices, organized a political-lynch-mob effort at a rump meeting called for this purpose, to expel Graham from the National Committee, and to cut Graham out of the organization as much as possible.

As soon as I had the power to do so, years later, I organized the restoration of Graham to his proper position of leadership. Graham then moved to resume his work, as much as his seriously impaired health allowed. Now, only some important fragments of this more recent work survive, but we, Nancy Spannaus and relevant others, shall do our utmost to bring the intended result to completion, for the honor of our association, and for the benefit of mankind.

Graham will have his place in immortality. Thank you, Graham, for being.

—Lyndon H. LaRouche, Jr.
July 29, 2003

The Great Debt of Ibero-America To the German-Jewish Renaissance: A Communication from Mexico

Among the historical accomplishments of Alexander von Humboldt, should be considered that of being the precursor of the independence movements of the American countries that he visited on his famous Botanical Expedition at the end of the Eighteenth and beginning of the Nineteenth centuries. Considering the influence of the ideas which he spread, one cannot deny him a role in all the independence movements.

In the recent weeks and months, we have published the results of the organization's "rescue" of the German-Jewish Renaissance and its contribution to keeping alive the thinking of the Renaissance of the Fifteenth to Sixteenth centuries.¹

One of the key figures of the Jewish Renaissance is Moses Mendelssohn (1729-1786), who defended the optimism of Leibniz against Voltaire and materialism. With his work in philosophy and theology, he laid the foundation upon which Judaism was incorporated into the modern world, breaking with the medievalism of the ghetto, and uplifting the cultural level of the Jews.

Reviewing the chronology of the life

of Humboldt, which appears in the book *Ensayo sobre el Reino de la Nueva España* (*Treatise on the Kingdom of New Spain*), it came out that it was the House of Mendelssohn and Friedlander which financed him. In 1799, Alexander von Humboldt met with the Spanish banker Simon de Arragora, who made good on the "unlimited credit" which the German banking house had put at his disposal. Humboldt said that Arragora was "one of the most distinguished men" of his time in Spain.

The same House of Mendelssohn financed the voyage to Spain (1800) of Wilhelm von Humboldt, a voyage which is made known in the book *Cuatro Ensayos sobre España y América* (*Four Essays on Spain and America*). I think that the works of Schiller on Spain form part of the same project, don't you?

Education of the Humboldts

As is known, the Humboldt brothers, at the age of 16, took classes in Hebrew from the same Moses Mendelssohn, through whom they maintained relations to this formidable intellectual circle from an early age. At this age, the brothers also constructed the second

The research memorandum presented here was drafted in 1999 by Carlos Cota Meza, as a "Public Note" to members of the International Caucus of Labor Committees, the organization founded by Lyndon H. LaRouche, Jr., in 1971, of which the author was a leading member in Mexico. Cota Meza died at age 48 on March 21, 2002, after a long illness. We invite continued research into the subject initiated here; as its author understood, such research will open, in the appropriate historical setting, many of the critical issues of the culture of Spain and Ibero-America otherwise addressed in this issue of Fidelio by "The Joy of Reading 'Don Quixote,'" [SEE page 56]. The memo was translated from the Spanish by Laurence Hecht in July 2003; subheads have been added.

lightning rod built in Germany, following the "instructions" of Benjamin Franklin.

Another of the tutors of Alexander and Wilhelm was Joachim Heinrich Campe (1746-1812), writer of children's books, and translator into German, in story-form, of the *Cartas de Relación de Hernán Cortés* (*Journals of Hernando Cortes*).

Another Spaniard key to the realization of the Botanical Expedition, was the Minister of State, Mariano Luis de Urquijo (1768-1817), a somewhat complicated political figure. Humboldt eventually criticized him, although he was the one who granted the famous passports.

It is said that the Urquijo family was the representative of the Rothschild Bank in Spain. The second Marquis of Urquijo (1843-1914) was involved in the construction of the first railroads, shipyards, steel mills,



The Granger Collection



The Granger Collection



Moses Mendelssohn (center), flanked by the young Humboldt brothers: Alexander (left) and Wilhelm (right).

and electrical plants. The Urquijo Bank apparently was in existence until 1948.

Research Leads

For purposes of investigation of the history of Spain and Ibero-America in this period, we would have to suppose that the scientific, political, and cultural circle which received Humboldt in Madrid and other cities, minimally was related to or influenced by the Jewish intellectual circle. The presbyter Cavanilles, Casimiro Ortega, Francisco Zea, Hipólito Ruiz, Juan Bautista Muñoz, the Abbé Pouret, José Espinoza Tello, Felipe Bauzá, and Clavijo, the last the object of powerful criticism from Goethe.

Insofar as history is not chronological, a good choice of date for the begin-

ning of the Botanical Expedition could be when Humboldt and Bonpland saw the Southern Cross for the first time, at which moment Alexander recited from memory the verses from Dante's *Commedia* which refer to that constellation.

I refer to this, because one of the things that comes out in the chronology of the Humboldt voyage, is that in each of the cities, he engaged in "typical German cultural evenings" (Havana, Caracas, Bogota, Lima, and Mexico City, among others), that of Mexico being "without equal for New Spain." I think that this is important, and would be more so if we could know what was done at such "cultural events."

In the PLAN [Andean Labor

Party—Ed.] Conference in Bogota in December 1982, I made a presentation on the Botanical Expedition, entitled "Science vs. Environmentalism: The First Botanical Expedition," where I found a relationship between the investigations of Humboldt, and Leibniz's *New Essays Concerning Human Understanding*. I send this to you separately. It would appear that "debt" is not only monetary . . .

—Carlos Cota Meza

1. See *Fidelio*, Summer 1999 (Vol. VIII, No. 2). Among the several symposium contributions in that issue, David Shavin's "Philosophical Vignettes from the Political Life of Moses Mendelssohn," includes reference to the Mendelssohn circle and the Humbolt brothers.—Ed.

Going Native in Siberia

The intent of *The Shaman's Coat* is partly summarized on the very last page, in which author Anna Reid writes:

"It has been fashionable for a while to think of all national identities as invented, to stress the artificiality of treasured national symbols and inaccuracy of not-so-ancient national myths. But the native Siberians are an example of the opposite phenomenon; of how hard it is to disinvent nationalities, of how they persist in the face of governments' best efforts at their destruction. To stretch a metaphor, the shaman bowing in front of the Russian flying-doctor is not donning his coat again, because although he hid it under a suit and tie for a while, he never really took it off."

Reid's emphasis here is revealed by the fact that she is a graduate of the London School of Economics, and participated in "bringing Russia into the marketplace," or the world of free trade. As any review of the literature of the London School of Economics reveals, the looting of natural resources becomes more achievable if a population is divid-

ed into "mini-states," "native rights" movements, or other such methods of community control.

Moreover, given that the Eurasian Land-Bridge as proposed by Lyndon LaRouche intersects this geographic region, an informed reader might ask if the agenda behind Reid's book is to argue that the habits and cultures of the so-called "peoples" of the region must be preserved, over and above the economic development which would lead to the ability of the human beings who inhabit the area to prosper. That is, as has been seen in the case of Brazil's Amazon region, is the intended use of this volume, the fostering of indigenous movements opposed to Siberia's economic development?

Cultural Relativism

Certainly, *The Shaman's Coat* leaves no doubt that the ideology of cultural relativism is alive and well at the London School of Economics. It is this ideology, the theory that so-called "less-developed peoples"—with emphasis on the term "peoples" as opposed to "men," as in "all men (and women) are created equal"—



The Shaman's Coat:
A Native History of Siberia
 by Anna Reid
 Walker & Company, New York,
 2002
 226 pages, hardcover, \$25.00

guides Reid's quaint account of her travels into Far Eastern Siberia, allegedly in search of shamans, gifted healers, and magicians whose powers allegedly outfoxed even Stalin's police. This is Reid's second such book; her first was *Borderland*—the Nineteenth-century Russian imperialist name for Ukraine.



Main and selected secondary routes of Lyndon LaRouche's Eurasian Land-Bridge proposal.

After reading that last page of *The Shaman's Coat*, I had to look again at the dust jacket, to see whether Ms. Reid was an anthropologist, a sociologist, or an ethnologist—that is, someone schooled in the bogus study of “lesser-developed” tribes, cultures, or “peoples.” Having confirmed that she was none of the above, I can only assume her to be part of the new generation of liberal imperialists, trained and certified in profiling the inhabitants of the former Soviet Union, for the purpose of discovering how these inhabitants could be yet again manipulated by the City of London bankers, Wall Street, etc., into tying up the vast oil-, gas-, and mineral-rich Siberian expanse.

Reid's sketches are very much reminiscent of Nineteenth- and early-Twentieth-century British accounts of travels to Russia, Belarus, and other parts of Imperial and Soviet Russia. She documents how Siberia was hard hit, first by the ravages of Stalinism, and then even worse by the effects of *perestroika* and the free-market reforms of the 1990's. But, at the same time, what Reid is attempting to defend, for example, is the right of Tibetan-style serfdom by Buddhist monks on the Russian side of the Tibet border—monks who each have their own mile or so square fiefdom among the Tuvars.

In extremely contradictory fashion,

Reid laments the state of Kamchatka and most of the rest of Eastern Siberia, but insists that only a people's rights movement that has sprung up to enforce the backwardness of the inhabitants of Kamchatka and Far Eastern Siberia, can possibly provide a solution. And, while what the much-abused inhabitants of Eastern Siberia really need is economic development—roads, electricity, running water—Reid is more concerned about being able to find “pure” members of various ethnic groups, i.e., members who have not intermarried.

The Trans-Siberian Railway

Strikingly, Reid appears to be completely unfamiliar with the Nineteenth-century fight by the great Russian chemist Dmitri Mendeleev and his collaborator, Count Sergei Witte, the Economics Minister, Railway Minister and builder, and Prime Minister, to build up Russia, including the Siberian region. Witte, whose ideas developed under Mendeleev's tutelage, was the chief promoter of the infrastructural development of Russia, all the way out to Eastern Siberia, and down into China.

For Reid, however, the Trans-Siberian Railway, created as the fruit of the Mendeleev-Witte policy, seems to exist in another universe, where economic development and great projects lead only to slaughter. She writes:

“The Buryat-Mongolian border was

laid waste by the original Mad Baron, Roman von Ungern-Sternberg, a wild-eyed Baltic-German who loathed Jews and commissars, believed himself to be a reincarnation of Genghiz [Khan] and reputedly soaked his battle standards at his captives' slit throats and upholstered his saddles with human skin. Bur-NatsKom [the local political committee] supported Grigoriy Semyonov, a half-Buryat former officer in one of the ‘native Cossack’ regiments, who raised a 2,000-strong army with Japanese help, stormed up and down the Trans-Siberian in the armoured locomotives ‘Merciless’ and ‘Destroyer’, and executed 1,800 prisoners in five days near Kyakhta.”

This is one of Reid's only two notices of that great infrastructure project.

Ritual Euthanasia

Despite her bias, Reid does usefully offer the reader a glimpse of the underdeveloped condition of native Siberians. Kamchatka, for instance, was one of the last places Reid visited, and she makes use of the Nineteenth-century memoirs of travelers to the island, including Anton Chekhov, who was sent there as a doctor to the penal colony. She includes the account of how the Chukchi, who no longer exist as a “pure” people, had adopted ritual euthanasia in the absence of medicine, it being considered an act of mercy for a wife to strangle a sick husband.

At this time in history, what Russia's Far East needs, is to increase the creative and scientific capabilities of every person—person, not tribal member or “peoples” member—who lives there. With more and more nations moving in the direction of Lyndon LaRouche's Eurasian Land-Bridge program—the development not merely of new rail lines, but the infrastructure of cities, universities, hospitals, etc., to go with it—Reid's book is definitely out of step with the potential that exists for humanity in this entire region. Adopting the Land-Bridge would mean burying, once and for all, the policy of creating micro-states, or “peoples,” which can easily be divided and conquered by those who make policy for the London School of Economics.

—Denise Henderson

We will not succeed unless we become a revolution of ideas. The revolution of ideas is, essentially, to rediscover the principle of truth, as scientific effectiveness defines a sense of truth, and to put the value of a human being, as being in the characteristic of an individual person to discover universal physical principles; to value them as gifts from earlier generations—from all over the world, in point of fact—as gifts we must transmit, enhanced, to future generations.

—LYNDON H. LAROCHE, JR.
July 26, 2003

A revolution of ideas.

Homer: The Odyssey, trans. by Robert Fagels, Penguin Classics, paperback, \$14.95

Aeschylus: Prometheus Bound, Seven Against Thebes, U. Chicago, paperback, \$9.00

Plato: Complete Works, ed. by John M. Cooper, Hackett, hardcover, \$47.00

Joan of Arc, by Herself and Her Witnesses, Scarborough, paper, \$16.95

Portable Dante, trans. Mark Musa, Penguin, paper, \$17.00. Includes 'The Divine Comedy'

Petrarch: Selected Sonnets, Odes, and Letters, Harlan Davidson, paperback, \$4.95

Giovanni Boccaccio: The Decameron, Penguin Classics, paperback, \$13.95

Toward a New Council of Florence: 'On the Peace of Faith' and Other Works by Nicolaus of Cusa, Schiller Institute, paperback, \$15.00

Miguel Cervantes: The Ingenious Gentleman, Don Quixote de la Mancha, Penguin, paper, \$10.00

Miguel Cervantes: Eight Interludes, C.E. Tuttle, paper, \$7.95

William Shakespeare: The Complete Works, Random House Value, hardcover, \$18.99

Johannes Kepler: Harmony of the World, American Philosophical Society, hardcover, \$45.00

G.W. Leibniz: New Essays on Human Understanding, Cambridge U.P., paper, \$25.00

Rembrandt, Phaidon Colour Library, paperback, \$9.95

The Political Economy of the American Revolution, EIR, paperback, \$15.00. Includes works by Leibniz, Franklin, Hamilton, and others

Percy Bysshe Shelley: Poems and Prose, C.E. Tuttle, paperback, \$7.95. Includes 'A Defence of Poetry'

Carl Friedrich Gauss: Disquisitiones Arithmeticae, Yale U.P., paperback reprint, \$40.00

A Source Book in Mathematics, ed. by David Smith, Dover, paper, \$19.95. Includes Bernhard Riemann, 'On the Hypotheses Which Lie at the Foundation of Geometry'

Francisco Goya: Los Caprichos, Dover, paperback, \$10.95

Abraham Lincoln: Selected Speeches and Writings, Random House Vintage, paperback, \$16.00

Paul Laurence Dunbar: Complete Poems, Hakim's, paperback, \$12.95

Franklin D. Roosevelt, A Rendezvous with Destiny, Frank Freidel, Little Brown, paperback, \$24.50

Testament of Hope: Essential Writings of Martin Luther King, Jr., Spring Arbor, paperback \$23.00

Lyndon H. LaRouche, Jr.: The Power of Reason, An Autobiography, EIR, paperback, \$10.00

Basic Books of the LaRouche Political Movement

Ben Franklin Booksellers

Call or write for our free catalogue.

Order on the web at www.benfranklinbooks.com

Call Toll-Free: 1(800)453-4108
Northern Virginia: (703)777-3661 **FAX:** (703)777-8287
e-mail: benfranklinbooks@mediasoft.net

Or mail your order to:

Ben Franklin Booksellers

P.O. Box 1707 Leesburg, VA 20177

Make check or money order payable to:
Ben Franklin Booksellers

****Shipping and handling (U.S.):** \$4.00 for first book \$1.00 each additional book. Additional shipping information available on request. Allow 3-4 weeks for delivery. Books shipped fourth class mail.

AUTHOR, TITLE (abbrev).

	Quantity	Price

Credit card orders: Please charge my

Mastercard Visa Am. Exp. Discover

Card No. _____ Expires _____ (Va. residents add 4.5%)

Signature _____

Subtotal

Shipping**

Sales tax

Total



Join
 The Fight for
 A New Golden
 Renaissance!

Join the Schiller Institute!

The Schiller Institute has been fighting since 1984 to bring about a new Golden Renaissance out of the depths of the current Dark Age. Giants like Cardinal Nicolaus of Cusa, Leonardo da Vinci, and France's King Louis XI strove against evil to give the world the new birth of freedom and creativity that we know as the Golden Renaissance of Fifteenth-Century Europe. Today, too, it will take the work

of key individuals, like you, to create a new Renaissance. JOIN THE SCHILLER INSTITUTE TODAY AND BE PART OF THIS GREAT EFFORT. Your membership will help finance the Institute's work in bringing Classical culture to America and combatting the evil of the Conservative Revolution. Help make a new Golden Renaissance a reality today!

----- ✂ CLIP AND SEND -----

Sign me up as a member of the Schiller Institute

- \$1,000** Lifetime Membership
 (includes LIFETIME SUBSCRIPTION to *Fidelio*)
- \$500** Sustaining Membership
 (includes 20 issues of *Fidelio*)
- \$100** Regular Annual Membership
 (includes four issues of *Fidelio*)

OR
 I wish only to subscribe to *Fidelio*
 \$ 20 for four issues

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

e-mail _____

TEL NO. _____

Occupation/Affiliation _____

Clip and send together with check or money order to:

Schiller Institute, Inc.
 P.O. Box 20244, Washington, D.C. 20041-0244

'Your heart can actually be opened'

If you look at Rembrandt's 'Lucretia,' it's obvious that she is innocent. The way the light is directly placed on her heart, on her chest—the way the light comes in through the blackness of the background—is a testament to her purity, to her virtue. The way the light hits the pearl necklace, and the hand that's open, that is caught in mid-motion.

One interesting thing is the relationship of the hands. Shakespeare wrote a poem about the rape of Lucretia, and in it, Lucretia says,

'Poor hand, why quiverest thou at this decree!
Honor thyself to rid me of this shame;
For if I die, my honor lives in thee,
But if I live, thou liv'st in my defame;
Since thou could'st not defend thy loyal dame,
And wast afraid to scratch her wicked foe,
Kill both thyself and her for yielding so.'

If you look at the hand that's clasping the knife, you know that Lucretia is saying, this was the hand that couldn't protect her, therefore it's the hand that has to atone for the sin. But the other hand is sweeping up; it's a testament to her innocence, open and in the light; but it's also, in a sense, to calm the people who are in the room, her



The Minneapolis Institute of Art, William Hood Dunwoody Fund

Rembrandt van Rijn, 'Lucretia,' 1666.



Andrew W. Mellon Collection, National Gallery of Art

father, her husband and other friends, who are sitting out there in the audience, looking at what's happened.

The way Rembrandt composes the painting, forces you, the viewer, to become the audience as well. You're not allowed to be passive. Think of it! Rembrandt, who's dead, takes a non-living substance, paint and canvas, and calls out to you from the 1600's: "Hey, I'm human! Hey, I'm grappling with this idea! Grapple with it with me as well!"

This relationship, between the artist, Lucretia, and us today, can not be achieved except in Classical art: Where you can re-experience the mind of Lucretia, while you are also experiencing, as the unseen audience in that room with her, being the father, being the husband, grappling with what just happened, wanting to stop her.

* * *

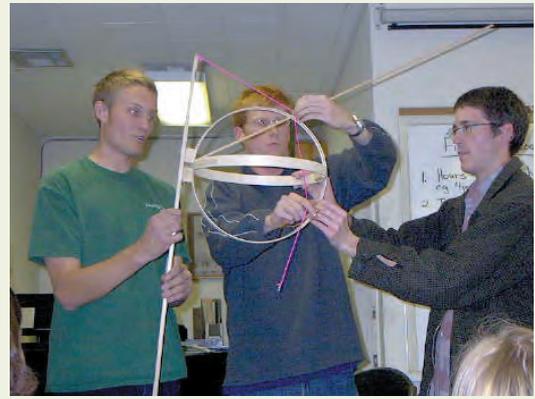
Rembrandt did a second 'Lucretia,' where the tension is settled; she's more serene, more peaceful. She has absolved herself of what she considered to be a sin. It's a kind of atonement. And again, you can see this, just through Rembrandt's different representations of the light.

[SEE 'Shattering Axioms, Fighting for Our Future!'—A Presentation by the LaRouche Youth Movement]

Believing Is Not Necessarily Knowing

What's wrong with today's education? Lyndon LaRouche begins this sweeping indictment of education policy:

- '1. Sense perception is not necessarily knowing.
- '2. Learning is not necessarily knowing.
- '3. Generally accepted opinion, academic or other, is not a standard for the definition of truth.
- '4. Today's teachers have not necessarily intended to educate or test their students in a manner suited to human beings.'



EIRNS

LaRouche's solution requires a wholesale revolution in thinking, in which the principles of scientific truth and social progress are shown to be united in the figure of Promethean man. 'We require not only a movement for education, but a political movement which is education in and of itself.'



EIRNS/Brendon Barnett

Shattering Axioms, Fighting for Our Future!— A Presentation by the LaRouche Youth Movement

In conference presentations and dialogue, leaders of the LaRouche Youth Movement demonstrate how the method of paradox in both the arts and sciences, generates the power to know the real universe at work beneath surface appearances. This is the power that drives the accelerating growth of LaRouche's Youth Movement internationally!



EIRNS/Chris Lewis



EIRNS/Brendon Barnett



EIRNS/Chris Lewis

The Joy of Reading 'Don Quixote'

Author Carlos Wesley shows how Cervantes used a madman and his crude peasant sidekick to take aim at the horrors of Hapsburg Spain—where successful attack demanded the weapons of humor, irony, and *agapē*.

