

FIDELIO

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Realizing Leibniz's Vision of Eurasian Development



The battle against economic underdevelopment and cultural backwardness ranks unquestionably among the great challenges for mankind in the next decade. As the American statesman Lyndon H. LaRouche, Jr., has shown, this will happen successfully only if the Western world concentrates on the greatest task of the Twenty-first century—the development of China and Russia, nations which, thanks to their wealth of population and raw materials, as well as culture, are the great reservoir of mankind.

The strategic vision of LaRouche is, historically, a further

development of the strategic plan which the great philosopher and statesman G.W. Leibniz proposed more than three hundred years ago. This brilliant thinker, who sparked the advancement of the sciences and laid the groundwork for a scientific physical economy, also saw the key for mankind's development in an ecumenical alliance of Europe, Russia, and China.

Maps: Economic-development corridors, centered on high-speed rail lines, link China and Europe, in LaRouche's Land Bridge program for Eurasian infrastructural development.

FIDELIO

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

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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 men.

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In Celebration of G. W. Leibniz's 350th Birthday

Defeat Fascist Economics— Impeach Governor Ridge, Build the Eurasian Land

The year 1996 is the 350th anniversary of the great universal genius Gottfried Wilhelm Leibniz (1646-1716), the German philosopher and statesman whose life's work contributed to the founding of the United States of America in 1776, and was in this century the formative influence on the intellectual development of Lyndon H. LaRouche, Jr., the world's leading physical economist and grand strategist.

As we approach the new millennium, the disintegration of the world monetary and financial system, as forecast by LaRouche, is propelling those elements of the Anglo-Dutch and French oligarchies who are intent upon preserving the international monetary system at all costs, to accelerate their drive for the imposition of Nazi-style economic policies. Their goal is the subjugation of sovereign nation-states to the dictatorial power of such supranational institutions as the United Nations, the International Monetary Fund, the World Trade Organization, and the World Bank—a veritable “Gang of Four” on a world scale.

What the cult-of-death globalists were not able to accomplish at the U.N. Conference on Population and Development in Cairo, Egypt in 1994, they are now attempting to accomplish through the globalization of the international economy, as witnessed by the unprecedented attendance of the Gang of Four supranational institutions at, and their domination of, the June 28-29 Group of Seven heads-of-state summit in Lyons, France.

As I.M.F. head Michel Camdessus admitted in Lyons, the world is in the throes of an international banking crisis. This crisis can be seen today in Russia, in Third World nations such as Brazil, and also in such industrial nations as France. The solution proposed by Camdessus is to “tighten the screws,” i.e., to impose homicidal austerity, and to abandon completely any notion of economic development, which is the only

true basis for peace in the future.

In the United States, this policy is being implemented as the “Contract on Americans” by Newt Gingrich's allies in the Republican Party—with the aid of Gingrichite moles in the Democratic Party, as evidenced by the recent passage of the welfare “reform” bill.

To combat this fascist assault on human life internationally, the LaRouche movement has undertaken two key initiatives. Employing Lazare Carnot's proven principle of “concentrating firepower on a crucial flank,” Lyndon LaRouche has called in the U.S. for the

impeachment of Pennsylvania Governor Tom Ridge for Nazi-style crimes against humanity. In order to balance the budget, Governor Ridge

deliberately cut medical assistance to 220,000 working poor and disabled, an act he *knew or should have known* would result in 3,500 deaths this year alone—even though an alternative, to raise revenue by taxing financial speculation, was available.

At the same time, Lyndon LaRouche and his wife, Helga Zepp LaRouche, have launched an international effort, in the footsteps of G. W. Leibniz, to revive President Franklin D. Roosevelt's World War II commitment to rid the world of “Eighteenth-century British colonial methods” toward the Third World, by forming an alliance among the only three powers in the world today—the United States, China, and Russia—which have the combined power to overthrow the fascist dictatorship of the Gang of Four; and, by employing American methods of economic development, to establish a family of sovereign nation-states on this planet, sharing a community of interest based upon the concept that all men and women are created *in the living image of God*.

For these initiatives to succeed, however, it is necessary to challenge the false axiomatic assumptions which prevent our public leaders and citizens from acting in anything but a lemming-like manner. This is the true work of “evangelization,” without which no

EDITORIAL

Bridge

solution were possible.

Hence, this issue of *Fidelio* features a major essay by Lyndon LaRouche, entitled “Leibniz From Riemann’s Standpoint,” which views Leibniz’s contribution to the science of physical economy from the standpoint of the LaRouche-Riemann method, as that relates to the concept of man defined by the *Book of Genesis* and the *New Testament*.

Introducing this essay is Elisabeth Hellenbroich’s “G.W. Leibniz and the Ecumenical Alliance of All Eurasia,” in which Leibniz’s grand strategy to develop humanity, through an alliance between Europe and China, mediated by Russia, is outlined. And the cultural basis upon which such an alliance can and must be built *today*, is presented by Helga Zepp LaRouche in her commentary, “China, Twenty-Five Years Later,” written after her May 7-9 participation in the International Symposium on Economic Development of the Regions Along the New Euro-Asia Continental Bridge, in Beijing, China.

Two articles—“John Keats vs. The Enlightenment” and “Percy Bysshe Shelley and the *Motivführung* Principle in Poetry,” by political prisoner Paul Gallagher and Dan Leach, respectively—continue our ongoing discussion of the principle of Metaphor. Both authors demonstrate how these Classical English-language poets strove to revive the Platonic method of hypothesis, as against the mind-destroying “mathematizing of language,” carried out by the oligarchical agents Thomas Hobbes and Sir Isaac Newton—who, not accidentally, were the opponents of Leibniz in his time, and against whose Aristotelean method of thought LaRouche battles today.

Our translation of a lecture given by Friedrich Schiller in 1789, entitled “Some Thoughts on the First Human Society Following the Guiding Thread of the Mosaic Documents,” was prepared by Anita Gallagher; like her husband Paul, Mrs. Gallagher remains a political prisoner in the Commonwealth of Virginia. This lecture, with its ringing indictment of the illegitimacy of oligarchic power, should be seen also in the context

Breadth and Depth

There glitter many in the world,
Who all things respond to so witting,
And where what’s charming, and where pleasure-filled,
One ascertains answers quite fitting;
You’d think, had you heard them ’loud confide,
That they had actually conquered the bride.

Yet go they from the world quite still,
Their lives were wasted sadly;
Who any excellence gaineth will,
Who’d bring forth greatness so gladly,
Must concentrate so still and tight
In tiniest point the highest might.

The trunk doth rise into the air
With uppish branches in splendor,
The glitt’ring leaves breathe a scent so fair,
Yet they can the fruit not engender;
The seed alone i’t’h’ space so wee
Conceals the pride o’t’h’ forest, the tree.

—Friedrich Schiller,
translated by Marianna Wertz

of the “Small Cowper Madonna” of Raphael, which appears on our cover. For Schiller argues here, that although the *Fall* introduced evil into the world, it also made necessary and possible the transition of man to Freedom and Humanity. From the standpoint of Christianity, the *Fall* is referred to as a “happy fault,” requiring Christ’s birth and sacrifice to set man free, through imitation of Christ’s creative reason and love.

Lastly, we are pleased to include an interview with Pennsylvania State Representative Harold James, a former Philadelphia police officer, and the current head of the Pennsylvania Legislative Black Caucus. Representative James, who is one of 733 current and former state representatives who have called for the exoneration of Lyndon LaRouche and his associates, is currently playing a world-historical role in Pennsylvania in defense of the poor and oppressed. He has courageously joined with the Schiller Institute and others to oppose the homicidal policies of Gingrichite Governor Tom Ridge, and is the prime sponsor of a bill introduced into the Pennsylvania House of Representatives which calls for taxing speculation, in order to balance the budget through productive investment, rather than by murdering defenseless people.

More than three hundred years ago, Europe's greatest philosopher, statesman, and scientific organizer, Gottfried Wilhelm Leibniz, first developed a plan for the economic and cultural development of Eurasia. In Russia, the

G. W. Leibniz and Alliance of

by Elisabeth


The battle against economic underdevelopment and cultural backwardness in many nations of the world ranks unquestionably among the great challenges for mankind in the next decade. As the American statesman Lyndon H. LaRouche, Jr., has shown, this will happen successfully only if the Western world concentrates on the greatest task of the Twenty-first century—the development of China and Russia, nations which, thanks to their wealth of population and raw materials, as well as culture, are the great reservoir of mankind. Central to this, must be a political economy based upon the concept of man as expressed in the Christian West as *imago viva Dei*, man *in the image of God*.

The strategic vision of LaRouche is, historically, a further development of the strategic plan which the great philosopher and statesman Gottfried Wilhelm Leibniz

proposed more than three hundred years ago. This brilliant thinker, who sparked the advancement of the sciences and laid the groundwork for a scientific physical economy after the Thirty Years War had ravaged Europe, saw the key for the development of a unified Europe in Eurasia in the development of Russia as the mediation between China and Europe.

It was Leibniz's vision that Europe, Russia, and China would form an alliance, based on the infrastructural exploration of these countries, in particular Russia's Siberia; on the founding of scientific academies; and on a common effort to engage in scientific, historical, and comparative language studies—which subjects were all to serve as the strategic and scientific guidelines for the work of Europe's scientific academies.

Leibniz so highly esteemed the strategic importance of



project was undertaken, at least in its rudiments, by Leibniz's correspondent Czar Peter the Great, while great strides were made in the initial transmission of the Renaissance sciences to China. Leibniz's vision must be our starting point today.

the Ecumenical All Eurasia

Hellenbroich

his Eurasian project, that in the general instruction of the Berlin Society of Science (1700) and other academy drafts, he cited the idea of the scientific mission in China and Russia as the essential aim of the academy's work. Especially propitious for Leibniz, was the fact that he kept up a close personal relationship with the Russian Czar Peter I (the Great), and was at his disposal as adviser on questions of infrastructure.

In a 1716 memorandum directed to the Czar, entitled "On the Arts and Sciences and Crafts in the Russian Empire," Leibniz provided an outline of how to create a scientific renaissance. The main points he emphasized were: (1) create the necessary instruments for education; (2) educate people in science; and (3) discover new knowledge.

In this outline, Leibniz proposed that print shops,

book shops, and libraries be established, "in which manuscripts would be found which are unknown in Europe, manuscripts from Greece, Turkey, Persia. . . . They should also collect books in many different languages, Slavonic, Dutch, Latin, Welsh, Spanish, also in Greek, in literary and vulgar Hebrew, Arabic, Syrian, Chaldean, Ethiopian, Coptic, Armenian, and Chinese. But the largest part must be in Latin. . . . Such a library should be established in such a way, that there would be pooled information from histories, countries, languages, sciences, food—in other words, that one would find there the whole treasury of human science, as much as there has been written about it."

For Leibniz, the key precondition for such a renaissance lay in the transmission, or rather, the replication of the method of *ars inveniendi*, the art of invention. And

therefore, he wrote in this memorandum, it was crucial to “rediscover” the best knowledge of mankind, starting with the earliest possible date of human civilization. “We should order this knowledge in such a way . . . that we can see *origines inventionum*—the ‘origins of invention’—how, by what method, did man come to specific discoveries in the past, and how can he make new ones; because, by rediscovering the discoveries, we would have a method at hand which would improve the sciences, and a pathway for making new discoveries.”

Hence, in addition to a library, he called in his memorandum for a cabinet displaying “all optical, nautical, mechanical, and other inventions. . . . This includes instruments which an architect and an engineer [*mechanicus astronomus*] needs.” There also should be a *theatris artis*, Leibniz says, including models, such as those of newly invented machines for waterworks, mining, etc.

Leibniz, who from very early on had investigated the question of a “grammar of thought”—an alphabet of human thinking, as it was called in his *characteristica universalis*, was addressing with the notion of *origines inventionum*, a question that is the underlying “metaphor” in many works of LaRouche, including his 1993 essay “History as Science.”*

It addresses the question of isochronicity in the history of mankind—namely, what is the connection between *idea* revolutions of the past, the present, and the future? And what is the underlying “continuity principle” in mankind’s history, which is the precondition for guaranteeing the durable survival of mankind?

The capacity for durable survival of our species is measured by what LaRouche terms “potential relative population-density,” which collapsed whenever mankind was at a standstill, and which grew during times of technological and cultural advancement. LaRouche connects this measurement with three other necessary axioms: natural law, the idea of the sovereign individual, and the idea of the sovereign nation-state. It is the same question with which Plato introduces his famous dialogue, *Timaeus*.

At the beginning of this dialogue, Critias tells the story of the wise man Solon, who once visited the priests of the Temple of Amon in Egypt. These people had told Solon: “You Greeks think you understand something about history, but you are like children. You have forgotten that once, many, many centuries ago, you had a civilization which collapsed because of natural catastrophes, and this happened to many cultures, without the question being

asked: why did this happen?” This story acts as a prelude to the dialogue, in which the astronomer Timaeus presents a series of hypotheses about the creation of the universe. Plato is saying here, that only when sovereign man explores the laws of nature, does he become not the victim of fate, but instead the willful director of the course of history.

Leibniz placed special importance on the exploration of the physical geography of the Eurasian lands; he spoke very often of the necessity of magnetic, i.e., cartographic surveying of Russia and China, especially Siberia. Only then could one think constructively about the promotion of agriculture, mining, and handicrafts, of the construction of canals, the draining of swampy areas, and, above all, of an opening up of Eurasia through industrial-transport technologies—wherein he understood the construction of roads from Russia to China and Persia, the dredging of streams and canals, and so forth. Only through the mediation of Russia, would it be possible in the future to tie Europe with China, which would bring both sides, not only political-economic but also spiritual-cultural, mutual benefits. As he wrote in the instruction drafting the Berlin Society of Science: “By this means, Chinese products and news from China would come to Europe, and on the other hand the Christian faith would spread to China and indeed spread through Moscow as the means of communication.”

In the general instruction, the importance of the czar, Peter the Great, was especially stressed, as architect of the new European peace and economic order conceived in Leibniz’s eyes: “Because now the selfsame, owing to his great power and most extensive lands, can contribute a greatness to the establishing of our generally beneficial goal aimed at through the society, thus we want to consider, how with this monarch on this occasion trade be made customary and useful preparation be made, that from the boundaries of our lands as far as China, useful observations—astronomical, geographic, as well as national, linguistic and cultural things unknown to us, artificial and natural, and such-like—be made and sent to the society.”

Leibniz and China

Leibniz was the first European scholar who, in a truly systematic way, transmitted to Europe a deeper knowledge about China’s Confucian tradition. The only thing known at that time in Europe about China—and then, only among a very small circle of people—were the reports written by the Franciscan monks Montecorvino and Rubruch at the beginning of the Thirteenth century. These reports were known to the Vatican, and perhaps to

* *Fidelio*, Vol. II, No. 3, Fall 1993, pp. 10-85. SEE “Leibniz From Riemann’s Standpoint,” p. 14, this issue, for LaRouche’s most recent presentation of this discussion.



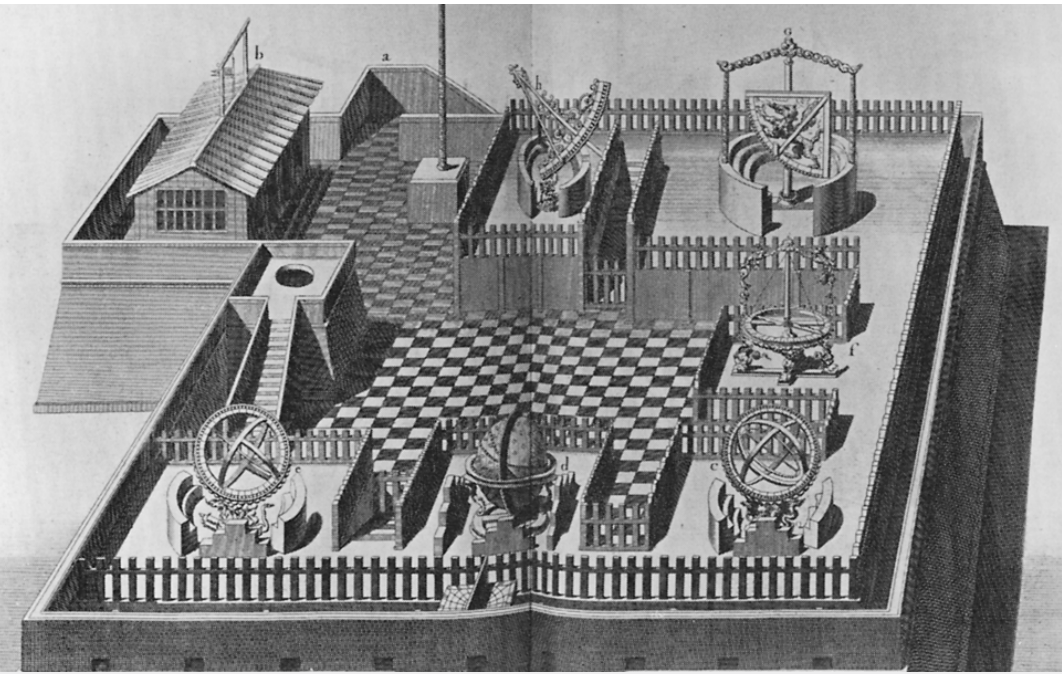
The Granger Collection

Father Matteo Ricci



The Granger Collection

Father Adam
Schaal von Bell



New York Public Library

Beijing observatory, designed and furnished by Father Ferdinand Verbiest.

For Leibniz, the precondition of a scientific renaissance lay in the replication of the method of *ars inveniendi*, the art of invention. By studying the inventions of the past, he wrote, ‘we would have a method which would improve the sciences, and a pathway for making new discoveries.’

the small circle around Christopher Columbus. Except for a few books here and there, there was no comprehensive map of China. (And, certainly, no one in Europe knew that, at the beginning of the Fifteenth century, the great Chinese Admiral Cheng had made five major maritime expeditions to the east coast of Africa, utilizing ships far in advance of the best in Europe; expeditions which were, unfortunately, suddenly halted and never resumed.)

Leibniz got his first direct knowledge of China in 1689, when he met the Jesuit Father Filippo Grimaldi in Rome. This eyewitness told him about China, Russia, the first Chinese-Russian border treaty (the treaty of Nerchinsk), and about the work of the Jesuits in China, which had been initiated at the beginning of the Sixteenth century by the Italian Father Matteo Ricci. This priest, who had received his mathematical and astronomical training from the German Christopher Clavius, had brought a harpsichord and some of his own compositions to China. During the twenty-eight years that he was there, Ricci translated into Chinese the most modern European scientific books, and developed a systematic cartography, thus beginning a most fascinating collaboration with the Chinese imperial court.

Participating in this were the fathers Adam Schaal von Bell, the Flemish Ferdinand Verbiest, the Italian Grimaldi, the French fathers Joachim Bouvet, Jean François Gerbillon, and Antoine Verjus, to name a few—all of whom were either directly in charge of the emperor’s Astronomical Station and Mathematical Tribunal, or were consulted as engineers in the various hydraulic works being undertaken, or served as diplomats. In some of the letters Leibniz wrote to Father Grimaldi, as well as to the Polish Father Kochanski, he inquired, for example, “whether there are not some traces of geometry by proofs in the old writings of the Chinese, and some traces of metaphysics; and whether they knew the theorem of Pythagoras? . . . Whether there are some natural scientific works by the Chinese, translated into Latin. . . . Whether they have some interesting machines, which could be replicated in Europe; . . . what kind of artificial means they use in agriculture; . . . what about their iron production and mineral mines, how do they produce salt and sodium?”

Lastly, he wanted to be informed concerning a *Clavis Sinica*, that is, a grammar of the Chinese language. Again and again, Leibniz emphasized the importance of comparative language studies: he wanted studies using the

Lord's Prayer to be carried out, in particular for those languages in the region between Russia and China, as a means to discover something about the origin of mankind and of human thought. And, by comparing the basic principles of Confucian philosophy with the principles of Platonic-Christian philosophy, he came to the conclusion that, in the ancient Chinese culture, the same universal questions concerning a Supreme Being, the laws of the universe, and man, were asked, as they were asked by Plato and answered by the Christians.

That is, Leibniz found that the human mind, no matter in which part of the world, follows the same pathway of reasoning. This proves the universal quality of the creative mind. One example was Chinese astronomy, which was ancient, and which Leibniz studied. Lyndon LaRouche has noted that the oldest extant poetry, the Vedic hymns of India, tell the story of how human civilization began to develop on the basis of observing the planets and developing a solar astronomical calendar; and, thus, how the laws of the universe were explored and civilization born.

In one of the many letters written to Grimaldi, Leibniz refers to the correspondence between the famous astronomer Johannes Kepler and Father Terrentius, who in 1630 worked as astronomer at the court of the Chinese emperor. He reported that Kepler was very interested and helped to bring to China his Rudolphine Tables,* and also corrected a few mistakes that had crept into Chinese astronomy owing to poor handling of the texts.

The individual who played a central role in the spirited exchange between the Jesuit fathers and China, as brought out in the *Novissima Sinica*, was the Chinese Emperor K'ang Hsi, a descendant of the Manchu dynasty. His "thirst for knowledge was nearly unbelievable," reported Leibniz, "for he occupied himself together with Father Verbiest in the seclusion of an inner chamber three or four hours daily on mathematical instruments and books, as a student with his teacher. And he made such great progress, that he comprehended Euclidean proofs, understood trigonometric calculations, and, thus, was in a position to express astronomical phenomena numerically."

Under K'ang Hsi's reign, the first important Chinese-Russian border treaty was concluded, and great infra-

structure projects initiated: dam building, to master flooding, as well as the building of a very extensive network of canals.

K'ang Hsi corresponded to the Platonic-Leibnizian ideal of a "philosopher king," which was also a central concept of Confucian philosophy, found in the philosophical writings of Mencius and of the great Twelfth-century neo-Confucian, Chu Hsi. Unlike the viewpoint of the Chinese legalists, sophists, and Taoists, Confucian philosophy states that man is "by nature good," and that the highest goal in the life of man, is to be able to govern himself, to do *bona opera* (good works), and to contribute in the best possible way to the well-being of all. This principle says, that those who rule should do so according to the idea of the good, of justice, love, and reason. They should fulfill "the Mandate of Heaven"—and if they violate it, they should not rule.

Leibniz's *News from China*

In the year 1697, Leibniz synthesized his programmatic ideas for China in a kind of *leitmotif*, in the little book *Novissima Sinica*. "I consider it a singular plan of the Fates that human cultivation and refinement should today be concentrated, as it were, in the two extremes of our continent, in Europe and in China, which adorns the Orient as Europe does the opposite edge of the Earth. Perhaps Supreme Providence has ordained such an arrangement, so that, as the most cultivated and distant peoples stretch out their arms to each other, those in between may gradually be brought to a better way of life. And I think it is likewise not accidental for the Russians, who through their huge empire connect China with Europe, and who rule over the far north of the uncivilized area along the coasts of the Arctic Ocean, that with the help and the engagement of their present ruler, they will follow on the pathway of our discoveries."

Among the most important China plans expressed in the *Novissima Sinica*, were the founding of a world Academy of Science, which would be engaged jointly in Western and Chinese science; the future role of Russia as mediator between China and Europe; the exploration of Siberia; and not least, the founding of comparative philology, which would yield information about the assumed common origin of all peoples.

In the 1689 letter to Father Grimaldi cited above, which is reproduced in the *Novissima Sinica*, Leibniz inquires in detail about this, and other things:

(15) Whether there are traces of geometric proofs in the old writings of the Chinese, and any traces of metaphysics, and whether that one theorem was already known which seemed to be worth Pythagoras' hecatomb?

* The Rudolphine Tables were a systematic mapping of the motion of the planets, calculated by Kepler and named by him after Emperor Rudolph II. Kepler used the data that he and Tycho Brahe developed at Tycho's observatory, the best observatory in the world to that date, for this purpose. For the impact of Kepler's astronomy on China, see Michael O. Billington, "Kepler and Renaissance Science in China," *21st Century Science & Technology*, Vol. 9, No. 2, Summer 1996, pp. 51-64.

(16) About the age of heavenly observations by the Chinese, and whether one can not get them, in order to complete the history of the heavens; . . .

(21) Whether nothing is known of the sea between North Asia and North America, and about the outer location of land of Jesso beyond Japan, and about the correction of geographic maps of these regions;

(22) About the translation into Latin of any useful accounts from Chinese history, and above all also works of natural science . . . ; . . .

(24) Whether they have any special machines which would be worth the trouble to build in Europe, and their manner and method of propelling the greatest stones, for which they make use of many people;

(25) What is to be expected from a *Clavis* [grammar] of Chinese characters; . . .

(27) About any artificial economic devices of the Chinese for tilling the field and garden, which are of worth and useful to be described; . . .

(30) About the ore and mineral mines, and how they extract table salt, sodium bicarbonate, and similar things.

Comparing China to Europe, Leibniz was deeply touched by the ethical conduct of the Chinese, and their respect for the individual. He therefore suggested that, given the moral decay in Europe, the Chinese should send missionaries to Europe, in order to teach them their practical philosophy. On the other hand, while Leibniz saw Chinese manufacturing and machine building—i.e., the technological level, equal to Europe’s—he nonetheless emphasized that the Chinese lacked the “first eye” which the Europeans had developed: exact mathematics. And, in addition, “we also have a ‘second eye’ which they don’t know too well, which I call the ‘first philosophy,’” wrote Leibniz. “But the scientific study of the stars and the planets (as Father Verbiest said in his Latin and Chinese studies), the *Muse Urania* which seems to influence the Chinese emperor, has opened up a situation in which our sacred and truly heavenly teachings [Christian theology] are finding an open field.”

Leibniz, in full admiration for this great country of the Orient, was of the opinion that perhaps not since the Apostles, had a greater cultural endeavor been initiated, from the standpoint of Christian thought, than in China.

In the same year that *Novissima Sinica* appeared, Leibniz wrote a letter to Duke Rudolph August of Braunschweig-Lüneburg, entitled “The Secret of Creation.” Added to the letter was a coin which Leibniz had designed, in which he represented the binary number system, which he had been able to “rediscover,” as he says, on the basis of a study of the 3,000-year-old texts of the Chinese Fuh Hi. “*Imago creationis*” and “*ex nihil ducendis Sufficit Unum*” were the *leitmotifs* for the coin. Leibniz

explains why: The world has been created out of nothing, by the almightiness of God. And this could not be better represented, he says, than by the origin of number (which for Leibniz was a metaphysical idea, a Platonic thought-object), and the development of number out of One and Zero. The secret of Creation was that God “not only created all out of nothing, but that He created it well, and that all that He created was good.” Therefore, he said, He would have conceived of an image showing light and darkness, “because in the beginning the earth was without form, and void, and the Spirit of God moved upon the face of the waters. And God said, Let there be light: and there was light.” The empty void, the terrible darkness belongs to Zero and Nothing, but God’s spirit with His light is the One, Leibniz explained. And he printed underneath, on the coin, the binary number system, the predecessor to today’s digital computer systems.

Leibniz’s Philosophical Method

Leibniz was a devout Platonist. Contrary to the empiricists, naturalists, and Taoists, Leibniz showed with his scientific method that man, on the basis of a “universal” quality of his mind, a “natural light,” can, out of himself, create new ideas. And man does it in such a way that, in a sense, everything that he thinks, exists “virtually” in his mind from the beginning, because the mind always expresses his future thoughts. And, Leibniz says, what man thinks in a somewhat confused way today, he will one day think out as a clear thought-object: “Nothing could be taught to us (as Plato’s dialogue *Meno*, on the discovery of irrational numbers, shows), if the idea were not ‘inborn’ in our mind—which is like the matter out of which new thought-objects are formed.”

Leibniz saw the excellence of the Platonic method of thinking, demonstrated by the fact “that he [Plato] defines the mind as a self-moving substance, which out of its own, freely determines its actions, and therefore Plato correctly conceives the mind as the ‘principle of action’ contrary to matter . . . [and] that all real knowledge is concerned with ‘eternal’ truth, and that ‘universal, eternal ideas have more reality than ephemeral ideas, which come and go and participate in matter.’”

This means that, for Leibniz:

1. Mind is not matter, but nature has its origin in metaphysical principles, which supersede the material.
2. The capacity to create universal ideas is an “inborn” faculty of man, in the sense that St. Paul understood it, that the “laws of the universe are inscribed in the hearts of people,” “even if they can’t grasp all, one must admit that the idea of God, the idea to think of

God, is within man's nature," as St. Paul said.

3. Behind the phenomena of nature, there lies an eternal, invariant principle, which Leibniz calls "sufficient reason," which, since it does not need any cause, lies outside the chain of causes. "It is therefore a necessary Being, a necessary existent, which is its own cause; this ultimate cause is called God."
4. The universe was not created by blind caprice, but rather follows a creative necessity, and in his infinite goodness and wisdom, God created "the best of all worlds," i.e., "from God's highest perfection follows, that He has chosen the best possible plan, in bringing forth the universe, according to the greatest multiplicity united with the greatest order: in the place, since the location and time are used in the best way and the greatest effect is brought forth in the simplest way: shortly, by which Creation is given the greatest power, the greatest knowledge, the greatest luck and the greatest good, which the universe can take up in itself."
5. Without the love of God there will be no foundation for a just society. One only obtains this from the true demonstration of the existence of God, i.e., from the discovery of new laws of nature, the improvement of man's living conditions, i.e., through *bona opera* (good works), which man creates in imitation and likeness of God's love and wisdom.

Natural Philosophy

In the course of his intensive studies of Chinese language and astronomy, as well as of Confucian philosophy, Leibniz came to the conclusion, that there existed in the old Chinese culture a methodical mental stance, which came to the same representations concerning the Most High, Absolute, God, the laws of the universe, and humanity, as had Plato and the Christian philosophers.

Shortly before his death in 1716, Leibniz wrote a philosophical essay, which he unfortunately could not complete, called *The Natural Theology of the Chinese*. This essay contains a harsh criticism of a reductionist approach in the interpretation of Confucian philosophy. Leibniz's criticism was prompted by the work of the two Jesuits, the Italian Niccolo Longobardi and the Frenchman St. Marie, who in Leibniz's opinion had reduced Confucianism to a materialistic, naturalistic, or pantheistic philosophy. "China is a great empire, no less in area than cultivated Europe," Leibniz wrote, "and indeed surpasses it in population and orderly government. Moreover, there is in China in certain regards, an admirable public morality

conjoined to a philosophical doctrine, or rather doctrine of natural theology, venerable by its antiquity, established and authorized for about three thousand years, long before the philosophy of the Greeks, whose works nevertheless are the earliest which the rest of the world possesses, except for our sacred writings. For both of these reasons, it would be highly foolish and presumptuous on our part, having newly arrived, compared to them, and scarcely out of barbarism, to want to condemn such an ancient doctrine because it does not appear to agree at first glance with our ordinary scholastic notions. Furthermore, it is highly unlikely that one could destroy this doctrine without great upheaval. Thus, it is reasonable to inquire whether we could give it a proper meaning. I only wish that we had more complete accounts and greater quantities of extracts of Chinese classics, more accurately translated."

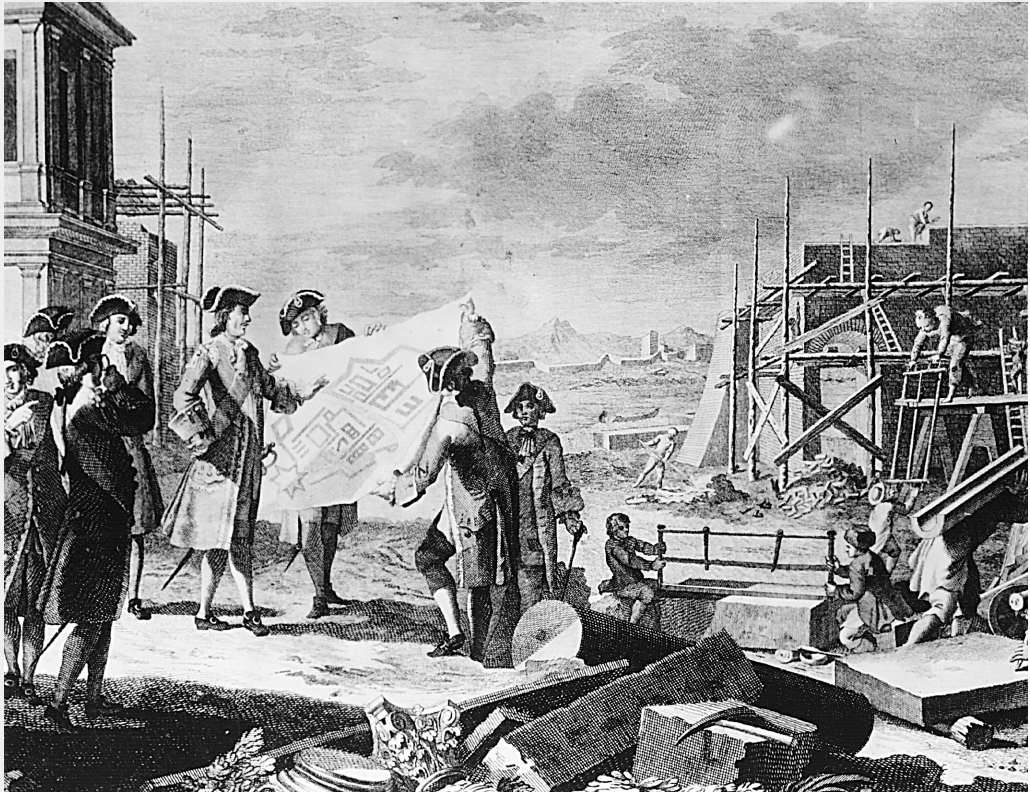
Leibniz, studying the original texts of Confucius and Chu Hsi, made out of this dialogue a fascinating synthesis between the basic principles of Confucianism, and Christian philosophy. With the kind of love that we know from Lyndon LaRouche's approach to people, always taking the best from everyone, and from the standpoint of reason, Leibniz concluded that the three main principles of Confucianism all come very near to what the Christians conceive as God.

"One should above all consider their *Li*, which is the prime mover and ground of all things," Leibniz says, and he quotes: "The first principle of the Chinese is called *Li*, that is, reason, or the foundation of all nature, the most universal reason and substance; there is nothing greater nor better than *Li*. From *Li qua Li* emanate five virtues: piety, justice, religion, prudence, and faith. For the Chinese, just as *Li* is Being *par excellence*, so it also possesses truth and Goodness *par excellence*. . . . Should one after all not say that the Chinese came very close to that absolute substance which we pray to under the name of God?"

Li is not the material cause of things, as Father Longobardi had assumed, nor a world soul in the sense of Spinoza or Averroes. (Spinoza reduced everything to a single substance, of which all things were only modifications.) But *Jovis omnia plena*—God fills all, that is, He is in all things and all things are in Him. The second principle, *Ch'i*, corresponds to matter, just as it corresponds to the instrument of the first principle which moves matter. "In consequence of this production of prime matter by the primary principle, or primitive form, by pure activity, by the operation of God, Chinese philosophy more closely approaches Christian theology than the philosophy of the ancient Greeks. . . . Admittedly, it appears that the Chinese believed that the *Li* first and always produced its *Ch'i*, and therefore one is as eternal as the other. But there

In a letter to the czar's Chancellor, Leibniz wrote: 'The land where the sciences flourish best, will be most beloved to me, since the whole of humanity will ever profit from it . . .

For the true treasures of humanity are the arts and sciences. That is what most distinguishes humans from animals, and the civilized from the barbarians.'



Corbis-Bettmann

Czar Peter the Great supervises the building of St. Petersburg.

should be nothing surprising about this, since they were apparently ignorant of the one 'Revelation' which can explain to us the beginning of the universe. St. Thomas Aquinas and other great doctors have claimed that the dogma could not be demonstrated by reason alone. . . . And there are those who believe that because the beginning of the Chinese empire occurred during the time of the Patriarchs, they could have learned about the creation of the world from the Patriarchs."

The third principle, *Shangdi*, and *Li* are the same thing, Leibniz says. One has every reason to give to God the name of *Shangdi*. What we call the light of reason in man, Confucius calls the commandment and law of Heaven: "To offend Heaven is to act against reason, to ask pardon of Heaven is to reform oneself and to make a sincere return in word and deed in the submission one owes to this very law of reason. For me, I find this quite excellent and quite in accord with natural theology. Far from finding any distorted understanding here, I believe that it is only by wrong interpretations and by interpolations that one could find anything to criticize on this point. It is pure Christianity, insofar as it renews the natural law inscribed in our hearts—except for what revelation and grace add to it to improve our nature."

Leibniz, the 'Solon of Russia'

From the beginning, Leibniz was clear that a rapprochement between China and Europe were only possible, if at the same time Russia, which he viewed as a country with immense, though unexploited possibilities, were developed. In October 1711, the first personal discussion occurred between Leibniz and the czar, Peter I (the Great), in Torgau.

Leibniz was from then on appointed, with an annual income of 1,000 Thalers, as an official adviser to the Czar. "I am in a certain way the Solon of Russia," commented Leibniz about this appointment to the Princess Sophie Charlotte, "even if from a distance. The Czar has let it be said to me, through his Lord High Chancellor Count Golovkin, that I should renew the laws and establish new administrative and legal norms . . ."

Other than the written documents of engagement which Leibniz himself later wrote, there exist no notes on record of this historic meeting. However, it is clear from the various memoranda and letters, which Leibniz directed to the Czar or to ambassadors and ministers of his, such as War Minister von Huyssen, the ambassador von Urbich, and Lord High Chancellor Golovkin, which

projects he placed in the center of his Russian plan. Thus, the establishment of a magnetic observatory, with whose help the vast land might be cartographically surveyed and infrastructurally developed, appeared very essential to him. At the same time, Leibniz submitted to Peter the Great a project for the investigation of the languages of Asian peoples and the origin of languages, and stressed the importance of these philological inquiries to the Christianization of Asia and Russia.

Among additional projects which he proposed, were the exploration of Siberia, the dredging of Russian river systems, the draining of swampy areas, the exploitation of undeveloped Russian mineral resources, the building of Russian road networks to China and Persia, the establishment of observatories and, not last, his greatest concern, the establishment of scientific academies and schools for the spread of the best and most progressive knowledge.

In his essay "The Education of a Prince," he raised the aim of the Russian education plans to a concept. Learning is a question of "the necessary, the useful, and the agreeable." It is decisive, "that one be a good man, a man of heart, a man of judgment and generally a cultured man. The good person strongly and actively cherishes feelings of piety, righteousness, and love of man, and makes every effort to do his duty. The man of heart cannot easily be shaken and proves, in all of life's circumstances, his freedom and presence of mind. The man of judgment thinks and judges rightly overall, without letting himself be dazzled by the light. And the cultured man knows at all times to maintain decency and to avoid all that is improper"

Leibniz's vision, to bring about a union between China and Europe by way of Russia, runs like a thread through his memoranda and letters. It was like his earlier legal proposal to France's Louis XIV, a "Consilium Aegypticum," a strategic flanking maneuver against the power politics of France, Holland, and Sweden, which at that time threatened to split Europe into many opposing interests and powers.

In a letter of Jan. 16, 1712, Leibniz wrote to Czar Peter: "Have moreover also wanted to enclose an extract from Chinese or Cathay letters, from which to see, how also there one considers scientific advancement and how therein Your Majesty could attach China and Europe with one another P.S. It appears, it is God's Providence that science should transform the circle of the Earth and henceforth also come to Scythia, and that Your Majesty could be the instrument thereof, since he could take the best, on the one side from Europe, on the other side from China, and could improve what both did through good institutions." Leibniz was deeply saddened over the small resonance his projects found with the Ger-

man territorial princes, and also in the rest of Europe. In a letter to Chancellor Golovkin of Jan. 16, 1712, he wrote that he would rather that his vision win a ruler like the czar of Russia or the emperor of China, whose decisions could contribute to the well-being of millions of men, than to suffocate in the mediocrity and smallness of territorial princes:

"Since my youth, it has been my goal, to work for the glory of God for the growth of the sciences . . . , in which I have in part succeeded through Godly grace, in that I made new discoveries in the Republic of Sciences . . . , I am constantly ready, to direct my thoughts to the great goal. And I have only sought a prince who has the same goal. And therein I make no differentiation, neither in regard to the nation nor the party. . . . I would rather see if these sciences bloom strongly with Russians, than work only in a mediocre fashion in Germany.

"The land where this will flourish best, will be the most beloved to me, since the whole of humanity will ever profit from it, and its true treasures will have been increased. For, the true treasures of humanity are the arts and sciences. That is what most distinguishes humans from animals, and the civilized from barbarians."

The 'Memorandum to Czar Peter'

In his first "Memorandum for the Czar Peter on a Society of Sciences in Russia," Leibniz summarized his conceptions thus:

It appears to be God's providence, that the two most powerful rulers of the earth, the czar and the emperor of China, take pains with great eagerness to introduce in their lands the knowledge of European sciences and their applications. The czar has personally familiarized himself with this knowledge with us, and it would be most unfortunate if such an opportunity, which was given to us by God, remained unused and the utmost were not put in place to make use of this for the benefit of Christendom. If there is something which should hinder the completion of these plans, then it is the unhappy condition in which Europe finds itself at this time. Fear prevails with the Protestants concerning the oppression of their religion.

Fear reigns in Europe before the power of France, just as fear of a change, which would be put in place as the consequence of the downfall of the Spanish monarchy and an increase in the power of the French crown, after the death of the Spanish king.

Not last, Europe also finds itself in a condition of exhaustion, because of the long war with France and the unhappy conclusion of peace. These, therefore, are the factors which hinder Europe from putting in place the things which would present the best to all and honor to God. This does not mean, however, that one should let one's hands sink on

one's lap on this account, and relinquish everything to God.

Thus have I, for my part, discussed these questions with the most varied people, who come from the immediate environs of the czar, and proposed to them that one should better use the role of the czar. . . . And thus I would much like to know, to what extent I can position myself, on my side, on behalf of this worthy goal. . . . Your Majesty appears to have interest in two things: in a fortunate resumption of war with the Turks, and in an improvement of position of his lands and the lives of his people. . . .

The interest which Your Majesty has in this, to make your land flourish and to bring the civilian and military matters into good condition, signifies the translation into reality that in your great land an increase in living standards, commerce, and money turnover will be provided for.

As a consequence thereof, the people would turn more to the sciences and arts, and become hard-working. The consequences of that would be, that Your Majesty could place his immense power, which God has granted you and your land and people, towards the glory of God and to the use and benefit of all Christendom. And this is so much the more important, because thus China and Europe—as the two most extreme ends of this world—would be brought together through the mediation of the czar.

By this means, Chinese products and news from China would come to Europe, and on the other hand the Christian faith would spread to China, indeed through Moscow as mediator. The prerequisite for this would be, that we bring to Moscow all the institutions which we have in Europe. Moreover, the czar must be able to get capable people from the most diverse occupations. He must teach his subjects.

(1) In order to have good reports or information, as the case may be, transmitted from Europe to Russia, it were necessary that Your Majesty direct that the complete descriptions of arts and sciences which are to be found in books be collected, and the best of these be translated into Russian.

It were further beneficial if the innovations made in the most diverse occupations were to be written down for the use of the subjects.

(2) In order to attract good people, the land should be open to the world and a "*sanctionem pragmaticam*" should be put forward, according to which, each, in accord with his liking, can leave the land. One should let societies, academies, and organizations organize all kinds of people from Europe and offer them estates instead of cash payment. The question were also still to be put, whether it would not be good, to establish European colonies in many places, and to grant appropriate privileges therefor.

(3) To ask the question, how one makes the people in Muscovite lands familiar with shipping, military science, the arts, sciences, and moderation and good customs, is to consider that one cannot begin much with such people, who are already grown up and enjoy the idle life and excess; for this reason, the highest hope rests on the youth who are growing up. These should be brought up in a way that redounds to the pleasure and use of God and man.

(4) In respect to the execution of the plans, thus were it

necessary, if Your Majesty established a higher collegium, which would depend exclusively on the guidance of the czar and whose proper goal would consist therein, to improve the aforementioned plans and the economic development of the czarist lands . . . in the sense, that all sciences and manufactures, and the domains which are connected to them, would from here out be managed. . . . Now, how these things are brought to realization in the most profitable way, without too much expense and yet with great advantage, one must still speak about in detail in another place. But above all, one should think over, how the land utilization were improved, to accomplish a better development of mines as well as a better use of rivers and of inland navigation

In Conclusion

The idea of Europe, China, and Russia working together, led Leibniz, in the disastrous period after the Thirty Years War, to create the foundation of modern Europe. He saw the key to this in the infrastructural opening and development of Eurasia—above all of Russia and China, based upon a scientific renaissance. However, Leibniz knew that such a renaissance were only possible, if the "art of invention," *ars inveniendi*, were to be replicated in the thought of every individual.

If we transfer Leibniz's design to our current time, and hold it before our eyes, we see clearly the enhanced vision of Lyndon LaRouche for the Twenty-first century.

Leibniz conceived his idea of an ecumenical alliance between Confucian and Christian thinking, from the standpoint of *bona opera*, that is, a method to generate, transmit, and assimilate new discoveries through good works. It is not conceivable to develop the gigantic potentials of Asia, and to guarantee the provision of all humanity with vital necessities, unless we apply ourselves to the development of these most populated lands of the earth. Just as for Leibniz, so for us, there must be no distinction between any nation or party, and "that country in which the sciences will best flourish, will be the most loved . . . because all mankind will profit from it."

This is Leibniz's legacy, as we today confront the greatest crisis human civilization has ever seen.

* * *

FOR FURTHER READING

Previous issues of Fidelio have featured the following in-depth studies of China and the West by Michael O. Billington: "Toward the Ecumenical Unity of East and West: The Renaissance of Confucian China and Christian Europe," Summer 1993 (Vol. II, No. 2), pp. 4-35; "The Taoist Perversion of Twentieth-Century Science," Fall 1994 (Vol. III, No. 3), pp. 76-96; and "The Enlightenment and the Middle Kingdom," Summer 1995 (Vol. IV, No. 2), pp. 34-62.

Leibniz

G.W. Leibniz



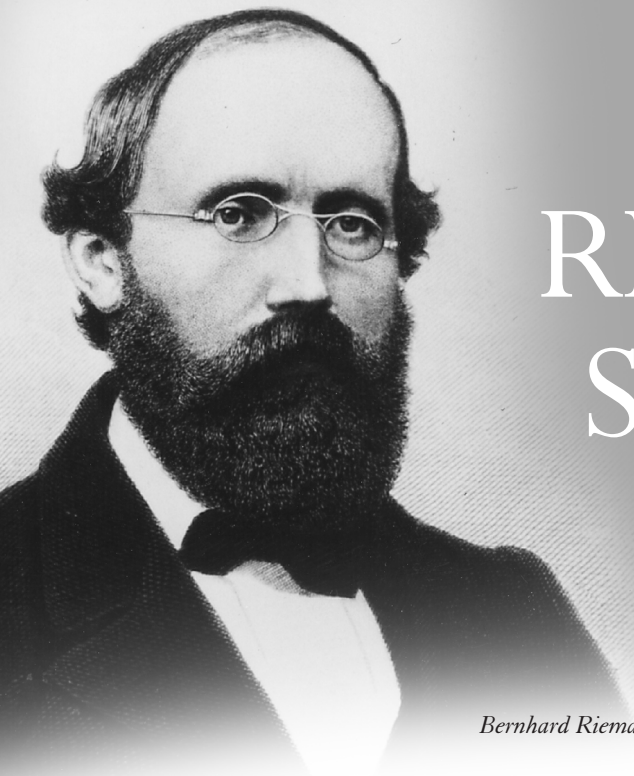
Johannes Kepler

Photo credits: Kepler, The Granger Collection; Leibniz, Corbis-Bettmann; Riemann, Corbis-Bettmann.

One who has not merely learned, but knows relevant features of the work of Johannes Kepler, Gottfried Leibniz, Carl Gauss, and Bernhard Riemann, must be appalled by the unbridgeable gulf between the actual work of those exemplary, leading figures of modern European science, and what most of today's relevant academic specialists misrepresent crucial elements of that work to have been. Such has been the present writer's cumulative experience, over those sixty-odd years, since he began systematic studies of the putatively leading European philosophers from the Seventeenth and Eighteenth centuries.

During most of those decades, the writer has wrestled with relevant, published scholarly and other misrepresentations, in his verbal and oral exchanges with relevant professors and students of philosophy, with ordinary laymen, and with practitioners of mathematical science. With rare exceptions, whenever any among these crucial issues of principle is addressed, nearly all among the profes-

1. Unless otherwise noted, the references to Leibniz's writings cited here, are limited to the following: [Loemker] Gottfried Wilhelm Leibniz, *Philosophical Papers and Letters*, ed. by Leroy Loemker (Boston: Kluwer Academic Publishers, 1989); [Monadology] G.W. Leibniz, *Monadology and Other Philosophical Essays*, trans. by Paul and Anne Martin Schrecker (London: Macmillan, 1965); [Theodicy] G. W. Leibniz, *Theodicy*, trans. by E.M. Huggard, ed. by Austin Farrar, 5th printing (Peru, Ill.: Open Court Publishing Co., 1996). The principal reference to the work of Bernhard Riemann, is to Riemann's 1854 habilitation dissertation, *Über die Hypothesen, welche der Geometrie zu Grunde liegen* ("On The Hypotheses Which Underlie Geometry"), in *Bernhard Riemann's*



Bernhard Riemann

FROM RIEMANN'S STANDPOINT¹

by Lyndon H. LaRouche, Jr.

July 14, 1996

sional opinions encountered, are not merely mistaken, but are uttered with shameless unconcern for truthfulness.

If one applies the method of Socratic dialogue, seeking to smoke out the underlying, axiomatic roots of these differences, two causes for the widespread academic, and popular misrepresentation of Kepler, Leibniz, and Riemann, are brought to the surface. First, that the standpoint of most of those commentators, is that of Aristotle, or the empiricists. Second, when the core of the difference is chased back to its relevant epistemological rabbit-hole, any reference to the fact, that the issue is rooted in opposition to the principles underlying the scientific method of Kepler, Leibniz, and Riemann, evokes their modern opponents' implicitly hysterical effort to deny the fact, that their own, contrary, judgments are derived from such differences in axiomatic assumptions.

Typically, the hysteria expressed on the second count, is of the same form as Isaac Newton's absurd literary outburst: . . . *et hypotheses non fingo!* The Newtonian system rests upon a very precisely defined hypothesis, which

Newton denies to exist.² On the subject of Kepler, Leibniz, or Riemann,³ the argument of most putative scholarly authorities, is analogous to Newton's denial of the existence of his own hypothesis. Rather than acknowledging the difference between their own and their subject's axiomatic assumptions, Newton *et al.* have insisted, that they themselves have no such assumptions to be contested. That hysterical behavior by Newton *et al.*, might remind us, of the startled, wild-eyed boy (probably the local schoolyard bully) caught by his mother at the moment he has his hand in the cookie-jar, with inculpatory crumbs all around his mouth, shrieking at his mother: "What cookie-jar!"

As we shall show in the course of this paper, those writers against which we complain thus, have not relived

Gesammelte Mathematische Werke, ed. by H. Weber, reprint of (Stuttgart: B.G. Teubner Verlag, 1902) [(New York: Dover Publications, 1953) and (Vaduz, Liechtenstein: Saendig Reprint Verlag)], pp. 272-287. Various English translations of this habilitation dissertation are extant, but, for purposes of precision, reference is made to the German. Other references to Riemann's writings are always to the reprint of the Weber edition: *Riemann Werke*. As a general, recurring reference, see Ralf Schauerhammer and Lyndon H. LaRouche, Jr., on Kepler and Riemann [Schauerhammer and LaRouche], respectively, in the "Riemann Refutes Euler" feature, in *21st Century Science & Technology*, Vol. 8, No. 4, Winter 1995-1996, *passim*.

2. See Riemann *Werke*, p. 525: *Die Unterscheidung, welche Newton zwischen Bewegungsgesetzen oder Axiomen und Hypothesen macht, scheint mir nicht haltbar. Das Trägheitsgesetz ist die Hypothese: Wenn ein materieller Punkt allein in der Welt vorhanden wäre und sich im Raum mit einer bestimmten Geschwindigkeit bewegte, so würde er diese Geschwindigkeit beständig behalten.* An English translation of this is found in the translation of the "Philosophical Fragments" from the *Riemann Werke*, published in *21st Century Science & Technology*, Vol. 8, No. 4, Winter 1995-1996, p. 57. More on the hypothetical basis for Newtonian physics, below.

3. Hereinafter, we focus upon these three figures of the four listed. Our primary focus here, is the retrospective connection of Riemann to Leibniz. Kepler is kept in focus, for reasons to become clear later in the paper. Gauss, the most prolific mind in modern science after Leibniz, represents, together with his collaborator Wilhelm Weber, and protégé, Riemann, a topic deserving of special attention in a location devoted to that connection.

the Socratic experience of the fundamental discoveries achieved by any among these three crucial figures of modern science. We shall show, that, for that reason, however much they might claim to have learned, they have no direct mental experience of the relevant acts of discovery of principle involved. Thus, however much they have merely learned, they know relatively nothing of crucial importance about those types of subject-matters of science, in which the principal variables to be considered, are differences in underlying (e.g., axiomatic) assumptions.

Thus, one might recognize, as in the manner indicated above, that the seemingly characteristic trait among today's roster of putatively authoritative commentaries, is that each and all are governed much less by a passion for truth, than by blind zeal. We observe that that zeal is commonly mustered in defense of some philosophical standpoint contrary to that of any and all among of such targets of their muddled commentaries, as those four whom we have listed at the outset of this paper. In general, it may be said, that most such commentators are fairly classed, either as Aristoteleans, or philosophical empiricists. All seek to deny, that any influential principle of mathematics or physics (for example) might have been achieved by a scientific method contrary to their own.⁴ Above all, they reject that fundamental principle of Socratic method, Plato's method of hypothesis, by means of which all of the crucial discoveries of Kepler, Leibniz, and Riemann (for example) were generated.

For that, and related reasons, no competent representation of the central conceptions underlying Leibniz's work can be presented in the terms of scholarship which have, unfortunately, become conventional in qualifying doctoral candidates, or, more generally, in the production of related, putatively "scholarly" theses. In the case, such as this topic, in which most among the putative authorities are distinguished almost as much by their incompetence (or intellectual dishonesty), as their scholarship, one must emulate that most estimable Franciscan, François Rabelais, to reject, as ridiculous, the suggestion, that consensus among a representative body of putative scholarly authorities, such as our modern Suckfists and Kissbreches of science, might be the relevant approach to the issues at hand. One must reconstruct the relevant principles, as if from the ground up. To this end, as we have said above, one must follow the map of Plato's method of

negation of axiomatically misguided, but official, or other generally held opinion; we must employ the Socratic method of hypothesis.

Today, the most efficient standpoint from which to present, to a modern, literate audience, the axiomatic basis for Leibniz's scientific work, is the case of the fundamental discovery, respecting the principle of hypothesis, which Bernhard Riemann applied to mathematical physics, in his 1854 habilitation dissertation.⁵ This present writer's discoveries within the domain of Leibniz's science of physical economy, provides the best vantage-point from which to demonstrate this specific connection of Leibniz to Riemann. We summarize that approach to the conceptions; we, thus, avoid the wide, textbook-paved road to Hell, and follow the Classical humanist method, instead. The latter, is the method of re-experiencing, at least in outline of the crucial points, the mental processes of one or more among the relevant original discoverers. The relevant case here, is the present writer's reenactment of Riemann's discovery, but from a fresh standpoint. This serves, in turn, as our vantage-point for pointing out some characteristic features of Leibniz's method.

Three points are considered below. First, what the present writer came to recognize as the deeper significance of Riemann's habilitation dissertation. Second, how the writer's own discovery in physical economy imparts to Riemann's discovery, an otherwise overlooked authority. Finally, how we are forced, by considering Riemann's and the writer's own discoveries, to adopt a deeper appreciation of some among the more celebrated writings of Leibniz.

1. The Principle of 'Universal Characteristics'

During the interval from his own fourteenth through eighteenth birthdays, this writer became a follower of Gottfried Wilhelm Leibniz. His acquaintance with Leibniz came through English editions of some of Leibniz's noted books, obtained, chiefly, either from the family household's library, or the Lynn, Massachusetts Public Library. This came as part of a project begun the summer preceding the writer's thirteenth birthday, and continued through his eighteenth year: a comparative study of the relatively most popular titles from leading English,

4. As James C. Maxwell purported to justify his refusal to acknowledge the work of the Gauss, Weber, and Riemann which Maxwell had parodied. He explained, that it was his policy to refuse to recognize the existence of any geometries but "our own."

5. See footnote 1.

French, and German philosophers of the Seventeenth and Eighteenth centuries, taking each in chronological order.

The writer began with writings of Francis Bacon, turned next to Thomas Hobbes, René Descartes, John Locke, Leibniz, Hume, Berkeley, Rousseau, taking up English translations of Immanuel Kant's *Critique of Pure Reason* and *Prolegomena to Any Future Metaphysics* about two and a half years later. The Leibniz writings featured in this series (and read, over and over again), were the *Monadology*, *Theodicee*, and *Clarke-Leibniz Correspondence*.⁶ At that time, the writer then found the empiricists trivial in content, relative to Leibniz, although foes of some importance respecting their obvious influence on the world as viewed from 1930's Massachusetts. It was the defense of Leibniz against the central argument of Kant's *Critique of Pure Reason*, which proved itself a more worthy and profitable challenge, back then. Although this writer did not turn to a systematic study of Plato's writings until the mid-1950's, he had already been steeped in Plato's method of hypothesis, through studying and defending certain among the leading published writings of Leibniz.

Obviously, as for any person, many childhood and youthful experiences converged to shape the present writer's character. However, in retrospect, the importance of working through a pro-Leibniz counter-attack upon Kant, was, without doubt, the most crucial of these formative experiences. This influence was hewn into a practical form by his most significant post-war experience, the encounters with, first, Norbert Wiener's *Cybernetics*,⁷ and, also, those notions of "operations research" and "systems analysis" converging upon the work of Bertrand Russell's devotee, John Von Neumann. The earlier wrestling against Kant, provided the standpoint from which to identify the kernel of evil implicit in Wiener's statistical definition of "information theory."

As reported in various locations, by the beginning of the 1950's, the writer's original discoveries, effected in the course of refuting "information theory," impelled him to undertake a careful rereading of Riemann's habilitation dissertation. The crucial importance of that rereading, lay in Riemann's addressing the subject of the determining function of Plato's method of hypothesis, in defining any competent form of mathematical physics.⁸ Once we

have considered the implications of Riemann's work, we are able to see his most famous predecessors within modern science in a fresh way: Gauss, Leibniz, and Leibniz's crucial predecessors, Kepler, Leonardo da Vinci, and da Vinci's crucial predecessor, Nicolaus of Cusa. Consider the relevant, central implications of Riemann's habilitation dissertation, and then the significance of Riemann's discovery, when it, in turn, is situated within the context provided by this writer's own original discoveries in physical economy.

Briefly, the significance of Riemann's discovery, is this. Consider the form of algebra introduced to the Seventeenth century by the founder of the "Enlightenment," the atheistic Servite monk, and follower of William of Ockham, Paolo Sarpi. Consider the expression of this in the work of such Sarpi lackeys and followers as Galileo Galilei, Thomas Hobbes, and René Descartes. The proximate source of the Enlightenment forms of algebra, employed by René Descartes, Isaac Newton, and their devotees, is derived from an "Ockhamite" reading of what is most widely recognizable as that modern classroom parody of Euclid's geometry embedded in the mathematics curricula generally, as presented, still, in secondary and higher education during the time of this writer's youth, and earlier.

The fallacies of this algebra, are the starting point of Riemann's dissertation. His point of departure there, is that in the form of algebra derived hereditarily from the work of Galileo, Descartes, Newton, *et al.*: *Discrete events, and their associated movements, are situated within a Cartesian form of idealized space-time*. This point has been presented by the present author in numerous earlier locations, but, on pedagogical grounds, it must be stated again here, this time in a choice of setting appropriate to the connection we are exposing, between the ideas of Riemann and his predecessor Leibniz.

Riemann opens his dissertation, with two prefatory observations. First, that, until that time (1854), "from Euclid through Legendre," it was generally presumed that geometry, as well as the principles for constructions in space, was premised upon *a priori* axiomatic assumptions, whose origins, mutual relations, and justification remained obscure. The second general point of his plan of investigation, which he restates in the conclusion of the dissertation, is that no rational construction of the princi-

6. See footnote 1.

7. Norbert Wiener, *Cybernetics* (New York: John Wiley & Sons, 1948). The writer's first encounter with Wiener's book occurred during Winter 1948, prior to the Wiley release of the hardbound U.S. edition, in the form of a loan to him of an earlier, Paris, paperbound printing.

8. Lyndon H. LaRouche, Jr., "On LaRouche's Discovery," *Fidelio*,

Vol. III, No. 1, Spring 1994. The use of the argument supplied in Riemann's habilitation dissertation, enabled the writer to solve the problem of mathematical representation incurred by his own original discovery in the science of physical economy. Hence, because of this relationship of Riemann's discovery to his own, the result came to be identified as "The LaRouche-Riemann Method." On Riemann's habilitation dissertation, see footnote 1

ples of geometry could be derived from purely mathematical considerations, but only from experience.⁹ He concludes his dissertation: “We enter the realm of another science, the domain of physics, which the subject of today’s occasion [mathematics] does not permit us to enter.” Riemann, thus, refutes the presumption on which a Newton devotee, of Prussia’s Frederick II, Leonhard Euler, depended absolutely, for the entirety of his attack on Leibniz’s *Monadology*.¹⁰

On grounds of the principles of Classical humanist, or cognitive pedagogy,¹¹ the prudent course of action, now, is to reconstruct the conceptions at issue from the initial standpoint of simple, deductive theorem-lattices. This pedagogical approach leads us by the most direct route, to the central issue of Riemann’s discovery: *the*

validation of an axiomatic-revolutionary quality of discovery of universal principle, by reason of which we are obliged to construct a new mathematical physics, to supersede that erroneous one previously in vogue. Later, continuing that process of construction, to the point of examining the writer’s own original discovery in physical economy, we identify the cognizable feature of the individual person’s mental life, in which we may then locate the significance of Riemann’s revolution in mathematical physics.

Riemann’s Principle of Hypothesis

The pedagogical reference-point throughout this paper, is the contrast between that Platonic principle of *change*,¹²

9. *Loc. cit.*, footnote 1. On the second point, Riemann writes: . . . *dass die Sätze der Geometrie sich nicht aus allgemeinen Grössenbegriffen ableiten lassen, sondern dass diejenigen Eigenschaften, durch welche sich der Raum von anderen denkbaren dreifach ausgedehnten Grössen unterscheidet, nur aus der Erfahrung entnommen werden können.* (pp. 272-273) The concluding sentence of the dissertation restates this point: *Es führt dies hinüber in das Gebiet einer andern Wissenschaft, in das Gebiet der Physik, welches wohl die Natur der heutigen Veranlassung [the subject of mathematics] nicht zu betreten erlaubt.* (p. 286)

10. On Euler’s attack on Leibniz, see, Lyndon H. LaRouche, Jr., *The Science of Christian Economy* (Washington, D.C.: Schiller Institute, 1987), “Appendix XI: Euler’s Fallacies,” pp. 407-425. Note a typographical error on p. 407; the passage should read “He [Euler] was a proponent of the Newtonian reductionist method in mathematical physics.” Euler was a member of an anti-Leibniz salon within the Berlin Academy of Prussia’s “Frederick the Great,” closely associated with such followers of Newton’s patron, Abbé Antonio Conti, and members of Conti’s network of salons, as Pierre-Louis Maupertuis, Johann Lambert, Giannaria Ortes (the founder of “Malthusianism”), Voltaire, and Joseph Lagrange. On this attack on Leibniz by Euler, the following history is most notable. A purely geometrical proof for the fact that π is of a higher cardinality than the Plato-Eudoxus-Eratosthenes-Archimedes notion of “irrationals,” was discovered by Nicolaus of Cusa (*cf. De Docta Ignorantia*, 1440). The physical proof, that non-algebraic (i.e., transcendental) functions must supersede the algebraic notions of Descartes and Newton, was demonstrated by Leibniz, Jean Bernoulli, *et al.*, during the 1690’s, in respect to the interconnected facts of isochronicity in the gravitational field (Huyghens) and the relativity of a constant “speed of light” with respect to refraction (Rømer, Huyghens, J. Bernoulli). Using the same false premises which he adopted for the attack on the *Monadology*, Euler presumed that the distinction between algebraic and non-algebraic (“transcendental”) functions could be degraded to its relatively degenerate expression, as a subject of infinite series (see Leibniz-Clarke Correspondence on the subject of differential calculus and infinite series). Around this, the Newtonian devotees, following Euler and Lambert, built the myth that the proof of π ’s transcendental quality, is the proof derived, “hereditarily,” from the tautologically fallacious assumptions of Euler’s 1761 attack on the *Monadology*. Hence, the popularization of the myth, that it was Ferdinand Lindemann, in 1882, who first “proved” the transcendental quality of π ! (See Lyndon H. LaRouche, Jr., “Kenneth Arrow Runs Out of Ideas, But Not

Words,” *21st Century Science & Technology*, Vol. 8, No. 3, Fall 1995; see reference to the π controversy, under the subhead “Axiomatic Method,” pp. 43-44. See also, LaRouche reply to a critic of this section of that paper, in Letters, *21st Century Science & Technology*, Vol. 9, No. 2, Summer 1996.

11. The “Classical humanist” method in education has two leading features which might be treated as the definitional distinctions of that method. “Classical” should be understood, in first impression, as implying a foundation in what are identified as the “Classical,” as distinct from “Archaic” (for example) plastic and non-plastic art-forms of Classical Greece. In literature, this implies the Homeric epics, and the tragedies of Athen’s Golden Age. In science, it implies Plato’s Socratic method of hypothesis, as typified by Plato, Eudoxus, Theaetetus, Eratosthenes, and, implicitly, also, Archimedes. Overall, it signifies the struggle of the Ionian city-states and the tradition of Solon of Athens, in combatting both the Babylonian tradition, expressed as the Persian Empire, and, also, the usurious cult of Gaia-Python/Dionysos-Apollo at Delphi (and, later, pagan Rome). In art, science, and history, it implies the principle of *agapē*, as defined by Plato and the Christian apostles, as in the *Gospel* of John and the *Epistles* of Paul. The use of these Classical Greek referents, including the Christian *New Testament*, is the significance of a Classical-humanist secondary education for the relevant medieval European teaching orders, such as the Brothers of the Common Life, the continuation of that standard of literacy among the proponents of the original (anti-Justice Antonin Scalia) intent of the U.S. Federal Constitution, and the reforms of education in Germany designed by Friedrich Schiller and his followers Wilhelm and Alexander von Humboldt. This exemplary significance of that use of the term, “Classical,” extends to the principle, that all of those discoveries of principle which have been proven to be valid, as such discoveries, from all currents of humanity, non-European as European, ought to be replicated mental experiences of discovery within the minds of all prospective secondary graduates, as a precondition for citizenship, in a durable form of society. The Classical currents of philology, as those with which the Humboldt brothers were associated in their time, illustrate the manner in which the notion of “Classical” is to be extended in choice of referents, from Classical Greece, to mankind as a whole. It is the emphasis on recreating the experience of the original discovery of principle, within the mind of each pupil, which distinguishes a cognitive education, from the evil of John Dewey and the “New Math,” in particular, and from today’s more popular textbook, or even worse standards, in general.

on which both Riemann's and the writer's own discoveries were premised, and the sterile formalism of the Aristotelean or quasi-Aristotelean models of an ordinary, deductive form of theorem-lattice. In all cases considered here, the notion of theorem-lattice is defined, and examined from the standpoint of Plato's Socratic method, by the so-called method of hypothesis.

A simple, deductive form of theorem-lattice, is defined by a process of successive approximations, as follows. Given, any set of theorems which are assumed to be not-inconsistent with one another. This presumes that the Socratic method of Plato would be able to adduce certain minimal, but sufficient, underlying assumptions, the which these theorems share in common. If so, these assumptions then constitute a set of interdependent terms, in the form of axioms, postulates, and definitions, none of which are deductively inconsistent with any among the previously given, mutually not-inconsistent theorems. Implicitly, therefore, there might exist an indefinite number of other theorems, none of which is inconsistent, deductively, with the same set of axioms, postulates, and definitions. The combined set of all such theorems, both known and possible, constitutes a simple theorem-lattice.

For the purpose of defining essential terms: The set of underlying, interdependent axioms, postulates, and definitions, underlying any such theorem-lattice, is the elementary, deductive form of an *hypothesis*. That is the definition of "hypothesis" employed by Plato, Leibniz, Riemann, and the present author.

If, then, there exists some stubbornly real condition or event, which were not consistent with that hypothesis,

12. Once one has worked one's way through the sets of later dialogues of Plato, it becomes clear, that his *Parmenides* serves implicitly as a prologue to all of those dialogues; it poses the crucial, ontological paradox, which the other dialogues address, each in its own respect. For this purpose, the *Parmenides* should be read as if it were the prefatory chorus of a tragedy, modelled upon the tragic principle characteristic of Aeschylus' work. One might apply Friedrich Schiller's explication of the principles for design of a tragedy: from opening *germ*, through *punctum saliens*, to conclusion. In the dialogue taken as a whole, the character Parmenides fails as pitifully as Shakespeare's Hamlet. The character Parmenides, like his real-life image, can not comprehend the notion of *change* as an efficient principle, just as Hamlet identifies the same cause for his own, oncoming doom, in the famous Act III, Scene I soliloquy. This is *change* as Heraclitus references its definition; so, for Plato, and for Riemann, the elementary form of efficient existence, is not objects akin to the notion of objects of sense-perception, but, rather, the principle of *change*, which brings such secondary phenomena as mere, apparently fixed objects, into being. *Change*, so referenced, has the connotation of *generate* or *create*. That is key to any competent reading of Plato, of Cusa, of Kepler, of Leibniz, of Riemann, or this writer's own original discoveries of the same efficient principle in physical economy.

then there is no proposition based upon that condition or event, the which could be the basis for a theorem of any theorem-lattice corresponding to that hypothesis. However, if, nonetheless, all of the theorems of the first theorem-lattice correspond to actually existing conditions or events, then, there exists a new hypothesis, which defines a new theorem-lattice, for which a proposition corresponding to the newly discovered condition or event, is a valid theorem. However, no theorem of the new theorem-lattice is consistent with any theorem of the first theorem-lattice.

The discovery of the change in hypothesis, which enables the leap from the old, failed theorem-lattice, to the new, is, thus, conveniently described as the discovery of a valid, *axiomatic-revolutionary* principle.

There is a crucial, corollary point to be taken into account, in reading, and rereading the highly significant, immediately preceding paragraphs. The proposition which we might construct, as our conscious representation of a condition, or event, is not the condition, or event, which may, in our opinion, have prompted the relevant proposition. This is a scientific matter, but one which is also brought to our attention by some relatively common, non-scientific, experiences of the layman's daily life.

For example. On this account, we must become uneasy in our seats, when some typical, philosophically illiterate person insists, that he, or she, is, in the words of Hollywood's "Sergeant Friday," insisting upon "Just the facts, Ma'am." For example, what the attorneys and judges, in a legal proceeding, insist are "facts," *are not reality per se*, but merely a special kind of subjective assessment, which might, or might not, have relevant correspondence to the reality to which the proceeding is putatively addressed.

To this point: Even if we might be persuaded, that we have overcome the hurdles of sincerity, in assessing a witness's report, the fact that the witness might be presumed to be speaking *sincerely*, and in his or her best judgment, does not rise to the standard for presuming, that the witness is also speaking *competently* of what that witness imagines himself, or herself to have experienced. Usually, the most favorable assumption which might be suggested, in the case of virtually any witness, is that the significance of a truthful effort to state a fact, or facts of a matter, is, that *it represents the present limits of the subject's competence to interpret what the subject believes to have been the experience of his, or her senses*.

"Truthful," when employed, carelessly, as a synonym for "sincerity," does not mean "real." What may qualify as a "fact," or "evidence," by extant legal or other professionals' standards, does not necessarily signify "true," "truthful," or "real," even if the relevant utterance is

the most sincere which the subject might utter on the matter of the event being considered.¹³

In the language of simple theorem-lattices: In the case, that some evidence forces us to abandon one hypothesis, for another, only the valid evidence prompting the theorems of the first theorem-lattice, but not the theorems themselves, are carried forward as evidence addressed by theorems of the second lattice. Virtually none of the theorems of the old lattice are incorporated in the new; virtually all of the theorems which, in the first lattice, were associated with the carried-forward experimental evidence, are abandoned by the second lattice, as inconsistent with truth.

Truthfulness, in science, or in ordinary testimony, lies not in what the witness believes he, or she has seen, heard, touched, felt, tasted, or smelled; truthfulness lies in the choice of hypothesis, which underlies those subjective things, called propositions, which the witness has construct-

13. In the line of discussion being developed here, we have already put to one side the substitution of non-existent conditions or events, for real ones. Three distinct classes of such substitutions are notable among those excluded from consideration in this portion of the text. (A) Simple lies. (B) Sophistries derived, as conclusions, from wishfully altered hypotheses. For a simple example: "I do not like him, therefore, I choose to find plausible anything bad said of him, and profess to consider as incredible, anything which might work to his credit." (C) Fallacies of composition superimposed, like a Procrustean Bed, upon perceived reality, to the purpose of protecting either an hypothesis, or some specific, isolated belief. Illustration: the principal origin of spread of gnosticism within western European Christianity, is the legalization of Christianity, as part of the Roman pagan Pantheon, by the Emperor Constantine. The most important action to this effect, was the later Byzantine emperors' virtual, or actual banning of the Plato who had been the correlative of Christian theology, and the introduction of Plato's adversary and bellwether of oligarchical social order, Aristotle, as authorized replacement. The efforts of the powerful oligarchical families, to defend their feudal and financier-aristocratic privileges, despite Christianity, has been the continuing source of renewal of the corrupting influence, within the clergy and churches, of the gnosticism inherent in Aristotle's philosophy and method. To avoid the embarrassing truth about the origins of gnosticism, the myth was created, that it was the Jews who are chiefly responsible for introducing gnosticism to western Europe, as via "Averroesism." This apology for oligarchism of both the landed and financier oligarchies—and, Aristotle, has been, thus, the most common source of religious anti-semitism. On the other hand, Friedrich Nietzsche, like his follower Adolf Hitler, premised his argument for ridding Europe of Jews, on the charge that it was the Jews whose collective crime had been the establishment of Christianity. Similarly, another illustration of category (C) taken from real life: To defend the Venice-created cult of Isaac Newton, Leonhard Euler, and many other devotees of the Newton cult, were willing to go to any lengths, as did J.C. Maxwell and Hermann Helmholtz, to defend the hypothesis of their cult's demi-god. Or, for a concluding example of this most relevant problem: The babbling fool who insists, that, since Karl Marx approved the idea of a progressively graduated income-tax, in the *Communist Manifesto*, that a man as fascistic as that "Miniver Cheevy" of the Confederacy's "Lost Cause," Ku Klux Klan fanatic and U.S. President Woodrow Wilson, was a Communist. Under "Lost Cause" devotee J. Edgar Hoover, the FBI was riddled with precisely such fanatical fools of the Roy M. Cohn breed.

ed as much, or more, from his, or her prejudices, as from the relevant experience. This is to be said in the same sense, as to argue, that where a member of an illiterate culture recognizes no more than "rock," a representative of a literate culture recognizes "ore." Or, to say, that the representative of the illiterate culture sees the stars moving about us; whereas, the representative of the literate culture, such as that of Plato's Academy of Athens, sees the moon orbiting the Earth, and the Earth rotating, while orbiting the sun.¹⁴

Riemann makes clear, in his referenced dissertation, that his emphasis upon experience, does not signify the popular delusion of the illiterate persons: The delusion that what we know as factual, is what we believe that we have experienced through our senses. Rather, the point of his argument there, is that the truthfulness of our opinions respecting actual experiences, depends, absolutely, upon the validity of the axiomatic assumptions which govern the way in which we form propositions and theorems in response to promptings of experience. It is on this

14. These elementary considerations respecting solar phenomena, underscore the fact, that any university which tolerates a policy of eliminating, or minimizing the student's requirement for mastery of the work of "dead European males," is clearly guilty of perpetrating a fraud upon both the students, and those institutions of society, including government, to which that university presents its graduates as competently educated. Exemplary is the fairy-tale, repeated by many illiterates with university bachelor and even terminal credentials, who believe in the myth of the "Copernican Revolution," that Mesopotamian lunatic calendars preceded solar calendars, and that the best astronomy, prior to Copernicus, was that of the fraud concocted, for ideological purposes, by Claudius Ptolemy. India's Bal Gangadhar Tilak was only citing already extant astrophysical and scholarly evidence, when he reported, in his *Orion*, that the Vedic solar astronomical calendars of Central Asia, circa 6,000-4,000 B.C., were already vastly more advanced scientifically, than any of the lunar calendars later presented in Mesopotamia. A similar case is demonstrated for ancient Egypt's solar astronomy. Aristarchus, long prior to Claudius Ptolemy's concoction of his hoax, had already defined the elementary hypothesis upon which rested the modern solar astronomy of such as the pre-Copernicus (1473-1543) Nicolaus of Cusa (1401-1464). Every competent program of combined secondary and higher education, requires a student's mastery of the work in mathematics, astronomy, and philosophy, by Thales, Plato, Theaetetus, Eudoxus, Euclid, Aristarchus, Eratosthenes, and Archimedes, through the construction, by Cusa's collaborator, Paolo Toscanelli (1397-1482) of the world map, which Christopher Columbus acquired through the Portugal-based executor of Nicolaus of Cusa's estate, and upon which Columbus largely relied, for his planning his first, 1492, voyage to the Americas. Most of the ideas underlying modern science, in every country, are derived chiefly from the original discoveries in geometry and scientific method, which we have inherited, chiefly, from such representatives of the Classical Greece tradition as these. As in astronomy, so, in general, the truthfulness of any report of a condition or event, lies in the hypothesis which has governed the manner the relevant experience has been comprehended by the mind of the witness. "Truth in education" cannot exist, without prompting the student to reenact, in his, or her mind, the act of original discovery by those ancient Greek and other individual minds, to which our civilization is largely indebted for the development of those hypotheses upon which the truthfulness of contemporary judgment depends, without exception.

point that Riemann focuses his devastating refutation of both Aristoteleanism and empiricism.

Riemann's exposure of the fraud embedded in the taught geometry and physics of both the Aristoteleans and empiricists, renders transparent the issues listed above.

The simple space-time employed by Galileo, Descartes, Hobbes, Hooke, Newton, *et al.*, was based on certain, *a priori*, axiomatic assumptions respecting extension in four, mutually independent senses of direction, three of extension in space, and one in time: a "quadruply-extended space-time manifold." It was assumed, *a priori*, that space is extended without limit, and in perfectly uninterrupted continuity: backward-forward, up-down, side-to-side. It was assumed, *a priori*, that time is extended, similarly, backward and forward. It was assumed, *a priori*, that place, size, and movements of events can be situated mathematically, as though these were something plopped into what were otherwise an empty, continuous, space-time void.¹⁵

To these arbitrary, *a priori* assumptions, other assumptions of a physical nature were similarly attached. Those persons who might be classed as "materialists," presumed, not only that these assumptions about space-time were products of the senses, but that the relevant features of sense-perceptions were mirror-images of the real world external to our senses. Others, such as the empiricist followers of Sarpi, Galileo, Hobbes, *et al.*, did not presume that sense-perceptions were necessarily mirror-images of the world outside our skins; however, from the standpoint of the pervasive fallacy intrinsic to popular

misconceptions of physical space-time, still today, Riemann's dissertation applies equally to all among the Aristoteleans, materialists, and empiricists.

Riemann's argument against that view of physical space-time, is predominantly twofold. First, that the referenced assumptions of Galileo, Descartes, Newton, *et al.*, were merely arbitrary assumptions. Second, that these assumptions were demonstrably false. The proof of these two arguments lay in the principle set forth by the founder of modern science, Nicolaus of Cusa, in his *De Docta Ignorantia*: the principle of measurement.

Given the topic under which this paper is subsumed, which is the retrospective view of Leibniz from the standpoint of Riemann's discoveries: The most convenient illustration of the way the principle of measurement applies, is the instance of the use which Jean Bernoulli and Leibniz made of the intersecting subjects of isochronicity (a phenomenon of gravitation) and the brachystochrone problem (refraction of light at a measurable, "constant speed"). Both of these were treated by Bernoulli and Leibniz, as arising out of the work of Christiaan Huyghens.¹⁶ In this connection, lay the physical basis for Leibniz's insistence upon replacing the "algebraic" methods of Galileo, Descartes, and Newton, by a "non-algebraic" (transcendental) form of mathematical physics.¹⁷

Riemann's dissertation introduces explicitly, a conception already implicit in the work of Leibniz and others, earlier: he establishes there the replacement of Newtonian physics in space-time, by the notion of *physical space-time*.¹⁸ He excludes the recklessly gratuitous, *a priori*

15. Cf. Riemann, *Plan der Untersuchung, Werke*, pp. 272-273.

16. See Christiaan Huyghens, *The Pendulum Clock*, trans. by Richard Blackwell (Ames, Iowa: Iowa State University Press, 1986); and _____, *A Treatise on Light* (1678), reprint of English translation (New York: Dover Publications). On Huyghens' relationship to the discovery of the "speed of light," see Poul Rasmussen, "Ole Rømer and the Discovery of the Speed of Light," *21st Century Science & Technology*, Vol. 6, No. 1, Spring 1993. On the relationship to Jean Bernoulli's solution to the brachystochrone problem, see D.J. Struik, *A Source Book in Mathematics, 1200-1800* (Princeton, N.J.: Princeton University Press, 1986), pp. 391-399.

17. This latter transformation became a central issue of the Leibniz-Clarke correspondence: Leibniz's insistence that a competent calculus could not be represented by the relatively degenerate geometry of infinite series.

18. For the purposes of this paper, it should be sufficient merely to note, as we do here, that Riemannian physical space-time does not permit "linearization in the very small." On this, note the conflict between Riemann and Rudolf Clausius. In a related example, also contrast Riemann's notion of physical space-time with that presented by Princeton's Hermann Weyl. For example, in editor H. Weber's appended note to Riemann's *Ein Beitrag zur Elektrodynamik* [*Werke*, p. 293], Weber reports Rudolf Clausius' attack upon Riemann's function, as follows.

$$P = - \int \sum \sum \epsilon \epsilon' F \left(\tau - \frac{r}{\alpha}, \tau \right) dt$$

Of which, Weber reports Clausius to argue: *Die Operation, vermöge deren später dafür ein nicht verschwindend kleiner Werth gefunden wird, muss daher einen Irrthum enthalten, den Clausius in der Ausführung einer unberechtigten Umkehrung der Integrationsfolge findet*. Thus, Clausius demands linearization in the very small. An English translation, by James Cleary, of H. Weber's note, is found in the textbook by Carol White, *Energy Potential* (New York: Campaigner Publications, 1977), pp. 299-300.

The formal-mathematical aspect of Clausius' argument is to be recognized at once as an "hereditary" influence of the same tautological fallacy on which Euler premised his 1761 attack upon Leibniz's *Monadology*. Similarly, it is the failure of Euler, Lagrange, Laplace's Augustin Cauchy, Hermann Grassmann, Clausius, Hermann Helmholtz, *et al.*, to recognize Leibniz's argument against Venetian Abbot Antonio Conti's agent, Dr. Samuel Clarke, respecting the implications underlying the incompetency of the mere numerical approximations supplied by use of an infinite series as a substitute for an actual calculus. In the *Beitrag*, Riemann is referencing work-product of his own collaboration with Wilhelm Weber, of which more is to be learned in a forthcoming issue of *21st Century Science & Technology*. In short, Clausius' invocation of the notorious "sliding rule," is not only flatly wrong, but, reveals much more about his own, and Grassmann's mathematics, than it does respecting the work of Weber and Riemann.

assumptions of *limitless extension*, and *perfectly continuous extension*. He then attributes the principle of extension to every physical principle whose validity has been demonstrated by experimental measurement, as Ole Rømer, in 1676, had reported his astrophysical measurement of the estimated “speed of light,” and as Jean Bernoulli, twenty years later, reported the coincidence of refraction of that light and Huyghens’ representation of isochronicity within the gravitational field. Thus, every validated physical principle is to be added to dimensions of space and time, as an independent dimension of a physical space-time manifold of “*n* dimensions.” This arrangement excludes, axiomatically, any toleration of the Euler-Cauchy-Clauisus-Helmholtz, *et al.* notion of “linearization of physical space-time in the very small.”

At the outset of his dissertation, Riemann already defends what is to appear as his construction of a multi-extended physical space-time manifold. This defense rests chiefly on two general premises. First, each discovered principle validated by experimental measurement, has, consequently, the manifest quality of extension. Second, each such principle has the quality of a dimension, in the respect of the same rule of mutual independence among dimensions, which any Euclidean form of geometry attributes to mutually independent senses of direction of dimensions of space and time.

Yet, this construction poses problems which can not be resolved within either the confines of a formal mathematics, or any extant formal mathematical physics. To resolve these further problems, one must depart the domain of mathematics, to enter the domain of experimental physics. One must enter Nicolaus of Cusa’s domain of *measurement*.

There must be some experimental proof, which demonstrates, in a measurable way, that a certain crucial-experimental occurrence requires us to construct one kind of mathematical physics, rather than some other.

19. Riemann, *op. cit.*, p. 273: . . . *Gauss, in der zweiten Abhandlung über die biquadratischen Reste*. [*Theoria Residuorum Biquadraticorum: Commentatio Secunda* (1831), *Carl Friedrich Gauss Werke*, II (Hildesheim: Georg Olms Verlag, 1981), pp. 93-178. See, also, *Zur Theorie der Biquadratischen Reste Werke*, II, pp. 315-385.]

20. *Ibid.*, p. 276: . . . *Zu Beidem sind die Grundlagen erhalten in der berühmten Abhandlung des Herrn . . . Gauss über die krummen Flächen*. See, *Disquisitiones Generales Circa Superficies Curvas* (1828) *Gauss Werke*, IV, pp. 217-258. See, Gauss’ notice of this paper: pp. 341-347; the crucial issue of mapping is presented on pp. 344-345. See, also, *Allgemeine Auflösung der Aufgabe die Theile einer gegebenen Fläche so abzubilden* (the famous “Copenhagen Prize Essay”) (1822), pp. 189-216. Notable is the issue of mapping of an ellipsoid onto a sphere; the referenced work of Gauss’ on this subject was, most immediately, a reflection of his discoveries in geodesy, in the setting of his 1818-1832 triangulation-survey of the territory of the Kingdom of Hanover. However, Gauss’ work in “non-Euclidean geometry”

This demonstration must have such *unique* significance. Riemann points to three hints, on which he has relied for elaborating the general quality of “yardstick” we require for that kind of measurement. Two hints are taken from the work of Riemann’s patron, Professor Carl F. Gauss: Gauss’ work on biquadratic residues,¹⁹ and general theory of curved surfaces.²⁰ The third is borrowed from Riemann’s own work, the concept of *Geistesmassen* which he outlined in his posthumously published *Zur Psychologie und Metaphysik*.²¹

To be considered validated, the new physical principle must correspond to some measurable difference in the characteristic action “connecting any two points” within the reality corresponding to the choice of mathematical-physics manifold being tested. The notion of this measurable difference, is suggested by the attempt to determine whether the very large surface on which one is travelling is a plane, or a curved surface.²² In terms of a physical space-time manifold of “*n* dimensions,” it is the relative curvature of the “surface,” which the crucial experiment must measure. Hence, the importance, for Riemann, of the hints supplied by Gauss’ work on biquadratic residues and general theory of curved surfaces.

For Riemann’s physics, one such yardstick is required. The present writer’s discoveries demonstrate that two yardsticks, rather than one, are required. We shall come to that in due course, below. First, we must locate the place where Riemann’s notion of *Geistesmassen* fits in; this touches the most crucial distinction of Riemann’s physics, and also the unique feature from which the unique, crucial superiority of the present writer’s work in economics has been derived. To that purpose, we now restate what we have just described, this time, explicitly referencing, as Riemann does, Plato’s—and Leibniz’s—method of hypothesis.

In place of the words “dimension,” substitute such words as “axiom, postulate, definition.” That is to say,

dates not only from his earlier discoveries in astronomy, but, according to a November 28, 1846 letter to H.C. Schumacher, to 1792. Notably, it was from this starting-point in the work of Gauss, not the quasi-Kantian Newton devotee and plagiarist of Abel, Augustin Cauchy, that Riemann derived what some wags amuse themselves to describe as the “Cauchy-Riemann” function; the debt to A.M. Legendre is significant, not to Monge’s and Legendre’s hateful adversary, and Laplace protégé, Cauchy.

21. *Ibid.*, p. 273: . . . *und einigen philosophischen Untersuchungen Herbart’s, durchaus keine Vorarbeiten benutzen konnte*. For the relevant text of Riemann’s earlier commentary on this, see *Werke*, pp. 509-520. For an English translation of the latter, see “Riemann’s Philosophical Fragments,” *21st Century Science & Technology, op. cit.*, pp. 51-55.

22. As is suggested by Eratosthenes’ experimental measurement of the estimated curvature of the Earth’s meridian, more than two thousand years before any person had yet seen the Earth’s curvature.

recognize the equivalence of a Riemann multiply-extended, physical space-time manifold, to Plato's, Leibniz's, Riemann's, and the present author's notion of "hypothesis." The connection is highlighted by reference to Leibniz's notion of *necessary and sufficient reason*, a notion which is Leibniz's refined treatment of the notion of *reason* as this appeared in the work of that Johannes Kepler, whose specified requirements for the development of a calculus were satisfied by Leibniz's work.

Proceed to that end, thus. As we proceed, now, bear in mind the following: Think of "dimension, axiom, postulate, definition," and "hypothesis," as representative of a common quality termed, alternately, either "formal discontinuity," or "singularity." Physically, each, as in the case of adding a new degree of independent dimension, signifies some break in the continuum extant prior to the introduction of such a singularity.

Consider the proposition: *What is a sufficiency of properly selected, axiomatic assumptions, respecting the task of assessing the significance of a particular event, when that event is considered primarily as a change in the state of the universe in which it occurs?* Select, as such an event, the equivalence which Jean Bernoulli demonstrated, between Huyghens' notion of the cycloid path as one of isochronicity (*tautochrone*) in Kepler's "gravitational field,"²³ and the fact that the variable feature of refraction describes the same tautochronic pathway.²⁴ What are the necessary and sufficient features of an hypothesis, which hypothesis defines a physical space-time in which these phenomena and their coincidence must occur? That hypothesis, whatever it may prove to be, constitutes "necessary and sufficient reason."

That reflects Leibniz's refinement of Kepler's use of the notion of *Reason*. This function of *Reason* (Kepler), or *necessary and sufficient reason* (Leibniz), is the alternative to the use of the percussive notion of "causality," as a geometrically degenerate parody of the notion of Reason, in the work of materialists, or empiricists such as Galileo, Newton, *et al.*

This leads to Riemann's notion of *unique* events, as those experimental events which force us to reconsider whatever has passed, until now, for a notion of necessary

23. On this item, no scientifically literate person would introduce, as objection, the somewhat popularized nonsense, of asserting that the original discovery of gravitation was the work of Galileo, Newton, *et al.* Newton's algebraic representation of gravitation was explicitly derived, as a relatively degenerate representation, from Kepler's formulation for gravitation. For a summary of the way in which Newton's plagiarism of Kepler was constructed, see Lyndon H. LaRouche, Jr., *The Science of Christian Economy*, *op. cit.*, Chapter VII, Note 8 (see pp. 471-473).

24. D.J. Struik, *loc. cit.*

and sufficient reason, that hypothesis heretofore considered as established. The general use of "crucial experiment," as ostensibly a substitute for "unique," does not rise to the functional significance of our use of "unique" here.

Implicitly, every event is, potentially, a unique experimental event. In some circumstance, any event must implicitly overthrow the presumptions of someone's hypothesis. Obviously, we, like Riemann, Leibniz before him, and so on, are situating these and related matters within an historically specific, task-oriented setting, the interdependency between mankind's progressive mastery of the universe, and the internal development of Classical forms of art and science. Therefore, we employ "unique" to designate those events which have pivotal, historic significance for the discovery of valid, axiomatic-revolutionary principles of our universe. E.g., the critical experimental, or analogous events, which correspond to the singularities of a never-perfectly continuous extension of scientific and artistic progress.

In Riemann, this overview of scientific progress is typified by progress from a relatively valid physical space-time of "*n* dimensions," to a more powerful conception, a superior, relatively valid physical space-time of "*n+1* dimensions." In other words, from one, relatively valid hypothesis, to a superior valid hypothesis.

This central implication of the habilitation dissertation, leads us, implicitly, to reconsider the so-called "ontological paradox" of Plato's *Parmenides*.²⁵ Resituate the notion of a Riemann series (e.g., of surfaces of differing Gaussian curvature), of the topological type $(n+1)/n$, as implicitly defined by the habilitation dissertation. This presents us a series of hypotheses, $n = 4, \dots, i, i+1, i+2, \dots$. What is the ordering principle of such a series? The answer is, first: some principle of valid successive discovery of hypotheses: a higher type of hypothesis, which underlies a series of hypotheses, as an ordinary, relatively valid hypothesis underlies the series of theorems represented by a theorem-lattice. Plato identifies this higher type of hypothesis, simply, as an "higher hypothesis." Hence, the title of Riemann's Platonist dissertation: "The Hypotheses Which Underlie Geometry."

As we depart one hypothesis of that series, to approach its proper supersessor, we must depart the domain of mathematical formalism, for the domain of either experimental physics, or something functionally equivalent to such a physics. These domains are to be found, relative to formalism, within transinfinitesimally small, mathemati-

25. See *Proclus' Commentary on Plato's Parmenides*, trans. by Glenn R. Morrow and John M. Dillon (Princeton, N.J.: Princeton University Press, 1987), *passim*.

cal discontinuities, the existence of which the followers of Newton, Euler, Bertrand Russell, *et al.*, each and all, fraudulently deny.²⁶ Each valid, axiomatic-revolutionary discovery of principle (e.g., a formal axiom, a dimension, an hypothesis), is a singularity, which, discovered, fills the place defined by a transinfinitesimally small formal discontinuity in the fabric of the mathematical-physics being superseded.

The process by which that valid singularity is generated, can never be detailed at the proverbial “blackboard.” Nonetheless, that process exists; its existence is provable, not by mathematics, but according to the principle of measurement.²⁷ The form in which that existence impinges upon knowledge, is the same quality of true *metaphor*; which is the distinguishing activity of all successful Classical forms of artistic compositions. The activity is known, otherwise, as “creative reason,” or, “cognition,” *when either term is employed to signify the quality of non-deductive mental activity typified by an original valid, axiomatic-revolutionary discovery of a principle of*

26. In every case examined, the argument against the existence of mathematical discontinuities is a parody of the tautological fallacy which Euler deployed in his attempted sodomy of 1761, against Leibniz’ *Monadology*.

27. Cf. B. Riemann, *Über die Fortpflanzung ebener Luftwellen von endlicher Schwingungsweite, Werke*, pp. 156-175. In this paper, Riemann addressed the implications of the mistaken assumption, that the speed of sound represented an insuperable barrier to movement of a propelled projectile at higher speeds through the air medium. Out of his understanding of the physical significance of discontinuities arising in such functions, not only was the possibility of accelerated transsonic flight indicated, but, more generally, the general principle of isentropic compression. The crucial point illustrated, for our purposes, here, is that Riemann recognized that the appearance of a formal discontinuity, in the mathematical form of the design of his experiment, represented the presence of a singularity, a new principle—isentropic compression—to be entered into the validated physical principles of physical space-time. The problem which Riemann had successfully attacked, was that on which Britain’s Lord Rayleigh discredited himself so recklessly on this point. Rayleigh’s commentary on Riemann’s *Fortpflanzung* shrieked, to the effect, that, if Riemann were right, then all of the physics of Rayleigh and the pro-Newton faction, were thoroughly bankrupt intellectually. The root of Rayleigh’s consternation: the argument against Riemann’s method, by such as Clausius, Grassmann, Helmholtz, Maxwell, and Rayleigh, is that the wrong view of gas theory is embedded axiomatically in those notions of percussive causality which Sarpi and his followers had embedded in the Cartesians and British empiricists. Riemann’s representation of isentropic compression has important implications within applications of the LaRouche-Riemann method in physical economy. On the latter account, the present writer commissioned a translation of this paper of Riemann’s, by Uwe Henke and Steven Bardwell, which appeared in the 1980 edition of *The International Journal of Fusion Energy* (Vol. 2, No. 3, pp. 1-23).

nature. In physical science, this activity is typified by the successful generation of a valid new hypothesis. Riemann approaches the conceptualization of this activity of creative reason, with his use of the term *Geistesmassen*. This implication of the same principle of hypothesis, which underlies Riemann’s dissertation, is the focus of Leibniz’s *Monadology*.

‘Psychology & Metaphysics’

That mental activity, through which principles of nature are discovered (and, recognized), and, through which artistic metaphor is generated (and, recognized), is not a subject for deductive methods. In that sense, the validation of an axiomatic-revolutionary principle can not be represented mathematically, either at the blackboard, or in kindred modes.²⁸ Nonetheless, like those discovered,

28. This is the key to understanding the convoluted argument which underlies such later publications of Immanuel Kant as: *Critique of Pure Reason* (1781), *Prolegomena to a Future Metaphysics* (1783), *Fundamental Principles of a Metaphysics of Ethics* (1785), *Critique of Practical Reason* (1788), *Critique of Judgment* (1790), and *Perpetual Peace* (1795). Kant’s argument is the basis for the mysticism of such Nineteenth-century neo-Kantian mystics as (implicit *Volksgeist* doctrinaire) Johann Fichte, (*Weltgeist* doctrinaire) G.W. Hegel, (*Zeitgeist/Volksgeist* doctrinaire, and Hegel ally) F.K. Savigny, and the pathological Franz Liszt. The central feature of Kant’s *Critiques*, and related writings on science, psychology, morals, and aesthetics, centers around the mystical irrationalism of his discussion of *synthetic judgment a priori*. Unlike his more radical, logical-positivist followers, such as Norbert Wiener of “information theory” notoriety, agnostic Kant is prepared to allow both God and creative reason to exist somewhere, but not to permit them to be known. Although there is a foretaste of Kant’s argument in the mystical side of the gnostic René Descartes, in the notion of *deus ex machina*, the empiricists deny the existence of creative reason altogether. (See relevant writings of the neo-Kantians W. Windelband and E. Cassirer, for insight into the continuing distinctions between neo-Kantianism, on the one side, and empiricism and positivism, on the other.) Similarly, as a reflection of their pro-atheistic, empiricist “mind set,” the pseudo-Christian gnostics of Britain deny the existence of a “divine spark of reason” within the individual person, i.e., deny both *Genesis* 1:26-30, and the Christian principles of *imago dei* and *capax dei*. It is for these same “British” varieties of religious motives, that Galileo student Thomas Hobbes decreed the policy, for banning both metaphor and the subjunctive mood (e.g., *Leviathan*), which is the continuing policy-trend among empiricist and positivist species of modern-language stylists, to the present day. This streak, expressed variously as the atheism axiomatically inherent in empiricism and positivism, and as “agnosticism” among the followers of Kant, is a strictly correct reading of the import of Aristotle’s method and writings. In modern Europe, this atheistic current is to be traced chiefly to Cardinal Gasparo Contarini’s extremely influential teacher, the Pietro Pomponazzi of Padua, who taught, that, among the followers of Aristotle (and, of Pomponazzi), the human soul could not exist.

and empirically validated principles of science themselves, the non-deductive mental activity of creative reason (*cognition*) can be known as clearly as any object presented to our minds by sense-perception. If education is based, not on the stultifying, textbook drill-and-grill mode, of indoctrination in a secularist catechism, but, rather, upon the student's reenacting the original discoverer's act of discovery within the student's own, sovereign cognitive processes, the repeated experience of coming to know these discoveries in this way, enables the pupil to come to recognize the common form of that mental action of *change*, which is the common feature of the progress of the pupil's mind, from one hypothesis to the next.²⁹

This brings us to the matter of *agapē*: the emotional quality, contrasted to *erotic* impulses, which is characteristic of what we term here, alternately, "creative mentation," or "cognition."

In Plato, the term *agapē* arises as "love for justice," "love for truth." The Latin translation of Plato's notion of *agapē*, where the Greek term appears in the Christian *New Testament*, is the *caritas* which is translated as "charity" in the King James Version's English translation of the Latin edition of Paul's *Epistles*.³⁰ There are some well-known, if absurd, but clinically foreseeable, capriciously pornographic renderings of the term, from among devotees of the Oxbridge glosses on Plato; despite such sick

minds, the intention, "love for justice and truth," is the only accurate rendering of "Platonic love." This quality of emotion, *agapē*, is associated only with a category of objects of thought which belong strictly to the category of "Platonic ideas."

The antonym for *agapē* is *eros*, the latter the quality of emotion peculiar to either objects of sense-perception, or to those words, methods, and procedures, the which are induced in individual behavior through the anti-cognitive, "sing for your supper," modes of "drill and grill."³¹

To make clear the significance of the term "Platonic ideas," the present author prefers the example of Eratosthenes' fair estimate for the length of the Earth's meridian. By aid of an ingenious, but mathematically simple experimental procedure, Eratosthenes estimated the polar diameter of the Earth within a margin of error of about fifty miles, and did this more than two thousand years before any person had seen the curvature of our planet. The several Classical Greek estimates of the distance from the Earth to the moon, including that of Eratosthenes, have the same relevance. We can not see, as objects, the actual astrophysical distances from Earth to the moon, sun, or neighboring planets; virtually all of astrophysics, and the entire domain of microphysics address objects which are not defined directly by our senses. Those matters of knowledge which lie outside

29. Cf. Lawrence S. Kubie, "The Fostering of Scientific Creativity," *Daedalus*, Vol. 91, No. 2, Spring 1962; also, *The Neurotic Distortion of the Creative Process* (Lawrence: University of Kansas Press, 1958). Although Kubie, a rather celebrated Yale psychoanalyst, was a participant in the Josiah Macy, Jr. Foundation's notorious "Cybernetics" project, he proved himself insightful in his investigation of the reasons why some of those persons nominally among the most highly qualified, and formerly most promising academics, had proven sterile in the field of scientific creativity. Kubie's referenced works were published after the writer's structured, quality-control study of indicated patterns of behavior in formally well-qualified management consultants who tended to fail, consistently; hence, the referenced titles attracted this writer's attention. From the standpoint of the writer's own investigations, Kubie's observations in the 1962 *Daedalus* piece were on target. In the typical case of the failure-prone management consultant, in this writer's study, and in related cases, it was the case's educational successes which were, arguably, the source of his performance failures as a consultant. In his education, usually, that subject had been the kind of "nerd" who hit the books, learned the subject, passed the examination, whose opinions won the approval of his teachers, all the way to his pre-doctoral orals and written examination. The subject's mind was trapped inside that mere learning as a virtual reality. Clearly, during his education, the subject had employed his cognitive powers sometimes, but had never recognized the distinction between learning and the role cognitive processes contributed to assisting the learning process. Only rarely, would that subject

rely upon thinking cognitively "in a pinch." If the subject must have been somewhat creative during the earlier phases of his education, his willingness to continue the learning process in that way would begin to wither away at a point proximate to his completing higher education. As he grew older, the growing maturity of his professional experience was accompanied by an apparent "calcification" of his cognitive potential. Under the pressure of desire for approval from actually present, or possible professional peers, he would fall back into the virtual reality of academically, and bureaucratically induced habits of Pavlovian "academic correctness." In a related type of case, the gifted experimental scientist might go stale, during the moments he is confronted with the prospect of defending mathematically, at the blackboard, or in a paper submitted to referees, what he knows, otherwise, to be his valid experimental discovery. As indicated in later paragraphs of this text, this is not merely a formal problem, but also a psychiatric problem, arising to this form through the victim's substituting the inappropriate, erotic form of intellectual motivation, where the non-erotic, agapic form of behavior is required.

30. The paradigmatic *New Testament* text is *I Corinthians* 13. Paul's meaning for the term, is fully consistent with that of Plato.

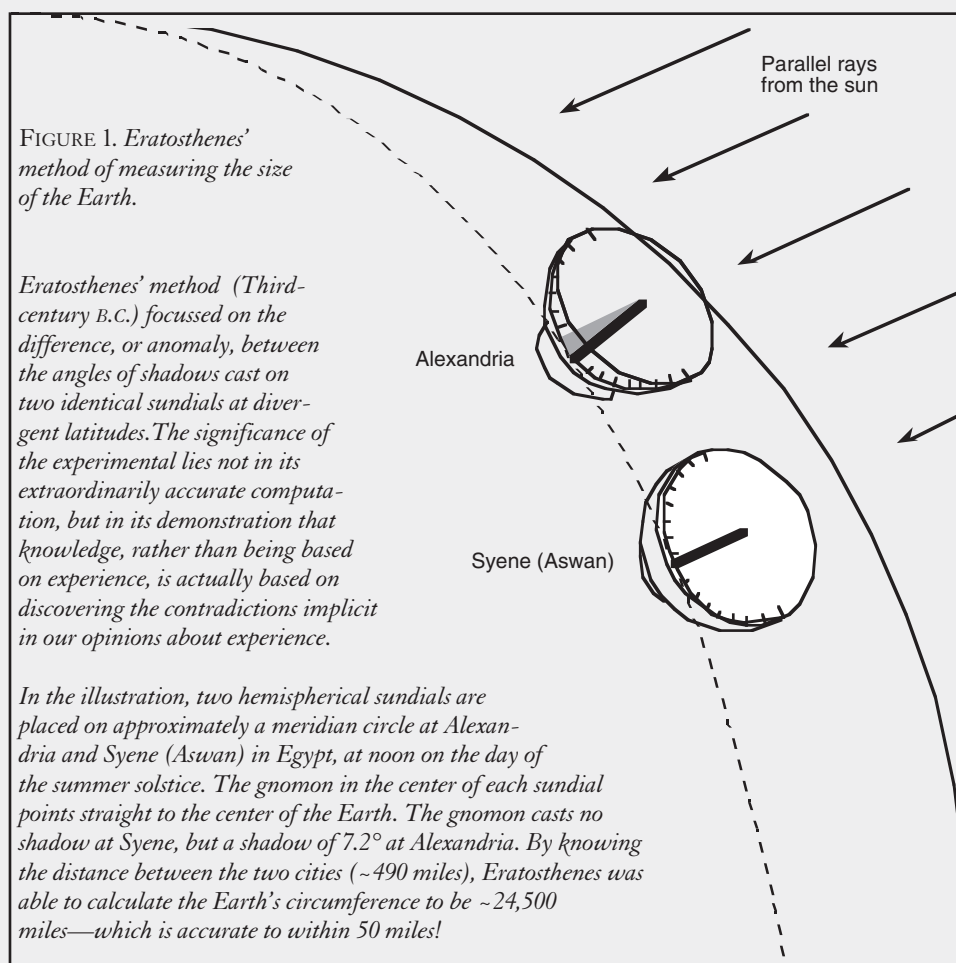
31. The student, and professional, who approaches his subject-matters like one who "sings no better than he believes necessary to gain his supper," is referenced by Friedrich Schiller as of the category of *Brotgelehrten*. That has been increasingly the characteristic of the education and standard of adult practice of professionals in general.

simple sense-perception, fall within the category of “Platonic ideas.”³²

The distinction between living and non-living processes, and the distinction between the cognitive processes of the human individual, and the behavior of all lower forms of life, are also subject-matters which are not defined directly by our sense-perceptions. Similarly, neither “justice” and “truth,” nor any validated discovery of a principle of nature, are objects defined as sense-perceptions. All of these distinctions of physical processes, which we can not define as matters of direct, simple sense-perception, but which we are able to know to be true in other ways, belong to the category of “Platonic ideas.”³³

We summarize here, once again, the way in which the case of Eratosthenes’ estimate of the length of the Earth’s meridian presents the central role of Platonic ideas in science [SEE Figure 1].

A series of measurements is taken, by sun-dials placed



at intervals along a measured (paced off) interval, along a South-North line, between Aswan and Alexandria, in Egypt. Each set of these successive series of measurements

32. The empiricist and positivist would argue, that such ideas are “constructs,” derived, thus, from sense-perceptions. That empiricist argument, is traced to Padua’s Pietro Pomponazzi through Pomponazzi’s student, the Venetian Francesco Zorzi (a.k.a. “Giorgi”), who took up residence in England to serve as marriage counsellor to King Henry VIII, and served as the intellectual resource upon which the King relied, together with Venice’s agent Thomas Cromwell, *et al.*, in that celebrated Anne Boleyn affair upon which the Church of England was established. Zorzi is otherwise notable in the history of England during that same period, for his direct attack on the influence of Cardinal Nicolaus of Cusa, the crucial organizer in the process leading into 1439-1440 Council of Florence, and, later, mid-Fifteenth-century canon of the Papacy. Zorzi’s attack was directed against the influence of the Erasmians, the principal conveyers of the Renaissance heritage into England at that time. Zorzi demanded extirpation of the method of “*docta ignorantia*,” and its replacement by a kind of proto-empiricism. The influence of Pomponazzi and his leading students, apart from the key role they played in orchestrating, as did Gasparo Contarini, the great schism of the early Sixteenth century, was the current of Venice’s influence leading into Paolo Sarpi’s founding of what we know today as the British empiri-

cism of Bacon, Hobbes, Locke, Bentham, *et al.* Echoing Zorzi, the Sixteenth through Nineteenth centuries witnessed an hysterical effort by the followers of Hobbes, Locke, and Newton, to eliminate the notion of ideas from science and philosophy, through the establishment of the notion that those ideas were merely “constructs.” The issue of infinite series, posed by Leibniz in the Leibniz-Clarke-Newton correspondence, and Euler’s lunatic use of a tautological fallacy, to attack Leibniz’s *Monadology*, are bellwether cases of this effort to promote the hoax of the “construct.”

33. It is also stressed, in sundry other locations, that scientific knowledge requires uncovering the necessary and sufficient reason underlying the existence of the division of experience among three distinct qualities of scale, and three mutually exclusive categories of characteristic functional distinction. Of scale, we have astrophysical and microphysical, which are beyond the scope of objects perceivable to the senses, and, thus, by elimination, the macro-physical scale. Of characteristic functional distinctions, we have putatively non-living, putatively non-cognitive living, and cognitive processes. The combinations of the two types of distinctions define a simple matrix; a functionally comprehensive definition of all of the relations implicit in that matrix, is science. Thus, science as a whole does not exist outside the domain of Platonic ideas.

is taken at noon (as indicated by the sun-dials) on the same day. The angles of the shadow cast are compared. This comparison shows that the Earth's surface is not flat. However, by use of similar figures, it appears that the data fits the case in which the Earth's surface is approximately that of a sphere, with the South-North direction, from Aswan to Alexandria, corresponding to an arc of a meridian. Since the length of that arc had been measured, the method of similar figures gave an estimate for the size, and diameter of the relevant complete circle.³⁴

The crucial point of describing that, in the present location, is, as stressed earlier, that Eratosthenes defined and measured the curvature of the planet more than two thousands years before man first saw the curvature of the planet. For related reasons, Columbus did not merely suspect that the Earth was a spheroid; almost five centuries before anyone saw the curvature of the planet, Columbus knew it with scientific certainty, through work done by Toscanelli, based upon ancient Greek science, decades prior to Columbus' acquisition of the map of the planet produced by Toscanelli. The size of the planet, estimated by Toscanelli, was accurate to at least the degree of precision of Eratosthenes' estimates, about 1,700 years earlier.³⁵ The estimates of the distance to the moon, by Eratosthenes, and Aristarchus' derivation of the demonstration that the Earth orbited the sun, are examples of the same principle of Platonic ideas.

The archetypal expression of Platonic ideas, is the quality of mental act, by means of which a valid, axiomatic-revolutionary discovery of a principle of nature is generated. The overriding mission of a competent policy in education, is to prompt the pupil to reenact the series of relatively more truthful, valid, axiomatic-revolutionary

discoveries of principle underlying the development of both scientific knowledge, and also of forms of plastic and non-plastic art which are consistent with what we shall identify, below, as the Classical principle of composition and performance. The primary mission of a competent educational policy, is the use of teaching of such crucial principles as a "pretext" for fostering the development of the individual person's potential for deploying and recognizing that distinct quality of mental act (cognition) which is the only means by which such discoveries may be either effected as original discoveries, or by one to whom the principle is presented as a challenge for reenacting the mental experience of the original discovery.

This potential for development of the creative powers of cognition, is that distinction between man and beast underlying *Genesis* 1:26-30: mankind, male and female, made in the image of God: as Nicolaus of Cusa emphasizes, the principles of *imago viva dei* and *capax dei*. In its paradigmatic expression, as knowable to the successful student in such a Classical-humanist program of education, this act of cognition is located in the person's experience, as the quality of mental activity through which the validation of an axiomatic-revolutionary discovery of principle, is effected. In other words, the generation of a valid "leap" from a given hypothesis (theorem-lattice) to a relatively superior hypothesis. This paradigmatic act, is, therefore, the experience of higher hypothesis.

That paradigmatic experience has two distinguishable, but inseparable interdependent qualities. The occurrence of the formally validatable discovery itself, and the distinctive quality of emotion associated with that act of discovery. That latter quality of emotion, is *agapē* as Plato defines it, and as *I Corinthians* 13 also defines it.³⁶ It is

34. See *Selections Illustrating the History of Greek Mathematics*, trans. by Ivor Thomas, Vol. II (Cambridge, Mass.: Harvard University Press, Loeb Classical Library, 1980), pp. 266-273. Note, that Eratosthenes also supplied an estimate for the arc of a great circle passing through Alexandria and Rome. Eratosthenes' estimates are typical of the application of Classical Greek science (from Thales through Eratosthenes' time) to the methods of observation of ancient through early Ptolemaic Egypt. (The fact that Claudius Ptolemy's hoax could be tolerated by his contemporaries, illustrates the significant degeneration in scientific practice which had occurred since the deaths of Aristarchus, Eratosthenes, and Eratosthenes' correspondent Archimedes.) To gauge this, one might wisely take into account, Indo-European culture's knowledge of the long equinoctial solar-sidereal astronomical cycle, shown (by progression of positions of observed stellar constellations) to date from some time between 6,000 and 4,000 B.C. (within Orion), in Central Asia.

35. The conspicuous error in Toscanelli's map, is neither his estimated size of the planet, nor the indicated distance to be spanned in crossing the Atlantic. The problem is Venetian lies respecting the distance across Asia to China and Japan, placing the latter in the middle of the United States.

36. The connection stated here is key to understanding Lawrence Kubie's thesis set forth in his 1962 *Daedalus* piece, which we have referenced in a note, above. As matured and reflective sports fanatics will concede, "erotic" refers not only to explicitly sexual behavior, but to notions of power to dominate, and submission to power, and, more generally, to ideas associated with sense-perception, as opposed to ideas associated with cognition. This underlies certain more readily recognized connections which come to the surface in forms of sexual abuse, such as rape, sodomy, intra-family violence, or simply the forms of psychosexual impotence in which the sex-act is performed with little more than a "sex-as-power," animalist pleasure-seeking impulse, for domination or submission. In the instance of the "Don Juan," or "Macho" type, this may be expressed as a person who is either emotionally confused by, or even virtually incapable of, a human quality of enduring attachment to merely one woman. "Macho" Don Juan protests, with all the feigned sincerity of indignation such an inveterate confidence man might muster, "Me psycho-sexually impotent? You have to be kidding!" In healthy states, the "erotic" impulse (*eros*) is associated with ideas within the domain of sense-perception; whereas, all ideas associated with cognition are associated with the emotional impulse of *agapē*. The neuroti-

through the summoning of the developed quality of agapic emotion, that the thinker is able, willfully, to summon the creative cognitive powers needed to address a challenge.

The kind of deductive reductionism typical of Aristotelean formalism, is erotic, and hatefully anti-agapic, in type, as the psychopathological case of Kant and his philosophical writings, typifies the pathology of personal character inhering in the true follower of Aristotle's philosophy and method. Thus, Friedrich Schiller and his follower Wilhelm von Humboldt, set forth as the primary objective of a Classical-humanist form of education, the fostering of the development of the personal character of the future adult citizen; the efficient principle referenced by Schiller and Humboldt on this account, is rooted in the argument of *I Corinthians* 13, and it is also the underlying character of Plato's dialogues taken as a whole.

Hypothesis, and higher hypothesis, are each a special kind of object, an object of the form which Plato associates with the *good*. To introduce this conception, consider, first, the example offered by a very ordinary sort of theorem-lattice, as we defined this earlier, here.

In the simple theorem-lattice, the derivation of theorems has a certain ordering, in the sense that some theorems, once proven, serve as the basis for deriving later theorems. This sense of ordering implies ordering *in time*. Nonetheless, the hypothesis underlying that lattice undergoes no modification during the time a sequence of theorems unfolds: from beginning, through to the end, the hypothesis remains unchanged; it is the veritable "alpha and omega" of that theorem-lattice. In Plato's method, every hypothesis, including every higher hypothesis, has this same property: it is the unchanging "alpha and omega" of whatever process of lattice-generation it underlies. In all, higher hypothesis is subsumed by

cally pathological characteristic of philosophical empiricism, neo-Kantian romanticism, and positivism, is typified in the extreme by the sexual history of such empiricists as Francis Bacon, Thomas Hobbes, and Jeremy Bentham. These three typify the neurotically confused state of mind essential to such philosophical currents. All of the ideas which are distinctively characteristic of Plato and of Christianity are within the domain of *agapē*, as *I Corinthians* 13 denies the quality of "Christian" to any ostensibly worthy act, which is not generated and controlled by *agapē*. Thus, the "Macho" type of neurotic responds to that challenge to his beliefs which is beyond what he senses he might be able to refute, not with reason, but with outbursts of an erotic quality of screaming, shouting, fist-waving rage. The "neurotic distortion of the creative process" which occupied Kubie's attention, is the result of the inappropriateness of the summoning of the erotic quality of emotional impulse, to address a challenge which requires the kind of ideas summonable only by the agapic impulse peculiar to Platonic ideas.

God, the unsurpassable "hypothesis," the ultimate *Good*. Yet, every *relatively valid* hypothesis also imitates that form, as a lesser *good*.³⁷

Agapē is the motivating state of mind which corresponds to the experience of any valid, or relatively valid such *good*.

Every person engaged in cognitive concentration, has lived through a relevant experiment: One's mind is working on the problem, up to the point the concentration collapses, as it were a man who suddenly toppled over, and fell asleep during a brisk walk. This might occur when one were exhausted, but we are considering only the type of case in which exhaustion was not determining. The motivation for the cognitive concentration has collapsed, as if the current had suddenly been cut off from an electronic device, as if the "batteries had died." Consider the instance, in which taking a break to participate in working through, or hearing a good performance of J.S. Bach, Haydn, Mozart, Beethoven, Schubert, or Brahms, returns one to one's cognitive undertaking with full powers of concentration restored—"batteries fully recharged." From this vantage-point, we turn our attention to certain identical features of Classical art-forms and valid axiomatic-revolutionary discoveries of physical principle. We are considering a topic which might be entitled: *cognitive energy*.

In Classical art-forms, the place of a mathematical discontinuity is taken by the ultimate expression of ambiguity, *metaphor*. During his 1948-1952 project, to refute Wiener's absurd claim, that human communication could be represented by statistical "information theory," the present author adopted the policy, that, although the case against Wiener could be made best from the standpoint of technological progress's increasing the productive powers of labor, it would be necessary to show that what was true for physical science, was also true for the generation and transmission of knowledge in Classical art-forms.

Thus, the study of "information" from the standpoint of technological progress, was paralleled by focus upon three closely related forms of non-plastic Classical media: poetry, drama, and the Classical art-song, the latter centered upon the Classical German *lied*, of Mozart, Beethoven, Schubert, Schumann, and Brahms, all compared with the Romantic *lied* of Hugo Wolf and Richard Strauss.

The standpoint in music, from which Classical forms of drama, poetry, and song were examined during that

37. This definition of the *good*, is congruent with Leibniz's definitions for the *monad*. See, notably, *Monadology*, 9-18, pp. 149-150 [footnote 1].

time, was the principle of motivic thorough-composition, as typified by Wolfgang Mozart's K.475 product of his study of the Bach *Musical Offering*, and the influence of that, and closely related Mozart compositions in later Classical composition. Today, the present author would have written of that approach, that keys and modes are hypotheses underlying the theorem-lattices of Classical forms of musical compositions, and that motivic thorough-composition, as typified by the Mozart K.475, is a prototype for higher hypothesis as the subject of musical composition.³⁸

Thus, effective Classical musical composition, especially since those aspects of the work of J.S. Bach so deeply admired and emulated by Mozart, Beethoven, *et al.*, is an exercise in *agapē*. Similarly, Classical tragedy, and great Classical poetry, which rely upon the implicit *bel-canto* well-tempering of the well-spoken language, as the medium for speech, embody the developmental principle of the Greek Classical tragedy and Socratic dialogue. This is that cognitive medium of artistic development, which such poetry and drama employ, to instruct musical composition in the principles of musical dialogue, called polyphony, the which is the principle of

Classical artistic development.

It is those artistic resolutions of ambiguity which carry the mind from one hypothesis to another, whether in poetry, drama, music, or plastic art-forms, which are the principle of change underlying Classical forms of artistic composition. This is that principle of Reason in art, which the psychosexually impotent Immanuel Kant could not recognize.³⁹ Those ambiguities which can not be resolved (e.g., "explained") deductively, as mere simile, symbolism, or hyperbole, are metaphors. These metaphors, which exist implicitly in the subjunctive mood, are the *Geistesmassen* of art.⁴⁰ Hence, during the course of the 1948-1952 study, the present author employed this sense of "metaphor" to embrace the expression of Platonic hypothesis in both physical science and Classical art-forms.

All successful art meeting those standards, evokes the same sense of uplifting agapic beauty we experience otherwise in those activities of the individual mind, through which original, or reenacted, valid, axiomatic-revolutionary discoveries of principle are generated. Such art is an integral part of science, in the broader sense of science. Such art increases the potential productive powers of

38. A few points of clarification must be supplied here, respecting the stages of the development, and related indebtednesses, of the author's progress to his present views on the subject of music. First, although the author's knowledge of lattice principles dates from his study of the work of Harvard's Birkhoff, during the late 1940's, he did not employ the theorem-lattice as a pedagogical approach to the principle of hypothesis until a middle 1950's manuscript examining problems of Operations Research from the standpoint of economic principles. In a sense, the author's views on motivic thorough-composition had perhaps a greater role in prompting the author to employ the pedagogy of theorem-lattices, than the other way around. By 1952, the author's views on motivic thorough-composition, were centered upon the traceable influence of Mozart's K.475 on Beethoven, Brahms, *et al.* This is typified by such matters, as the recognition of Brahms' direct quotation from this Bach-Mozart source in the C-minor (First) Symphony, and the direct quotation from the *Adagio Sostenuto* (measures 70-85) of Beethoven's Opus 106, as the motivic germ opening Brahms' Fourth (E-minor) Symphony (measures 2-19). During the same interval, 1948-1952, the author had chosen the characteristics of the composition of the German Classical *lied*, from Mozart through Brahms, as the key to all music, including all Classical instrumental compositions, and had emphasized the origins of music in the singing of ancient Classical poetry, and related principles of irony in Classical drama, especially Classical tragedy. The next qualitative advance, as contrasted to gradual ones, came through collaboration with immediate associates and others, the others including, most emphatically, his dear friend, Professor Norbert Brainin, former Primarius of the Amadeus Quartet. In the first phase, 1979-1985, the emphasis was upon the implications of tuning from the standpoint of Florentine *bel canto* modes of voice-training. During that period, beginning 1981, the author projected the compilation of a text on the scientific principles underlying Classical musical composition, which became

Book I (On the Human Singing Voice) of *A Manual on the Rudiments of Tuning and Registration*, ed. by John Sigerson and Kathy Wolfe (Washington, D.C.: Schiller Institute, 1992). In the preparation of the forthcoming Book II (On Motivic Thorough-Composition and the Ensemble), Professor Brainin outlined his own discovery of approximately two decades, respecting the relationship between Joseph Haydn's launching of *Motivführung* with his own Opus 33 quartets, and the revolution in motivic thorough-composition which Mozart launched, from approximately 1782-1783 onward, in response to Haydn's program (e.g., Mozart's six quartets dedicated to Haydn). See, Lyndon H. LaRouche, Jr., "Musical memory and thorough-composition," *Executive Intelligence Review*, Vol. 22, No. 35, Sept. 1, 1995, and the relevant addendum, "Norbert Brainin on *Motivführung*," *Executive Intelligence Review*, Vol. 22, No. 38, Sept. 22, 1995.

39. I.e., *Critique of Judgment*.

40. It is important to stress, that the subjunctive mood is not the grammatical forms with which its employment may, or may not be associated. The subjunctive mood is the mood of hypothesis, the mood of thought taking thought-processes as an object. Its Classical expression is the relevant literature of Greece, such as the Homeric epics, the great tragedies of Athens' Golden Age, and the dialogues of Plato. The type of Classical Greek literature which presents the actuality of the subjunctive mood (as distinct from a mere accident of conventions in grammatical forms) is a trio, of persons from two cities of different cultural heritage, interacting in a common setting, with one or more representatives of the pagan gods of Olympus. The actual events are shared in common, but those propositions, generated in response to the events, lead to theorems which are, respectively, mutually inconsistent. One character's, or the audience's, comparison of the differing mental processes leading to the different reactions, and related ultimate outcomes, is the actuality of the subjunctive mood. Hence, the dialogues of Plato are all written in the subjunctive mood.

labor, in the same sense that technological progress does. Such art also “recharges the batteries” of the individual’s, and society’s exercise of its creative powers of reason.

All too often, in observing discussions of mathematical, or of scientific work, we may be startled to recognize that the discussion we are witnessing, is painted in fresh coats of gray upon gray, proceeding with the implied assumption, that there is no emotional motivation in scientific thought as such, but only in arguments about its conclusions. Poor actor Leonard Nimoy, trapped for eternity in endless sequels of “Star Trek,” babbling forever the idiot-savant’s: *true scientific “logic” is a quality free from emotions!*

John Keats’ “Ode on a Grecian Urn” spoke elegantly for Plato: truth is beauty, and beauty is truth. It is the passion of a mind gripped by a prescience of great beauty, which impels the creative thinker to ascend the impossible alp of scientific risks. Well-meaning laymen speak, foolishly, of financial rewards as motives for scientific (or, artistic) work. Feed a scientist, nourish his family, and offer him the opportunity to meet the kind of challenge which inspires him; freed of distracting such matters, his incentive is his passion never to lose that sense of a (Leibnizian) pursuit of happiness, the which is for him, or her, the lure of the scientific (like the Classical artistic) profession. The sense of truth is the source of the sense of overwhelming beauty; the recall of the emotion one associates with that sense of beauty, is the passion which drives one to push forward, one more step, and another, in pursuit of truth. Like Edmund Hillary, the scientist climbs the Everest of science—and Classical art, “because it is there.” Keats’ “Ode” is dedicated, passionately, to the triumph of *agapē* over *eros*.⁴¹

Such is “cognitive energy.” The composition and performance of the Classical art-form are the mirror-image of valid scientific discovery, on this account. Thus, does art command the power to recharge the batteries of the

cognitive process for the scientist. That is a subject which, however curious that might seem, at first hearing, belongs to the department of economics: to the Leibnizian science of *physical economy*.

It is relevant here, to consider what might be described as a “structured” feature to *agapē*, a feature presented in the clearest way by considerations of technological attrition.

We have already indicated, that the Riemann topological series of hypotheses, typified, symbolically, by $(n+1)/n$, corresponds to a series of formal-mathematical discontinuities. Each such discontinuity corresponds to a corresponding singularity, an added “dimension” of the series of manifolds. All of the singularities functionally extant at the time each of the manifolds is in operation (subjectively and in corresponding practice), is efficiently present in every interval of thought-action of the person whose judgment and practice are being directed in accord with that manifold. Thus, we may apply the notion of implicitly enumerable densities of discontinuities, for any arbitrarily selected interval of thought-action, for that manifold’s influence, under those general conditions.

The increase of the density of discontinuities, in such modes, has the twofold quality of “tension” and “potential.” The “potential” corresponds to the relative increase of power over nature, *per capita* and *per square kilometer* of the planet’s surface. The “tension” corresponds to a higher development of the internal (subjective) mental state of the relevant person. The increase in potential, corresponds to capacity for effectiveness of action; the increase of “tension,” corresponds to an increase in the psychological motivation for action, to an increased sense of agapic, subjective “energy.”⁴²

The notion of hypothesis, and higher hypothesis, as of the timeless form of a *good*, defines these notions as what Kepler defined as *Reason*, and Leibniz as *necessary and*

41. In music, for example, the difference between a Classical and Romantic style of performance of a Classical composition (e.g., Mozart, Beethoven, Schubert, Schumann, Brahms) is implicit in conductor Wilhelm Furtwängler’s instruction, to perform “between the notes.” In the simplest degree, this requires that the performer express the counterpoint, rather than present a sensuous array of individual notes. To this end, the emphasis must be upon the motivic implications of the interval as an element of change, avoiding resort to erotic obsession with the utterance of the individual chord or note as such. Ultimately, it requires that each interval be performed with an eye to the hypothesis established by the concluding resolution of that developmental process which is the composition taken in its entirety. This applies not only to recognizing the proper relative tempi among movements, etc., as motivic considerations of the composition as a whole demand this; it prohibits decadently erotic emphasis upon uttering individual tones, in movements performed with exaggerated

slowness for this purpose, and, on the contrary, excessive velocity, used to bury the meaningless of the performance under a sensuous heap of haste. It means a hatred of misrepresenting compositions through resort to readings of portions of a Classical score, such as Schumann, as “passage work” imported to make the composer appeal more erotically to the taste of a decadent Manhattan audience. The same applies to Classical drama and poetry. In good art, there is no symbolism, but, rather, the expression of interdependent empyreal ideas and agapic passions, expressed by metaphor.

42. This is not to be confused with erotic qualities of manic elation. The subjective effect is “calming,” directly opposed to manic. The increased capacity for action, is associated, metaphorically, with the notion of serenity and a source of “energy” for action. It suggests the quality of serenity in that great military commander who has achieved the appropriate capacity for what Clausewitz references in use of the term *Entschlossenheit*.

sufficient reason. A related term, to the same general effect, is *universal characteristics*. The significance of the latter term is shown more clearly from the standpoint of the present author's original discoveries in the domain of physical economy.

2. The 'LaRouche-Riemann Method'

There can be no competent teaching and practice of economics, which does not reject, and that absolutely, the entirety of the doctrine of "causality," as that doctrine has been passed down from Paolo Sarpi *et al.*, to the teaching of social theory and science, in virtually every classroom and textbook of secondary and higher education today. Physical science, as Leibniz applied this to economy,⁴³ demolishes, absolutely, two classes of conceptions of that Venetian tradition which is hegemonic in the economics classroom today. Physical economy overturns all widely taught doctrines of "profit" and "surplus value," by showing that the only possible origin of net growth and ("macroeconomic") profitability, is the increase of the productive powers of labor, through investment in (principally) scientific and technological progress. Physical economy demolishes the ordinary notions of "causality," directly, by showing that present economic behavior is as much determined by the influence of the future upon today, as by the heritage of the recent and more remote past.⁴⁴

The pivotal point of reference for addressing these two failures by omission, of virtually all taught economics today, is the general notion of the hypothesis as a *good*, referenced here, above. The fact that an hypothesis has the "timeless" quality referenced there, permits that

hypothesis to act as the efficient agent of the future, upon the present. The difficulty is, as early as during the medium to long term, technological attrition gives us a future which is not determined by a single hypothesis, but, rather, by a series of hypotheses.⁴⁵ Thus, the required hypothesis for determining the future outcome of present choices is that higher hypothesis, which subsumes the relevant sequence of hypotheses. On that account, no science of economics could be competent, were it not premised upon Leibniz's principle of universal characteristics, the which is derived from Plato's method of hypothesis.

On the same premises, Riemann's principal work, fairly described as *mathematics defined from the standpoint of experimental physics*, provides an indispensable service in the advancement of the science of physical economy. Given, a series of hypotheses, ordered according to the standard of mankind's increasing power over the universe, *per capita* and *per square kilometer* of the Earth's surface, we have a corresponding series of curved surfaces, each coordinate with a relevant, *n*-fold, physical space-time manifold. The series of such surfaces corresponds to the functional impact of the relevant higher hypothesis, serving as the yardstick by means of which the future may determine the selection of choices in the present.

As extremely relevant as Riemann's discoveries are, the present author's discoveries in economics could not have been derived from the root of Riemann's work. The impulse for increase of man's power over nature, *per capita* and *per square kilometer*, is expressed implicitly by the notion of Riemannian potential arising from the pages of the 1854 habilitation dissertation. However, for his own discoveries, the present author's debt to the prompting by Leibniz, is more or less direct.

Riemann's notion of a succession of manifolds of increasing power, implies a potential, a potential which

43. Gottfried W. Leibniz, "Society and Economy" (1671), trans. by John Chambless, *Fidelio*, Vol. 1, No. 3, Fall 1992. This is Leibniz's original work in physical economy, in which some among the most crucial principles of his own later work, and those of such American System followers as Alexander Hamilton, the Careys, and Friedrich List, are already affirmed.

44. This issue of the manner in which the future acts efficiently upon the present, has been an included topic of the present writer in a number of locations, in which the implications of musician Ramon Llull's use (*Ars Magna*) of Plato's principle of memory, has been addressed. Senior Operations Researcher Kenneth Arrow contributed remarks on this subject, to *Pragmatic Gradualism: Reform Strategy for Russia*, Valery Makarov, project director (Moscow: Economic Transition Group, Aug. 1995): ". . . No doubt many factors operate, but the one which I want to stress, the role of time, is intimately linked with a deeper understanding of the price system and markets. There is a

future as well as a present in economic life. . . . What I mean by the role of time can be stated paradoxically: the future influences the present. This seems like a violation of our ordinary laws of causality, but what is really meant is that our expectations of the future will affect what we do in the present." (p. 42) See, also, Lyndon H. LaRouche, Jr., "Kenneth Arrow Runs Out of Idea, But Not Words," *op. cit.*, and _____, "How Hobbes' Mathematics Mismatched Modern History," *Fidelio*, Vol. V, No. 1, Spring 1996. The same topic, directly referencing Arrow's referenced remarks cited here, was an included feature of a memorandum of May 4, 1996, on the work of U.S. contributors to *Pragmatic Gradualism*, submitted to relevant Russian academicians: *More Nobel Lies*.

45. This is illustrated most forcefully by the history of the function of technological attrition in modern warfare. The case of development in deployed combat aircraft, during the 1939-1945 interval, is exemplary.

might be expressed in terms of increasing *cardinality*: increasing density of discontinuities for any arbitrarily chosen interval of human action. To account for the historical actuality of mankind's increase of potential relative population-density, an additional standard of measure, an additional notion of function, must be supplied.

That additional standard of measure was supplied by this author, during the 1948-1952 interval. The discovery was provoked by the shocking absurdity of Norbert Wiener's claim, that the characteristic distinctions of living processes and human behavior could be subsumed under Ludwig Boltzmann's theorem in statistical thermodynamics, the so-called H-theorem. Although Wiener appeared to adopt the standard of some leading biologists, and others, in noting that the formal distinction of living processes, was that they defied entropy, his attempt at a radical-positivist form of mechanistic explanation for living and human behavior, was disgusting. Since, the fact is, that living and human behavior are distinguished from putatively non-living processes by "not entropy," the absurdity of Wiener's arbitrary claims for his "information theory," obliged the present writer to focus upon the problem of supplying an alternate, sane definition for "negative entropy." Although the writer had not yet encountered Leibniz's *Society and Economy* at that time, the starting-point of his approach to refuting Wiener was that of a Leibniz student, broadly identical to that of Leibniz's 1671 paper.

Reduced to essentials, the writer's opening argument was this. The *per capita* productive potential of both the member of the labor-force, as an individual, and in the work-place, is an expression of investments, by society, in the development of both that person, and his work-place. This cumulative investment can be represented in terms of *per-capita*, and *per-square-kilometer* values of "market-baskets" of consumption by households and the productive workplace and its essential environment. This functional notion of a relationship between productive potential, and the market-baskets of "investment" in developing and maintaining that productive potential, may be compared with the notion of "energy of the system," in classroom thermodynamics. Thus, by comparing the outputs and inputs of the population and its productive processes, including education and health as physical costs, the distinctions of "energy of the system" and "free energy" are implied.⁴⁶

46. On this and the following paragraphs, see Lyndon H. LaRouche, Jr., *So, You Wish To Learn All About Economics?*, 2nd ed. (Washington, D.C: EIR News Service, 1995). Relevant statistics and other relevant supplementary material are to be found in *To Save The Nation* (Leesburg, Va.: LaRouche Exploratory Committee, 1995).

However, that was only the beginning. The characteristic of modern agro-industrial society, is technological attrition. The study of what is known of the physical economy, and associated demographics, of pre-historic and historic existence of society, prior to the Fifteenth-century rise of modern European civilization, exhibits the same principle, governing the rise and collapse of societies. The essential difference, is that modern European civilization has stepped up the rate of development (and technological attrition) greatly, far exceeding all earlier human experience. This development occurs at a cost, a cost measurable in terms of market-baskets. In other words, the increase of the productive powers of labor occurs at a cost. That cost is, predominantly, the increase in *per-capita* and *per-square-kilometer* absolute (physical) cost of the "energy of the system," as expressed in market-basket terms.⁴⁷

This, and related considerations, leads to the following yardstick, expressed in terms of inequalities: *The requirement for the successful continuation of an economy is, that the ratio of "free energy" to "energy of the system," must not decline, despite the dependency of this ratio upon continuing increases of the absolute market-basket cost of "energy of the system," per capita and per square kilometer.*

Science As Art

The crucial features of the present writer's contributions to Leibniz's science of physical economy, are four:

1. The development of the needed metric for a science of physical economy: an appropriate conception of what should be signified, functionally, as a "not-entropic" increase of potential relative population-density;

47. As a matter of accounting for the point of reference from which the author's work on this subject began: The observations identified in this, and the preceding paragraph, were the adopted starting-point, during 1948, for the author's rebuttal of Wiener's statistical dogma. The features of that starting-point bearing on the subjects of "negative entropy" and scientific method, were products of study, including the philosophical studies of the 1930's. The notions of what constituted "energy of the system" for a modern industrial economy, were premised largely on a combination of the personal experience, being apprenticed to factory work, and related activities, as preparation for a management consulting career, during non-school-time periods of his adolescence, and relevant experiences in Bengal during the early months of 1946. The notion of putting aside nominal prices, to regard the entirety of a national, or an international economy, as a network, in terms of the standpoint of bills of materials and process-sheets, was the basis for his training and practice in management consulting. The special distinctions of his approach to defining bills of materials and process sheets, was the including of technological progress, education, and health-care, as an integral part of the national cost of the local process of production.

2. The establishment of the appropriate notion of the characteristic function of economy as subjective, rather than objective. Economic processes as characteristically cognitive for purposes of defining physical-economic function. This is accomplished through a direct focus upon the principal irony of economic science, that a thought, in the form of a *Platonic idea* (valid discovery of principle), of imputably transinfinitesimal mass and velocity, is ostensibly the efficient, catalytic, cause for vast physical changes in man's relationship to the universe, *per capita* and *per square kilometer* of our planet's surface. The related notion, that all science is a Classical art-form, that poetry must supersede mathematics in science: that mathematics and experimental physical science are subsumed by a generalization of the notion of metaphor, as metaphor is the characteristic function within all Classical art-forms.
3. That the ultimate proof of the validity of the human cognitive process, is not the principle of "repeatable experiment," but, rather, the fact of mankind's increasing potential relative population-density, and correlated potential for improvement in demographic characteristics of individuals, households, and the population as a whole, through increase of the cardinality of human cognitive action. *The universe is manifestly pre-disposed, by design, to obedient submission to those valid, axiomatic-revolutionary discoveries of principle which are generated by the individual person's willful, cognitive processes of creative reason.*⁴⁸
4. The significance, as we have shown, of Riemann's discovery, for providing the needed notions of measure-

48. This use of the term "design," respecting the disposition which our universe has acquired by design, is congruent with the notions of Leibniz's *Monadology: op. cit.*, 51-60, pp. 156-157. The highest Good, the ultimate hypothesis, the ultimate Monad, is the "alpha and omega" of all of the existence of the universe. Thus, the characteristic imbued in every theorem of the theorem-lattice defined by that hypothesis, reflects the future as hypothesis reflects all possible future states of its own theorem-lattice. Hence, the characteristic of the universe's response to relatively valid, axiomatic-revolutionary discoveries of principle, is the increase in man's relative power of dominion in the universe as a whole. The fright which explodes in the Aristotelean or empiricist, when any conception of this is presented, is illustrated, as Leibniz notes this fact, by the so-called "mortalist" doctrine of the soul, transmitted into the Sixteenth and Seventeenth centuries by the students of Pomponazzi. The argument of these "mortalists" is congruent with the tautological fallacy which Euler employs to attack Leibniz: the root, is the popularization of that absurd representation of "infinity" inhering in the method of Aristotle. A wag might say, on this account, that "all followers of Aristotle are schlemiels." See, forthcoming publication of work by Webster G. Tarpley, respecting the roots of Bonapartism and the Grand Orient freemasonry in France, including treatment of the subject of the "mortalist" currents in Seventeenth-century France.

ment required to show the connection between scientific and physical-economic progress.

The addition of the fourth, to shape the application of the preceding three discoveries to empirical treatment of actual physical-economic processes, constitutes what has been known, since December 1978, as the *LaRouche-Riemann Method*.⁴⁹

Although this method makes use of mathematics and physical science, it is essentially the treatment of mathematics and physical science as subsumed features of a Classical art-form, the defining, subsuming characteristic of which, is the equivalence of metaphor to the primary features of human cognitive activity. In that sense, we are obliged to speak of "art as science."

Before we proceed to focus the camera of the mind upon the argument underlying each of the four topics just listed, let us clear the scene (so to speak) of some of that distracting bric-a-brac, whose presence, today, usually prevents students, key government officials and other policy-shapers, and others, from focussing rationally upon the crisis-problems of today's planet.

To be a competent economist today, one must have a taste for Classical stylists of a Platonic disposition and wit, in the footsteps, for example, of a François Rabelais, or Jonathan Swift. To clear one's mind to think with scientific rigor, one must be capable of seeing that the pompous verities of the privileged and popular of one's own time, and earlier, too, are ridiculous pretenses. Like Swift's Gulliver, one might think of one's self as some poor lout, who is nonetheless a veritable titan amid the royal, lordly, and lackey pygmies around him, or might fancy a view of early Eighteenth-century England, as a pack of witless, ever-rutting Yahoos, being herded and culled by what appears to be a lordly pack of horses'

49. In consequence of an argument, between this writer's circles, and some of Dr. Edward Teller's talented friends at Lawrence Livermore Laboratories, on the matter of isentropic compression in ignition of fusion processes, the writer proposed to show that Riemann's principle of isentropic compression, as typified by Riemann's *Fortpflanzung* paper, had a general application, including its role in presenting the best economic forecasting tool for computer-assisted forecasts. The author reduced the principled features of his work in economics to the relevant sets of inequalities and constraints required for a computer "modelling," treating the Riemann-like, technology-driven phase-shifts in economic processes as the basis for showing the characteristics of current economic trends. This produced a series of quarterly forecasts for the U.S. economy, which were continued by the weekly *Executive Intelligence Review (EIR)* into the close of 1983. These, described since late 1978 as "The LaRouche-Riemann Method," were the only successful forecasts of the 1979-1983 interval. They were discontinued only when *EIR* caught the U.S. government and Federal Reserve System introducing, abruptly, such wild fakery of reported data, during the closing months of 1983, that no rational forecast dependent on official data was possible any longer.

rears. We could not, in good conscience, be so tolerant as Swift was, to the economists, sociologists, psychologists, and, lowest of all, popular journalists, who pollute the prevailing sentimentality of our own times. Considering such creatures as those professionals of today, a man, beset by packs of such misanthropes, must be forgiven, if he imagines, in the odd moment, that he might be a modern Gulliver, the only man with a functioning watch on a planet full of cannibals.

Those allusions to Rabelais and Swift might be misjudged, as spoken lightly; but, they are in dead earnest, and do not exaggerate the enormity of the problem confronting the world today. Consider what man is, in contrast to what the debased opinion of today's empiricists presumes man to be. Then, it should be clear, that we have perpetrated no libel in speaking so contemptuously of those vastly overpopulated social-theoretical professions, the which have turned our universities into refuse dumps for dead minds and rotting morals.

The rise of the Enlightenment's influence, during the course of the Seventeenth through Nineteenth centuries, witnessed the spread of those mental illnesses in the forms of empiricism and Cartesianism, and, later, as Kantianism. Each nation, today, has a heritage of the most radical extremes of such axiomatic misassumptions, respecting the nature of man: For England, for example, Thomas Hobbes, John Locke, and Bernard Mandeville; for France, the neo-Cartesian positivists and their bastard intellectual progeny, the existentialists; for Germany, the neo-Kantians and existentialists; for the U.S., our pragmatists; and, so on. Influences of that ilk are paramount in our universities, in the educational programs of public education, and, colored with pornographic, day-glo hues, as the commonplace truisms reigning within the common, back-fence variety of gossip, everywhere.

This same immorality, spreading out of those cesspools which are our universities' departments of sociology, psychology, anthropology, political science, philosophy, modern language, and history, is the characteristic feature of the editorial practice of our leading news and entertainment media. It is the foundation for the filthiest concoctions of gossip, used as weapons of political influence, as by both leading press and corrupt prosecutors. English and French "social science," has transformed the majority of the hegemonic currents among ostensibly educated U.S. citizens, their children, and others, into "Yahoos." It is a mark of the times, that "Yahoo" is an irony of incontestable appropriateness, to describe those citizens who profess themselves to be the "single-issue minded" Torquemadas of the public conscience.

This moral rot may be summed up, fairly, as deeply

embedded, axiomatic acceptance of that notion, which the British empiricists define as "human nature." The overlapping, paradigmatic figures of common reference for this social doctrine, include Francis Bacon, John Locke, Bernard de Mandeville, François Quesnay, Giammaria Ortes, David Hume, Adam Smith, Jeremy Bentham, James and John Stuart Mill, and the American pragmatists. They include the followers of Bertrand Russell; the Frankfurt School of Theodor Adorno, Hannah Arendt, *et al.*; the German existentialists, including the proto-Nazi Friedrich Nietzsche, and Nazi official Martin Heidegger; Jean-Paul Sartre, *et al.*; the institutions associated with Dr. Kurt Lewin, and with such Tavistock Centre creatures as Sigmund Freud (a.k.a. "Sigmoid Fraud"), Dr. John Rawlings Rees, Melanie Klein, and that serial killer of coal miners, Dr. Eric Trist.

These varieties of nasty creatures differ only as do sundry specimens of disease-bearing lice. Their commonality is seen most clearly, in the light of physical economy: The Malthusian economic dogmas of Quesnay, Giammaria Ortes, Adam Smith, Jeremy Bentham, and the Nineteenth-century utilitarians, reflect that commonality in the clearest terms of experimental reference. The most shameless expression, until Adolf Hitler, of the principle of evil common to all these lice, putative economists and others, is the late Friedrich von Hayek's choice, the satanic Bernard de Mandeville, he the spiritual progenitor of the fascistic Mont Pelerin Society. The essence of this evil, is expressed in the economic domain, as the Locke-Mandeville-Quesnay dogma of "free trade," or, in the original Quesnay French, *laissez-faire*. Throughout what is called "European culture," there is no morally abominable feature of economic doctrine, social theory, or mathematical physics, which is not rooted in the equivalence of the Mandeville-Quesnay dogma of "free trade" to that Newton-Clarke-Euler dogma of "infinite series," which Euler employed for his tautologically fallacious fraud of 1761, against Leibniz.⁵⁰

Sometimes, it appears, that people accept the *laissez-faire* dogmas of the evil Quesnay and Adam Smith, because they have been brainwashed into accepting the influence of Newton, Euler, *et al.* respecting axiomatics of mathematical physics. Admittedly, the substitution of the virtual reality of "infinite series" for real-world physics, prescribes that economic processes be treated from the standpoint of Thomas Hobbes' principles, which underlie the statistical gas theory of Lord Rayleigh and Ludwig Boltzmann. On the other hand, sometimes it appears, that

50. The sociological root of the doctrine of "linearization in the very small."

it is empiricist social theory which prejudices the mind to accept the notions of causality and infinite series of the empiricists. Obviously, the doctrine of social behavior promulgated by Hobbes, prescribes that mankind's experience in the domain of sense-perception, be premised upon a notion of "random walk" through a kinematic manifold. One who wishes, passionately, to defend such a mechanistic world-outlook, must fear Gottfried Leibniz, must be disposed to lie ferociously about Leibniz, and to seek to discredit him in every way an hysterical gossip might contrive, even if that means going to bed with a certain bachelor, Dr. Samuel Clarke's lunatic client, Isaac Newton.⁵¹

The principle of evil inhering in Hobbes, François Quesnay, and Adam Smith, is presented in its most naked terms by Bernard Mandeville.⁵² The form in which this principle of evil is presented, is that Hobbes model which is otherwise the general plan for statistical gas theory, and for the use of infinite series as a substitute for physics. The argument is, that unless we wish to

adopt Hobbes' alternative, the Divine Right of an Absolute Monarch to do as he might will, we must be content with a form of "libertarianism," a "social contract" derived from John Locke's defense of chattel slavery: "Life, Liberty, and Property," the Locke argument against which both the American War of Independence, and the war against the Confederacy were fought. Evil is, "Anything might be allowable, if it does not interfere with the superior, unchecked right of the property-owner." From the conception of "my body," "my family rights," "my personal sensitivities," and so on, as Lockean forms of "property," any evil done in the name of libertarianism might flow. From this is derived the anti-Christian ethics professed publicly by U.S. Supreme Court Associate Justice Antonin Scalia, that upon the "perfect democracy" of Lockean chaos, law may impose only those rules which are set, as guidelines, by the most recent caprices of majority opinion.

Every branch of social theory taught in leading universities today, differs from every other branch as one

51. Isaac Newton's apotheosis as the "English Descartes," was arranged by the Paris-based control agent of Venice's intelligence service, the Abbot Antonio Conti (1677-1749). Dr. Samuel Clarke was a leader in an English circle run by Conti, and was Conti's controller of Newton during the period of the Leibniz-Clarke-Newton correspondence. The setting for Conti's apotheosis of the unfortunate Newton, was the implications of England's 1701 Act of Settlement, which, for a time, designated Leibniz's patroness, Electress Sophie of Hanover, as heir to the throne. Leibniz, then the most powerful intellect in Europe, with a powerful, international network under his leadership, and the most deadly enemy of the Venice's special interest, loomed, until Sophie's death in 1714, as the prospective Prime Minister of England. Conti picked up poor looney Isaac Newton to serve as a cat's paw, in Venice's desperate concern to discredit that Leibniz, who soon emerged as the philosophical progenitor of the American Revolution, its Declaration of Independence, and the Preamble of its Federal Constitution. [Cf. H. Graham Lowry, *How The Nation Was Won*, Vol. I (Washington, D.C.: Executive Intelligence Review, 1987).] On the subject of Newton's scientific work, the following, as reported in "How Bertrand Russell Became an Evil Man," *Fidelio*, Vol. III, No. 3, Fall 1994, Note 234, p. 59. The monetary theorist John Maynard Keynes was entrusted with the assessment of a chest of Isaac Newton's private scientific papers. Keynes, opening the chest, was shocked to find the scribbblings of a superstitious lunatic, a Newton whom he described, in his report, as "the last of the magicians, the last of the Babylonians and Sumerians . . . wholly devoid of scientific value"; see "Newton the Man," in *Newton Tercentenary Celebration* (Cambridge: Cambridge University Press, 1947), pp. 27-34.

52. Adam Smith was, beginning no later than 1763, an agent of the notorious William Petty (Fitzmaurice), Second Earl of Shelburne, best known as "Lord Shelburne," one-time Prime Minister of Britain, key representative of the British East India Company interest, and of Barings bank, and paymaster for the bribes employed to control the British Parliament of William Pitt the

Younger. Shelburne was, also, the patron of the Jeremy Bentham who headed up the British foreign service, from 1782 on, and of the pack of creatures who passed for economists at the British East India Company's Haileybury School. Smith was assigned, in 1763, to assist a Shelburne project aimed both at undermining the economy of France, and destroying the independence of the English colonies in North America. To the latter end, Shelburne dispatched Smith to France, where he studied the works of Quesnay and other physiocrats, whom he parodied and plagiarized for the production of his own anti-American tract, his 1776 *Wealth of Nations*. The evil in Smith may have resonated with that of Quesnay, but was firmly established earlier, in his 1759 *Theory of the Moral Sentiments*, the core of which is pure Mandeville. The relevant passage of the latter work most often cited by the present author, runs as follows. ". . . To man is allotted a much humbler department . . . more suitable to the weakness of his powers, and the narrowness of his comprehension; the care of his own happiness, of that of his family, his friends, his country. . . . [T]hough we are . . . endowed with a very strong desire of those ends, it has been entrusted to the slow and uncertain determinations of our reason to find out the proper means of bringing them about. *Nature has directed us to the greater part of these by original and immediate instincts. Hunger, thirst, the passion which unites the two sexes, the love of pleasure, and the dread of pain, prompt us to apply those means for their own sakes, and without any consideration of their tendency to those beneficent ends which the great Director of nature intended to produce by them.*" [emphasis added—LHL] The libertarian's immorality of Mandeville is clearly reflected in that passage from Smith, just as Smith's plagiarizing Quesnay's *laissez-faire* is the basis for his own "free trade," and "Invisible Hand." Mandeville insists that even evil impulses of individuals are part of the process of interactions which leads to ultimate good, just as the evil Professor Milton Friedman argued in such locations as his April 16, 1980 TV interview on the *Phil Donahue Show*. On Mandeville, see H. Graham Lowry, *op. cit., passim*. Also, _____, "The Mandeville Model," *Fidelio*, Vol. V, No. 1, Spring 1996.

cut of the same cloth might differ from another. All are but varieties of apologetics for this same moral and intellectual pollution exemplified by liberal economic dogma.

Under the influence of these and kindred misconceptions of “freedom” and its limits, during the past thirty-odd years, we have nearly destroyed what had been an admittedly imperfect, but successfully progressing civilization. Until changes in “cultural paradigms,” induced during the mid-1960’s and following, the modern sovereign nation-state republic had been premised upon promoting the benefits, implicitly to all, of investment in scientific and technological progress. During the recent thirty years, the damages which have been done to the mind, have been worse than that which has been done to their bodies. We must console the Lemuel Gulliver condemned to describing that Hell-hole which our civilization is becoming.

Potential Relative Population-Density

That cause for our recalling Swift, is typified by viewing the moral degeneracy of those who fancy real-life economy as an “n-person, zero-sum game” out of the virtual reality of Von Neumann’s and Morgenstern’s theory of games.⁵³ This brings us to consider the first of the present author’s four crucial contributions to Leibniz’s science of physical economy, the notion of *potential relative population-density*.⁵⁴

53. John Von Neumann and Oskar Morgenstern, *Theory of Games and Economic Behavior*, 3rd ed. (Princeton: Princeton University Press, 1953). As those authors note [Note 1, page 1], the genesis of their book is found in a 1928 paper of Von Neumann, *Zur Theorie der Gesellschaftsspiele*. By 1938, Bertrand Russell devotee Von Neumann had committed himself publicly to the lunatic doctrine, that economic processes could be reduced to solutions to a set of linear inequalities. Together with another Bertrand Russell clone, Norbert Wiener, the modern dogmas of “cybernetics” and “systems analysis” were hewn into the form, as policies, they have dominated post-World War II practice.

54. On the practical representation of *potential relative population-density*, see Lyndon H. LaRouche, Jr., *So, You Wish to Learn All About Economics?*, *op. cit.* There are also editions in Spanish, Russian, Ukrainian, Polish, and Armenian, and Georgian and Chinese editions in progress to print.

55. The interval, from the opening of the great ecumenical Council at Florence, to the accession of France’s King Louis XI to establish the first modern sovereign nation-state republic. This period corresponds to the core of what is called the “Renaissance,” e.g., the *Golden Renaissance*, as opposed to the Sixteenth-century emergence of the Venice-orchestrated *anti-Renaissance*, which came to be known as the *Enlightenment*. The conflict within European culture, to which we have been referring throughout this present paper, is efficiently, and accurately identified as the irreconcilable conflict of principle between the Renaissance and the Enlightenment.

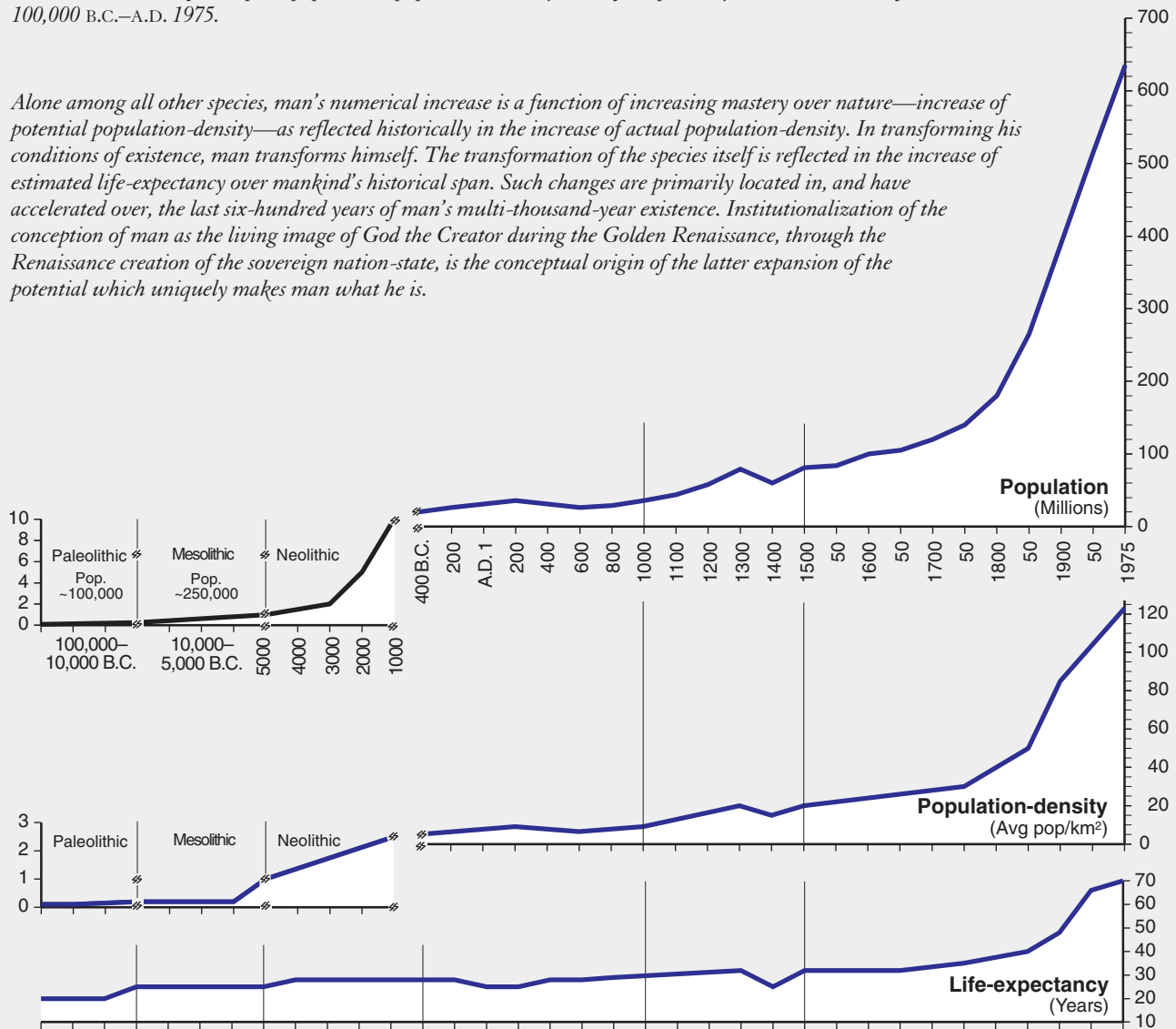
The distinguishing characteristic of the existence of the human species, is the increase of its population over that of any actual, or imaginably comparable type of higher ape. For the conditions which have existed on this planet during the recent two millions or so years, such a higher ape could not have exceeded a population of several millions, world wide. By the close of the medieval period of European history, circa A.D. 1439-1461,⁵⁵ the world’s human population had attained several hundreds millions; from that point on, the impact of the combined development, in Europe, of modern scientific progress and the emergence of the modern sovereign nation-state,⁵⁶ has prompted a hyperbolic population-growth world-wide, to in excess of an estimated 5.2 billions presently [SEE Figure 2].

This is not limited to an increase in raw population. There is a correlated trend for improvement in demographic characteristics of total populations and their component cohorts. The combined trends are correlated with increase of both the consumption and production of essential market-basket components of both input and output, as measured *per capita*, *per household*, and *per square kilometer* of relevant land-area. These components include such physical components as agricultural and manufactured products, and improvements in land, and other infrastructural development of the occupied territories of the society. These

56. Under feudalism, there was the notion of “nationality,” but there were no nation-states. Rather, from the bowels of Babylon until the middle of the Fourteenth century, the civilization of the Mediterranean littoral, and immediately adjacent territories, was under the rule of *imperial law*. [See, Friedrich August Freiherr von der Heydte, *Die Geburtsstunde des Souveränen Staates* (Regensburg: Josef Habel, 1952).] The land and the people were the property of an emperor, under which overlords, lords, and others, ruled over those territories and persons which had been parcelled out to them. From Babylon, through Rome and Byzantium, through Venice-dominated Fourteenth-century Europe, over ninety-five percent of the population of this planet, in every quarter, lived as virtual human cattle, or worse, under the rule of a form of rule by quasi-immortal oligarchical families, an oligarchy apotheosized as the pagan gods of Olympus. The idea of a modern European sovereign nation-state, belonging to its people, rather than according to a feudal system, was the outgrowth of a long process, growing out of the infusion of the Greek Classical idea of Solon, Plato, *et al.* with the principles of Christian universality of mankind. The proximate general precedents for the founding of the first modern state, France, were the program of Dante Alighieri, as amended by Nicolaus of Cusa’s *Concordantia Catholica* and *De Docta Ignorantia*. The conflict between *Renaissance* and *Enlightenment*, has been the struggle of the former, to establish, defend, and develop the modern sovereign nation-state, against the determination of the oligarchical interest to turn back the clock to “global economy” and “world government,” under the rule of a Venice-style aggregation of financier-oligarchical families.

FIGURE 2. *Growth of European population, population-density, and life-expectancy at birth, estimated for 100,000 B.C.–A.D. 1975.*

Alone among all other species, man’s numerical increase is a function of increasing mastery over nature—increase of potential population-density—as reflected historically in the increase of actual population-density. In transforming his conditions of existence, man transforms himself. The transformation of the species itself is reflected in the increase of estimated life-expectancy over mankind’s historical span. Such changes are primarily located in, and have accelerated over, the last six-hundred years of man’s multi-thousand-year existence. Institutionalization of the conception of man as the living image of God the Creator during the Golden Renaissance, through the Renaissance creation of the sovereign nation-state, is the conceptual origin of the latter expansion of the potential which uniquely makes man what he is.



All charts are based on standard estimates compiled by existing schools of demography. None claim any more precision than the indicative; however, the scaling flattens out what might otherwise be locally, or even temporally, significant variation, reducing all thereby to the set of changes which is significant, independent of the quality of estimates and scaling of the graphs. Sources: For population and population-density, Colin McEvedy and Richard Jones, *Atlas of World Population History*; for life-expectancy, various studies in historical demography.

Note breaks and changes in scales.

include such elements of “soft” infrastructure as education and health-care [SEE Table I, p. 38].

In light of the dependency of productivity upon both the development of the individual member of society, and of both the work-places and of infrastructure generally, one may readily discern a fact, which may be established with great rigor. The increase of the productive powers of labor, as measured in market-basket contents, *per capita*, *per household*, and *per square kilometer* of

land-area, depends upon increase in the content of the relevant market-baskets of consumption. Relevant to the argument of Von Neumann, to increase the output of society, *per capita*, we must increase the input of society, *per capita*. Thus, summed up in terms of inequalities: *The successful growth of potential relative population-density, requires that the ratio of “free energy” to “energy of the system” not decrease, under the condition that this can not occur without an increase of the density of “energy of the system.”*

TABLE I. *Development of human population, from recent research estimates.*

	Life expectancy at birth (years)	Population density (per km ²)	Comments	World population (millions)
Primate Comparison				
Gorilla		1/km ²		.07
Chimpanzee		3-4/km ²		1+
Man				
Australopithecines B.C. 4,000,000-1,000,000	14-15	1/ 10 km ²	68% die by age 14	.07-1
Homo Erectus B.C. 900,000-400,000	14-15			1.7
Paleolithic (hunter-gatherers) B.C. 100,000-15,000	18-20+	1/ 10 km ²	55% die by age 14; average age 23	
Mesolithic (proto-agricultural) B.C. 15,000-5,000	20-27			4
Neolithic , B.C. 10,000-3,000	25	1/km ²	"Agricultural revolution"	10
Bronze Age B.C. 3,000-1,000	28	10/km ²	50% die by age 14 Village dry-farming, Baluchistan, 5,000 B.C.: 9.61/km ² Development of cities: Sumer, 2000 B.C.: 19.16/km ² Early Bronze Age: Aegean, 3,000 B.C.: 7.5-13.8/km ² Late Bronze Age: Aegean, 1,000 B.C.: 12.4-31.3/km ² Shang Dynasty China, 1000 B.C.: 5/km ²	50
Iron Age , B.C. 1,000-	28			50
Mediterranean Classical Period B.C. 500-A.D. 500	25-28	15+/km ²	Classical Greece, Peloponnese: 35/km ² Roman Empire: Greece: 11/km ² Italy: 24/km ² Asia: 30/km ² Egypt: 179/km ² * Han Dynasty China, B.C. 200-A.D. 200: 19.27/km ² Shanxi: 28/km ² Shaanxi: 24/km ² Henan: 97/km ² * Shandong: 118/km ² * * Irrigated river-valley intensive agriculture	100-190
European Medieval Period A.D. 800-1300	30+	20+/km ²	40% die by age 14 Italy, 1200: 24/km ² Italy, 1340: 34/km ² Tuscany, 1340: 85/km ² Brabant, 1374: 35/km ²	220-360
Europe, 17th Century	32-36		Italy, 1650: 37/km ² France, 1650: 38/km ² Belgium, 1650: 50/km ²	545
Europe, 18th Century	34-38	30+/km ²	"Industrial Revolution" Italy, 1750: 50/km ² France, 1750: 44/km ² Belgium, 1750: 108/km ²	720
Massachusetts, 1840 United Kingdom, 1861 Guatemala, 1893 European Russia, 1896 Czechoslovakia, 1900 Japan, 1899 United States, 1900 Sweden, 1903 France, 1946 India, 1950 Sweden, 1960	24 32 41	41 43 40 44 48 53 62 73	90+/km ² Life expectancies: "Industrialized," right; "Pre-industrialized," left	1,200 2,500
1970 United States West Germany Japan China India Belgium	 59 48	 71 70 73	1975 26/km ² 248/km ² 297/km ² 180/km² 183/km ² 333/km²	3,900

Contrast this with the twofold absurdity of axiomatic presumptions, which underlie, inextricably, the foolish “zero-sum game” of Von Neumann’s and Morgenstern’s text. That is to say, consider, on one side, the absurdity of Von Neumann’s and Morgenstern’s axiomatic assumptions, as this pertains to the facts of physical economy. At the same time, consider the lunacy of Von Neumann’s and Morgenstern’s presumption, that prices, as treated in their games, represent functional measures of economic performance of societies considered in their entirety. Consider in that light, the sheer lunacy of the manner in which the modern economics classroom popularizes its mythical distinction between “micro-economics” and “macro-economics.”

Like Wiener’s statistical information theory, Von Neumann’s systems analysis apotheosizes the worst banalities of radical logical positivism: Hobbes and Mandeville are taken to their radical extremes. Von Neumann, Hobbes, and Mandeville portray a linearized parody of actual man, and this in the very small; the result is elaborated, by simple extrapolation, all in an idiot-savant child’s multi-dimensional parody of Euclidean space-time. There are no physical values, no physical realities in the virtual reality of Von Neumann’s universe. There is only a fantastic montage: the Cheshire cat’s grin of Jansci (“Johnny”) Von Neumann, as an imaginary child, and the ring of the candy-store cash register.

All of the arguments, to the effect that a money-price ought to represent the action of a competitive market to arrive, asymptotically, at a level corresponding to the dogmatics of “marginal utility,” are patently absurd, both by definition, and in light of facts of economic history of price movements. The “free trader’s” argument is essentially that of Hobbes, Mandeville, Quesnay, *et al.*: That, it is the random interaction of the microeconomic events, aggregately under the statistical governance of the “Invisible Hand”—might one say, “ergodic process,” which reveals what Adam Smith’s “great Director of nature intended to produce” by these relatively blind, statistical interactions. That is, with some qualifications on tertiary points, the argument of Von Neumann and all among those who follow him in this matter.

In reality, throughout economic history, relative values of money prices are rigged. In some instances, the prices are set by decree; usually, prices are rigged by the action of monopolistic or oligopolistic financial powers; in the optimal circumstances, movements in relative price-levels among commodities are controlled indirectly, through the setting of the rules of the market-game, as by governments, or agreements among governments; in worse times, these powers are usurped by private financier

cabals, such as those centered around the U.S. Federal Reserve System, which preempt powers which should be reserved to representative agencies of sovereign nation-state republics. The assertion, that a “market” process tends to produce a statistically appropriate money-price, is the babbling of either an economics illiterate, or an out-right liar.

The leading political issue, respecting how prices of money and other commodities *should be rigged*, whether by representative agencies of sovereign republics, or by supranational cabals of financier oligarchical interests, is the strategic question: *Which shall reign, sovereign nation-state republics, or “private” financier oligarchies which esteem themselves supranational potencies above governments?*

Under present realities, during which the global system of financier-oligarchy-ruled “free trade,” is so visibly in the process of its self-induced disintegration, the proposition before us is clearly nothing other than this: Except for economics illiterates, and liars, the central issue of money-prices is: *How should representative agencies of sovereign nation-state republics “rig markets”?*

This question requires a two-part answer. First, and foremost, the issue is political, and strategic: *How shall we set the conditions determining relative price-movements, to ensure that the republican interest is not weakened to the advantage of humanity’s ancient and continuing strategic adversary, the oligarchical interest?* The second leading question is economic: *How shall we regulate the flow of money and credit, to such effect that the “ratio of ‘free energy’ to ‘energy of the system’” does not decline, while promoting scientific and technological progress in the productive powers of labor, through increasing the capital intensity of ‘energy of the system,’ per capita, per household, and per square kilometer of relevant land-area?* How do we regulate price movements, and credit streams, to ensure that the appropriate physical-economic function is observed in practice? Both questions may then be combined into one: *How is the national economic security (of the perfectly sovereign nation-state republic) best immunized against the two principal epidemics most often fatal to the institutions of human freedom: the diseases of economic devolution, and growth of financier-oligarchical influences?*

The national economic security, is defined, in turn, as the required, not-entropic increase of potential relative population-density, and improved demographic characteristics and standard of living for each and all age and other cohorts of the total population.

The general objective in price policy, is to cheapen relative prices while increasing the productivity, physical income, and demographic characteristics of every part of

the labor force, excepting parasitical and redundant functions of administration and finance. (A man as wise as Jonathan Swift might recommend, that the latter economic categories should be culled regularly, and the culls reassigned to honest labor. A modern Rabelais might recommend regular sweeps of Manhattan's Wall Street, and similar gathering-places of both the parasite and Paris-ite classes in every country, to this same salutary purpose.) This accords with such measures as providing a Humboldt grade of universal public education to every child and adolescent, and, increasingly, a comparable higher education of the same quality. It requires a health policy of prolonging life, in defiance of every category of life-impairing affliction, constantly pushing back the boundaries which constrict human life. It requires persisting increase in the capital-intensity and power-intensity, of a productive process driven by investment focussed upon increase of productivity and product types and quality, through priority assigned to investment in scientific and technological progress.

This requires a policy of more abundant and cheaper credit, and more favorable tax-treatment, for those undertakings which accord with this notion of national economic security, and relatively less generous treatment for matters which lie outside these high-priority aspects of the economy. It requires an emphasis upon long-term investment, over short-term, using the same "weapons" of monetary, credit, trade, tariff, and tax policy, to obtain the desired relative movements in prices and credit-flows.

It requires fostering trends in international trade which work to these same goals in relations among sover-

eign nation-state republics. Relatively fixed parities among national currencies, and low prices of long-term trade, infrastructure-building, and productive-investment credit, over the medium- and long-term cycles. National food security assured to all nations, and promotion of growth in physical productivity, rather than cheapening of the average price of labor in international trade.

In all, movements in money prices must be orchestrated in such a way as to bring trade, investment, production, and consumption, into patterns of flow which accord with the indicated general metric: not-entropic increase of the potential relative population-density of sovereign nation-state republics, most notably our own. The wise government, when it is able to do so, will rely upon defining the axioms of the economic hypothesis, more, and desire less the direct administration of prices of individual commodities.

Economics: The Subjective Science

A consistent policy of what we today might term "zero technological growth," was the recurring cause for the "dynastic" collapses of all societies organized according to that oligarchical principle typified by the "oligarchical model," the so-called "Babylonian," or "Persian" model of Rome, Byzantium, Venice, and the landed and financier aristocracies of feudal Europe.⁵⁷ The "zero technological-growth" policies of the Diocletian Code, were a continuing influence of Byzantium on the reigning internal policies of feudal Europe, until the virtual elimination of the landed aristocracy as a ruling institu-

57. The following note is supplied here, as a matter of facts relevant to, and influential today, for the reader's deeper understanding of the present times in which we live today. The term "oligarchical model," as interchangeable with "Persian model," was the currency of mid-Fourth-century B.C. Classical Greece. These usages arose for modern scrutiny, in the negotiations by (the enemies of Socrates and Plato,) the Persian Magi caste, with King Philip of Macedon. This occurred during the time of Aristotle's teacher and controller, the Isocrates who headed the leading school of sophistry in Athens of that time, Isocrates' School of Rhetoric, the same Isocrates who played a conspicuous role in the policy-discussions surrounding the mooted East-West "detente" of that time. As was famously proposed by the Persian Emperor, to King Philip's son and political adversary, Alexander "the Great," this was the "one world" project of that place in history: A "detente" whose intent was to end the centuries-long war between the Persian Empire and the intellectually and militarily superior Greeks, by establishing a division of the Persian Empire, between "West" (west, approximately, of the Halys and Eurphrates rivers), and "East." The Macedonian monarchy was repeatedly offered the hereditary imperial rule over the West, on condition that Macedonia subdue those stubborn Greeks whom

the Persians had never developed the wit and military skill to conquer. The added condition was, that the social model of the western empire conform to the oligarchical model of the Achaemenids. Actually, the "Persian Empire" was nothing but the old Babylonian Empire revitalized under the "hired new management" selected by the ruling families of Babylon, the hereditary priest-caste, akin to the priesthood of the Delphi Cult of Apollo. The model of Mediterranean-wide East-West Empire, was revived, first, during the wars of the First century B.C., in which the Capri agreement between Octavian (Augustus) and the Magi priests of Mithra, established Rome as the capital of a "world empire," and the second phase, under Diocletian, in which the Empire was divided between an eastern and western division, the religious-cultural "balance of power" division of Europe, from the Code of Diocletian, to the present day. It was from these precedents, that the modern British Empire designed the orchestration of the "geopolitical" balance of power between eastern and western Europe, since the beginning of this century, and still attempts to do so, in two World Wars, one Cold War, and the present Anglo-French *Entente Cordiale* manipulation of internal Moscow strategic perceptions and policies, today.

tion, during World War I. It was this same policy, of “zero technological progress,” as embedded axiomatically in Diocletian’s Code, which brought about the internal, cultural, economic, demographic, and political self-destruction of Byzantine rule, through A.D. 1453, and beyond, to the collapse of the Ottoman Empire during World War I. Any civilization which adopted such a policy of “zero technological progress” (such as today’s neo-Malthusian “environmentalism”), was destroyed internally by that policy, and stands, like the poet’s fabled Ozymandias, a pitiable relic upon the sands of dead history, today.

Why do oligarchical forms of society insist, like a lunatic set upon his self-destruction, on the interrelated policies of “zero technological growth” and “population control,” by means of which every great empire of the past destroyed itself from within? Are our modern oligarchs such “lemmings” of the sociologists’ animal-experiments laboratories, that they cannot escape their recurring dynastic nightmare, even after so many thousands years? Today, this mass-murderous, but also suicidal species of pervert, insists upon repeating the kind of policies which we may recognize today as the policies of the 1961-founded World Wildlife Fund, created by the arch-oligarchs of the late-Twentieth century, the British Empire’s Prince Philip, and Nazi-SS veteran Prince Bernhard of the Netherlands? History, and Prince Philip’s own utterances on the matter, like those of the Worldwide Fund for Nature, and kindred institutions, coincide.

There are two, inseparably connected motives.

First, the global oligarchical class which Princes Philip and Bernhard represent in the post-World War II process, have a perverted, totally pagan misconception of human nature, which Prince Philip expresses publicly, repeatedly. He insists on standing out in public, his naked face shamelessly displayed, insisting that he is not a man as *Genesis* and Christianity define man and woman, but something more like a monkey; he insists that he is a “higher ape.” He insists that mankind is no better than just another species, whose herds and flocks must be culled, as murderously as might be necessary, to

yield managed herds which are more manageable, both in numbers and in down-breeding’s selected traits of docility⁵⁸: like selected Hollywood actresses, selected like races of dogs, for breeding-stock, not for brains and character of the progeny (“Zeus save us!”), but for the down-bred qualities of fancied pulchritude, as preferred by the current crop of judges at the eugenics breeding marathons.

Second, it has penetrated even the sun-drenched, Gila Monster-like, sluggish wits of these oligarchs, that the mere existence of the modern sovereign nation-state republic, is a menace to future world-rule by the oligarchical species. It has occurred to even these high-ranking spokesmen of the British Empire, that the uplifting of the ninety-five percent of humanity, from their imperial status as virtual human cattle, to persons enjoying a universal cognitive quality of education, and the opportunity to participate in the benefits of generalized scientific and technological progress, produces a quality of individual, economically and in every other way, which is vastly superior to the typical member of a society ruled by “free trade” and pro-Malthusian ideologies of practice. It is also apparent to, and explicitly desired by, a well-tanned specimen like Prince Philip, that without that design of modern nation-state republic set into motion by Dante Alighieri, Nicolaus of Cusa, the A.D. 1439-1440 sessions of the Council of Florence, and the A.D. 1461-1483 establishment of the first such state by France’s Louis XI, the condition of approximately ninety-five percent of humanity will fall back, without visible hope of repair, to the status of human cattle. Witness the persisting pattern, since the 1960’s, of the degeneration of children of formerly human subjects of Her Majesty, once capable, in pre-Harold Wilson days, of the cognitive functions of modern industrial labor, to such pathetic “Yahoos” as England’s homicidal, beast-like football fanatics of the 1970’s, and, worse, today.

That, in a capsule, is what the row is all about. All of the other topics of European history since the Fifteenth century, and all of world history since the Eighteenth century, are merely incidental matters of secondary or much less importance, than this one conflict, between

58. In his 1923 *The Prospects of Industrial Civilization*, the Hitler-like Bertrand Russell supplied an utterance typical of him, and the “Jenny” of Bertolt Brecht’s *Three-Penny Opera* script: “. . . the white population of the world will soon cease to increase. The Asiatic races will be longer, and the negroes still longer, before their birth rate falls sufficiently to make their numbers stable without help of war and pestilence. . . . Until that happens, the benefits aimed at by socialism can only be partially realized, and the less prolific races will have to defend themselves against the more prolific by methods which are disgusting even if they are necessary.” Russell’s is the same mentality

exhibited by the later Averell Harriman and President George Bush’s father, Prescott, in their leading role in supporting Hitler’s London-orchestrated, 1933 accession to power in Germany. This is the oligarchical culture of Sparta in the Delphi Apollo-cult tradition of Lycurgus, and the tradition of the pagan empires of Babylon, and Rome. Bertrand Russell, Averell Harriman, Prescott Bush, *et al.*, are merely typical of the bloody face of oligarchism. These are representatives, by enculturation, of a sub-human, predatory species, against which civilization must defend itself, by methods which are necessary, but by no means “disgusting.”

republicanism and oligarchism, humanist Renaissance versus financier-oligarchical Enlightenment. This row is the single, overriding issue of all history, all national policy, of every nation, today. Who does not acknowledge that fact, knows nothing of real politics anywhere today.

The capital penalties prescribed for offenses against the Malthusian features of Diocletian's code, illustrate the point. The characteristic of an oligarchical model of society, is the condemnation of approximately ninety-five percent of the population to what is sometimes identified as a "traditional society," in which each is prescribed as doing now what his, or her father or mother did before. The fact is, that today's so-called "environmental" codes are largely outright hoaxes, like the fraudulent banning of DDT by Ruckelshaus, the multi-layered fraud of F. Sherwood Rowland's argument for banning of CFC's, "Global Warming," and so on. The fact that most of the policies associated with the Worldwide Fund for Nature, Greenpeace, and so forth, are anti-scientific frauds, is neither unknown, nor of concern to the financier oligarchy circles which deploy these organizations top-down.

It is really simple to understand why the oligarchs do this: To manage minds, as much as sizes of human populations, by Bertrand Russell's methods, which oligarchs deem "necessary, even if they are disgusting." Dupe credulous, ignorant graduates of today's "politically correct" universities and secondary schools, to put on their shackles and lock themselves into their pens each night, by luring them to believe what the oligarchs since time immemorial have always demanded that the duped human cattle of society believe, even on pain of death for the non-believer, death administered to the accompanying approbation, and Malthusian baas and bellows, of the credulous cattle themselves.

The environmentalist's technologically fixed mode of human behavior, is itself the mental condition natural to beasts, not human beings. It is the mentality imposed upon the slave, and serf, and wrought upon the tens of thousands of victims of living human sacrifice by the worse-than-Nazi Aztecs. It is the mentality which prompts that victim to make himself a slave or serf, or a man helplessly awaiting his own sacrifice upon the Aztec altar, until some event, such as a Cortez, might come to lead the victims to triumph over the bestial oppressors. It is the imprisonment of the human mind within illiteracy, which defines the slave, that slave-like mentality which knows no better that to preserve a "traditional society," a society based upon a technologically fixed theorem-lattice of human knowledge and behavior.

It is in this light, that one must understand the "why"

of the essential incompetence of virtually every accepted doctrine of economics taught in any university of this planet today, the bestiality of John Von Neumann's "n-person, zero-sum game" of economy, included most emphatically in this roster of academic charlatanry. There is no mankind in that economics. Where in what passes for a functional principle in their scheme, do we find the principle of valid, axiomatic-revolutionary discovery of natural principle as a "causal" factor in determining the outcome of policies of economic practice? Perhaps it is because the economics taught in our universities and textbooks is so obscenely absurd, that a blushing Lemuel Gulliver preferred to protect tender minds from knowing that such depraved doctrines were practised among the academicians of Laputa. "That stuff," to give it its strictly proper scientific name, was never intended ("Zeus forbid!") to be scientific, even rational. It was never intended to be other than a superstition, to be induced among the credulous. It was never intended to be other than a lunatic ideology, like that which John Maynard Keynes encountered, when he opened the chest of papers from Isaac Newton's laboratory.

Bat's wing, and eye of newt, with a bit of the cabala thrown into the recipe; ("Samiel be adored!") There, in that fabulously stinking witch's pot, is all there is to be learned of economics from the devotees of Faust, Mandeville, Smith, and Johnny Von Neumann.

Once we have situated the problem of taught economics as being the control which the oligarchical class exerts over our markets and our universities, once we know what the row is all about, we have isolated the internal problem of formalities to the degree it then may be addressed as a scientific matter.

Where in the formal mathematics of Galileo, Descartes, Newton, Euler, Helmholtz, or Bertrand Russell, is the place where the action of valid discovery of principle may be placed, to define the characteristic feature of economy? Nowhere? The place exists, but that crack has been bulldozed over, hidden for a moment by the malicious intent of the "sliding rule," Euler's referenced tautological fallacy. The principle, is Leibniz's *monad*; the place, is the mathematical discontinuities in the fabric of the formalist's physical space-time. The key, is Leibniz's attack on the efforts of Clarke and poor Newton to defend the fraudulent claim, that the calculus could be represented by means of the kind of infinite series derived from an Aristotelean, Cartesian misreading of Euclid's *Elements*. The answer is supplied by study of those densely packed mathematical discontinuities, which riddle, like sea-worms, the pillars of Euler's virtual-reality edifice. Thus, for the present author, the *Monadology*, with the *Leibniz-Clarke Correspondence*,

supplied the pivot, on which the refutation of Wiener's statistical absurdity turned.⁵⁹

Repeated successes, in validating axiomatic-revolutionary qualities of discovery of physical principle, prove conclusively, that cognition, whose knowable existence Aristotle, empiricism, and Immanuel Kant deny, exists. The increase in man's power over nature, *per capita*, demonstrates that that cognitive act is efficient. The presence of cognition, as something not captured by any mathematical schema, can be demonstrated. The efficiency of cognition is also demonstrable. The remaining challenge becomes, "How can the act of cognition itself be known, in a sense comparable to knowledge of a sense-perception?" Here, Classical art-forms take over the highest prominences of scientific method.

There are two preconditions to be satisfied, before a Platonic idea can be realized with that quality of immediacy less literate folk associate with "sense certainty." First, immediacy relies upon emotion, erotic or agapic. Without the arousal of the agapic sense of passion for truth, there is no verisimilitude to that Platonic idea of principle, even though the experimental proof of the principle's existence is complete. This sense of verisimilitude is evoked in science in the same manner it is aroused by well-composed examples of Classical art-forms. That arousal can occur only in the same way that the relevant ancient Greek literature, from the Homeric epics, through the dialogues of Plato evoke the presence of *agapē*.

As we have touched upon this matter here, as in earlier locations. Now, the present author takes the liberty of "plagiarizing himself," excerpting a passage of several pages duration from a document which he produced earlier this year. It is a portion of that earlier document which addresses the specific matter immediately before us here. In the following excerpt, the author elicits the relevant, common features of three types of ancient Greek literature: Homeric epic, Classi-

cal tragedy of Athens' "Golden Age," and Plato's Socratic dialogues.

The excerpt begins:

Look at the three, identified types of Classical-Greek literature from the vantage-point of these observations on the subject of theorem-lattices. Treat each of these types of literature from the vantage-point of that Classical-Greek notion of hypothesis adopted by Riemann.

The type of subject-matter to which the Homeric epics are devoted, is the interconnected relationships among gods, the human individual, and nature. The themes of these epics—the interconnected struggles among gods, man, and nature, are the most frequent points of reference for the later tragedies of Greece's "Golden Age" authors. In turn, the method of the Classical tragedies is the point of reference for Plato's development of the method of his Socratic dialogues, the same *method of hypothesis* employed by Riemann for the physics of his 1854 habilitation dissertation. The problem posed by the negotiations of a new world monetary order among the four world powers, is of a type already implicit in the problem of differing hypotheses, as between gods and man, in the Homeric epics.

For this comparison, the relevant case is the instance in which the fabled gods and some mortals, from the epics, experience the self-same event, but react differently to it.⁶⁰ This type of case appears again in the tragedies, and, in a slightly different, but derived form, in Plato's Socratic dialogues.⁶¹

This kind of difference in reaction, is not to be regarded as simply a difference in the interpretation of an event shared in common. We must read these differences in the sense of an efficient (e.g., physical) interaction between two mutually inconsistent processes, two incompatible physical geometries.

The one—man, or god—sharing the same event, does not merely generate a different sense-perception of the

59. References are supplied in footnote 1.

60. E.g., Aeschylus' *Prometheus Bound*. In this tragedy, the false presumption of Zeus and his Olympus cronies, is that torture dictates it to be in Prometheus' self-interest to reveal to Zeus the deadly secret of Zeus' doom. Prometheus is operating on different axioms than Zeus *et al.*; his concern is to save his own life's work, the protection and development of mankind; Zeus is committed to the elimination of the human species. Thus, Prometheus' self-interest dictates that he must not provide Zeus any information which might result in Zeus' escaping the common doom of the gods of Olympus; the good Prometheus, by keeping the secret, even at the price of prolonged torment, will triumph over the evil Zeus. Similarly, shallow-minded commentators assume that the Prometheus of this play is a tragic figure, when the subject of the drama is, most plainly, the tragic doom of Zeus! Zeus' Olympians, the archetypes of oligarchical evil

deploying capricious whims against mankind, are doomed because they insist on remaining the oligarchy they are: not a conception willingly received by the decadent dons of Oxbridge.

61. The approach we are employing here, illustrates the importance of the adolescent student's familiarity with the art and science of Classical Greece, in preparing the student to become qualified as a statesman, scientist, or even as a true citizen. If we are alert to what we are studying, we find embedded in the seemingly homely entertainments from Classical Greek tradition, the distinct notions to which the highest forms of artistic and scientific thought today owe much. Often, the modern translator has buried these crucial subtleties from sight, by means of a gloss which is either simply slovenly, or an ideologically motivated misrepresentation. These Classical works must be studied with regard for what is not to be overlooked, that which appears in the corner of one's mind's eye.

common event; the physical acts he makes in response to the stimulus of that event, will be different in its effect on man and nature than the reaction of the other. As we shall see, this notion of variability of practical, willful responses to the same events, is the essence of the science of physical economy.

The difference between the mortal man and the god, as this occurs in Homeric epic or Classical tragedy, is premised upon differences in the underlying, axiomatic quality of assumptions of each, with respect to the other. As a pedagogical ruse here, examine the sequences of developments in a simplified, schematic way.

The man reacts to the event, by attempting to formulate a proposition which is consistent with his axiomatic notions respecting the character of the relations among gods, mortals, and nature. The god reacts analogously, excepting the fact that his axiomatic assumptions differ from those of the man. Each, then tends to refine his tentative propositions to the effect of eliminating inconsistencies with the relevant underlying set of axioms and postulates. The resulting proposition, in each case, then constitutes either a theorem of that theorem-lattice, or an approximation of such a theorem.

Therefore, in respect to formalities, the respective theorems of the god and the mortal will be mutually inconsistent. In respect to physics, the impact of the resulting action upon the physical universe by the man, will be of a correspondingly different character than the impact of the action by the god.

Thus, the dramatic appreciation of a Classical Greek epic, or tragedy, presents to us combinations of characters, or clusters of characters, which are each of a distinct type. That is to say, they are each representative of a distinct hypothesis.

One might illustrate the same point respecting Greek art, by imagining the case of three characters from ancient Greece: one from Sparta (of the type of Lyncurgus'

tradition), another from Athens (of the type of Solon's tradition),⁶² and a third, mutually detested by all three, from Thebes. Each represents a different hypothesis; in the case of a commonly experienced event, each formulates propositions differently than the other two, and the efficient actions taken in response to each of the respective propositions, will have a different physical effect than the actions of each of the remaining two.

The notion of hypothesis pertains not merely to differences among hypotheses; that elaboration of the principled notion of hypothesis, which we have acquired from Plato, demands that we define a fixed hypotheses in respect to the manner in which the hypothesis of the individual type may be changed. The existence of an efficient science of physical economy depends absolutely upon this notion of *change*.

Modern science thus begins with those later Plato dialogues which his *Parmenides* implicitly serves as prologue; that "ontological paradox" which Plato identifies as the proof of the fallacy of the Eleatics' (e.g., Parmenides') reductionist-formalist method, is located in the Eleatics' refusal to consider those implications of the notion of change, by means of which the proof of the notion of hypothesis may be accessed.⁶³ Plato's solution, in his sundry later dialogues, for that "ontological paradox" exposed by the *Parmenides*, is the notion of hypothesis employed by Riemann.

To wit: As Riemann's habilitation dissertation exemplifies this argument, *the principle upon which modern experimental physics and analogous science depends, is the presumption that there exists an implicitly measurable demonstration, that each valid, revolutionary discovery of new physical principle, increases the power of the human species over nature, per capita and per square kilometer of relevant land-area of our planet*. That argument is the empirical principle under which the notions of the rational human individual, and of science, are subsumed. To

62. The allusion here, is to Friedrich Schiller's treatment of the contrast between the legislation of Solon and Lyncurgus.

63. This argument is illustrated by the case of Riemann's ridiculing of Isaac Newton's "*et hypotheses non fingo . . .*": "*Das Trägheitsgesetz ist die Hypothese: Wenn ein materieller Punkt allein in der Welt vorhanden wäre und sich in Raum mit einer bestimmten Geschwindigkeit bewegte, so würde er diese Geschwindigkeit beständig behalten.*" (*Werke*, pp. 524-525) Compare the comment on Newton with the opening argument of Riemann's habilitation dissertation (subtitled *Plan der Untersuchung*), *op cit.*, pp. 272-273. Only by considering the changes in the axiomatic notions of space-time which are imposed by introducing the matter of the empirical relations, is the conditional (e.g., hypothetical) nature of our assumptions respecting space-time forced to our attention. The general principle to be adduced, is not found merely by considering objects of naive sense-perception; it demands treating as objects

of thought, those kinds of relations in physical space-time which are shown to be measurably efficient, principled forms of relations, but relations of a type which do not exist for us as independently perceptible objects of the senses. [Cf. Riemann, "I. Zur Psychologie und Metaphysik," *Werke*, pp. 509-520. See, also, Lyndon H. LaRouche, Jr., on Riemann's use of *Geistesmassen* as a technical term, in LaRouche, "On The Subject of Metaphor," *Fidelio*, Vol. I, No. 3, Fall 1992.] Isochronism, for example, is not an object of the senses; contrary to the pathological presumptions of some, it is not a "property" of the cycloid. Rather, as Bernoulli *et al.* demonstrated, the existence of the cycloid is determined by material relations characteristic of physical space-time in general: geometry does not determine physical space-time, but, rather, our progress in discovering improved hypotheses respecting efficient relations within physical space-time, determines our always imperfect ideas respecting geometry.

wit: *The notion that reason may resolve differences in hypothesis, presumes that all normal human beings are born with the potential for assimilating ideas corresponding to an orderable sequence of progress in increase of the potential productive powers of labor, per capita, per family household, and per square kilometer of relevant land-area employed. On this basis, and no other basis, there exists a quality of knowable truth, the which is independent of, and superior to any set of extant opinions.*⁶⁴

Knowledge of such a science of history, did not end with the Greeks. This is the subject of Friedrich Schiller's discussion of the relationship between his own stage tragedies and those of William Shakespeare. To illustrate the point respecting *change*, witness the most celebrated passage from *Hamlet*: the following excerpt from Hamlet's soliloquy near the beginning of Act III.

. . .

The undiscovered country, from whose bourn
No traveller returns, —puzzles the will,
And makes us rather bear those ills we have
Than fly to others that we know not of[?]
Thus conscience doth make cowards of us all;
And thus the native hue of resolution
Is sicklied over with the pale cast of thought;
And enterprises of great pith and moment,
With this regard, their currents turn awry,
And lose the name of action.⁶⁵

“Rather bear those ills we have,” our presently adopted hypothesis, rather “than fly to others,” a new hypothesis, “that we know not of.” A persisting refusal to effect that change in hypothesis, by means of which latter we might survive the assured doom of clinging to our old hypothesis, is the essence of the way in which great empires expire through dynastic catastrophe; they are doomed not so much by their palpable adversaries, as by their own fatal

64. This does not signify that the ordering can be predetermined in any sense other than “greater than/less than.” The idea that there might exist an *a priori* formal geometry for comparing orderings of the $(n+1)/n$ type by the yardstick of “linearization in the very small,” is as absurd a notion as it is a somewhat popularized, and arbitrary one.

65. The U.S.A. of 1861-1865 enjoyed the benefit of two extraordinary commanders. Notable was the William Tecumseh Sherman (the “Anvil” of the Grant-Sherman pair) whose genius was highlighted by Alfred v. Schlieffen's *Cannæ*. The greater genius of these two Americans, was Sherman's commander-in-chief, President Abraham Lincoln, who shaped much of the policy of the U.S.A.'s struggle against Britain's diabolical creation, the Confederacy, with aid of lessons from Shakespeare's dramas. The decisive role, during 1863, of Russia's alliance with Lincoln against the Victorian Britain of Palmerston, Russell, and the “Black Age's” Prince Albert Edward, renders the reference to Sherman and Lincoln of double significance in the setting of the present writing.

devotion to “our traditions.” Exactly so, did that swaggering butcher, Hamlet, bring himself to the doom, over which carnage Shakespeare's Horatio said:

. . . give order that these bodies

High on stage be placed to view;

And let me speak to the yet unknowing world

How these things came about:

. . .

And, in this upshot, purposes mistook

Fallen upon the inventors' heads: All this can I

Truly deliver . . .

. . .

But let his same be presently performed,

Even while men's minds are wild: lest more mischance

On plots and errors happen.

Doom falls often upon those who suffer the special cowardice common among history's bloody-bladed soldiers. One speaks of bold men, like the swashbuckling Hamlet, “the good old boy,” who was struck down, bloodily, by nothing so much as his own terror in face of an idea contrary to his accustomed beliefs. One may speak, so, of the cowardice of the football hero (like Zeus, that bullying, doomed wretch of *Prometheus Bound*), who, away from his accustomed play, finds himself cursed by a world whose reality now defies his infantile rules of sport. Like the contemptible Zeus, the Hamlets of real life may blame Fate, but, the truth of the matter is, that each of these swaggering victims has doomed himself to a mewling end; the instrument of his self-undoing is his peculiar terror in face of ideas which, to him, are strange. In the end, history always cheats such block-headed bully-boys; to such effect, history, time and time again, changes abruptly the rules of play. So, Hamlet and his kind, like the Eleatics, sophists, and rhetoricians after Parmenides, would rather die than accept the principle of Heraclitus and Plato, that nothing within this mortal's world is fundamental, but change itself.

That attribution of change, is not a plaything of artistic elegance; it is the cornerstone of all scientific truth. To the point: If the three crucial world powers, the U.S.A., Russia, and China, were to reject an effective basis for common agreement on a new, just world economic order established jointly by means of their leadership, this planet would, like Hamlet, be plunged quickly into the worst dark age in history. Specifically, were they, like the tragic Hamlet, to allow themselves to fall back into defending “our traditions,” rather than find a new, common, scientific solution, the implosive collapse of the world monetary-financial system could not be averted longer than the short-term; then, the col-

lapse of a now highly interdependent system of world economy would unleash the worst, accelerating, downward spiral of famine, disease, and related homicidal strife throughout the planet as a whole.

If those world powers retreated, each like the self-doomed Hamlet, into clinging to the argument of “our traditions”—“rather bear those ills we have, than fly to others that we know not of,” all existing nations, including those powers, would soon become politically extinct in the demographic holocaust into which their stubborn false pride had lured them. In this “dynastic crisis,” this virtual “Twilight of the Gods,” not only would most of today’s existing lesser powers evaporate from the political map; many would become also biologically extinct, as the world’s potential population-density were driven, rapidly, down toward levels not exceeding the approximate three hundred millions individuals populating this planet during the time of Europe’s Fourteenth century. That is not fantasy, not conjecture; it is a straightforward scientific calculation.

For today’s nations to live, they—especially the indicated three world powers—must have the courage and wisdom to change, to depart the Hamlet-like “traditions” which presently augur their doom.

The excerpt ends there.

In all Classical art-forms, as in this indicated connection among epic, tragedy, and Socratic dialogue, the same active principle operates. Around a subject, which has a sensuous component attracting some interest, a problem is defined. The problem’s solution is shown to center in the needed resolution of a conflict among several hypotheses. In the Classical Greek epic, tragedy, and Socratic dialogue, the relevant hypotheses are represented by characters, or groups of characters. In all cases, any prospective hero’s solution to the problem, such as the Ulysses of the *Odyssey*, or Zeus, the anti-hero of Aeschylus’ *Prometheus Bound*, must solve something akin to a riddle. The solution requires insight, not into the mere opinions of the other characters, but, rather, perception of the hypotheses which underlie the generation of their respective theorem-lattices of opinion. Usually the character which might pass for prospective hero, or anti-hero, can solve the riddle only by changing his own hypothesis, as key to mastering the effects of the hypotheses of the others.

It is not so difficult to recognize the carry-over of the same principle, from Classical poetry and drama, into the Classical *lied* of Mozart, Beethoven, Schubert, Brahms, *et al.* The counterpoint of that motivic thorough-composed form of song, might help to open up the more general principles of Classical vocal polyphony, and, hence, to adduce more readily the Socratic dialogue of Classical

thorough-composition in general. Understanding the Classical principle of artistic composition, so, in epic, drama, dialogue, poetry, and music, trains the mind’s eye to seek the same principle of Socratic dialogue at the core of the plastic art-form.

The characteristic features of the Classical artistic experience are centered in two aspects of the matter.

First, the method of the Socratic dialogue, focuses attention upon the process of thinking, rather than the thought-product, focuses upon the hypothesis, rather than the mere theorem. There is more. The hypothesis must be considered as a subject of change; it is the prospect of changing an hypothesis, as a method of solving a problem otherwise insoluble, which is key to the function of the Socratic dialogue. Thus, the *monad* comes to the fore; it is *change* which is the quality of the indivisible *monad*, change from nothing less than from one hypothesis to another. Thus, the substance of the *monad* is the quality of *higher hypothesis*. This, the ontological quality of the higher hypothesis, is the quality of the singularity which resolves a competently defined formal discontinuity in a mathematical-physical process, for example.

Second, the method of the Socratic dialogue, is the only means by which a person might render his own mental processes the subject of *efficient consciousness*. By looking deeply enough into the mind of others, by focussing upon the hypotheses underlying their thinking processes, one is enabled to cause them, if only in one’s own imagination, to become conscious of one’s own thinking processes. Through that feat of the imagination, employed as a mirror, one may render one’s own conscious processes the subject of a sense of immediacy, and willful attention.

That precisely, is the essential function of all Classical art. To see, through media typified by the common features of Homeric epic, Classical tragedy, and Socratic dialogue, how the thinking processes of men and women are transformed to the effect of solving problems which could not be solved if each clung, like some race of dog, to his or her own, as if hereditarily predetermined hypothesis. Above all, to employ art so contrived to enable one to become efficiently conscious of the power to change one’s own hypothesis willfully, to this purpose.

When one has learned great discoveries from the past, by the method of reenacting the act of original discovery in one’s own mind, a corresponding moment of the mental life of the original discoverer comes to reside in one’s own mind. In this fashion, the properly educated student not only populates his, or her mind with the living personalities of important original discoverers; the student

acquires the habit of developing such relations with others, living and deceased alike, throughout later life. The mind of the properly educated person comes alive with a great dialogue of the type suggested by Raphael Sanzio's famous mural, *The School of Athens*. In moments seized by a relevant topic, that person's mind comes alive with a dialogue among the assembled, remembered minds of the discoverers who have come to take up residence there. In reading Riemann's habilitation dissertation, one can almost hear their voices, as Riemann summons them to the foreground of his argument. When Riemann writes on the topic of *Geistesmassen*, in his posthumously published *Zur Psychologie und Metaphysik*, one can sense the nearby presence of Leibniz speaking on the subject of the *monad*, or anticipate the present author's writing on the subject of *metaphor* to kindred effect. The dialogue is science, but it is a science ruled by the Classical art-form of Homeric epic, Aeschylean tragedy, and Socratic dialogue, as all true science must be.

It is the ability to develop an agapic functional sense of immediacy respecting the Leibniz *monad*, the act of higher hypothesis, which is the essential difference between the scientifically impotent follower of Aristotle, and the fruitful scientific worker. It is in the special, agapic passions which the methods of dialogue underlying great Classical art arouse, that Classical art functions as the precondition for effective science, that art reveals itself as the highest expression of science. It is through such art, and that alone, that the immediacy of what Leibniz identifies as the *monad* is rendered efficiently intelligible.

Finally: Man Rules The Universe, by Pre-Design

By the nature of the accomplishment, that mankind's successful increase of its potential relative population-density, occurs through valid axiomatic-revolutionary discoveries of principle, acts of discovery which lie outside the domain of any formal mathematics, there is no formal mathematical proof, or disproof of the mental activity by means of which a succession of such valid discoveries is ordered. Rather, *that a measurable advancement is ordered by this means, shows that the principle expressed by such a succession of discoveries, is itself in harmony with a deep principle of design of the universe as a whole.* Human existence, taken as a whole, is "the great experiment," upon which certainty of scientific principles ultimately depends.

In Plato's argument, what we have just stated, as we had announced this earlier, here, points to the interaction between the *monad* identifiable as *hypothesizing the higher hypothesis* and the highest *monad*, the ultimate *Good*. The

Good, the "alpha and omega" of the universe's existence, does not change, but, rather changes that which acts upon it. From moment to moment, the *higher hypothesis* acts as a relative "alpha and omega" to the changes in hypothesis which it orders, as a simple hypothesis is the relative "alpha and omega" to the theorem-lattice it subsumes. So, the act of *hypothesizing the higher hypothesis* subsumes the succession of changes in higher hypothesis. Thus, we have man revealed as made in the image of the Creator, by virtue of this power for valid changes in hypothesis, for that *measurably efficient* principle of change which lies outside, and above any possible mathematical schema. This all sorts itself out, once we learn to look at the matter from the appropriate perspective.

The key is the notion of "universal characteristics."

For example, the characteristic of all valid axiomatic-revolutionary discovery of principle, is an ordering of human existence which satisfies the not-entropic metric, which was expressed in approximation here, as the requirement that the ratio of "free energy" to "energy of the system" not decline, although the "energy of system" *per capita*, *per* household, and *per* square kilometer must increase in absolute physical terms of measure. All successful discovery of changes in economic and related policy satisfy that requirement. That that requirement has been satisfied to the degree history demonstrates, shows that the creative principle of the individual human mind, the principle of higher hypothesis, generates an interaction with the universe which has the effect of "not-entropy." Thus, the principle of not-entropy, so expressed, is the most fundamental principle of our knowledge of the universe as a whole.

The subsidiary point, derived from that same argument, is that "not-entropy" is *the universal characteristic* of the power of higher hypothesis (and hypothesizing the higher hypothesis). This is a characteristic of the relationship between that individual power of hypothesis and the universe.

That relationship also expresses, in the sense of "alpha and omega," the relationship of the individual person's existence to the universe, and to all past and future mankind.

We are each, in our brief mortal existence, the repository of that which is given to us, life, and culture, above all the rest. Because we are human, we are creatures of ideas, rather than mere biological heredity. The ideas we acquire, are products of those principles which we have assimilated from our society by reenacting the relevant act of discovery within our mental processes. We are thus joined immediately to discoverers who lived millennia and centuries before us, more closely than most of our next-door neighbors. If we preserve that talent afforded

to us, and seek to improve the gift of life and knowledge which we pass on to others, we may conclude an unquestionably necessary individual life, which will have been, in its fashion, a boon to society centuries and millennia after we have died.

Then, in that distant future time, the hypotheses we have known will be as an earlier century's long fallen dead leaves. Yet, the process of hypothesizing the higher hypothesis, the process to which we have contributed our part in our time, lives on, as a *monad* should, and our work thus within it. By recognizing that, we may allow even the distant future to flow into our judgment, and let it shape our choice of present action, today. Whereas the man who but reacts to the present moment, and its pains and satisfactions, is as one who never lived, before or after that ephemeral present moment, with which his existence, like the mayfly's, is scarcely born and already dead.

The transmission of ideas does not occur through a literal reading of words, as if according to their dictionary meanings, nor by means of any other deductive extraction from the composition of sentences and paragraphs. It occurs only "between the cracks" of the literal utterance, as the emergence of ideas is reflected only in those discontinuities in the mathematical-physics fabric which Euler fraudulently denied to exist, as did Immanuel Kant after him. It occurs only through irony. No idea of principle can be communicated by spoken or written language, except by metaphor. Singularities arising in the locus of discontinuities of the mathematical-physics fabric, are the form in which metaphors appear in the language of mathematics.

The communication of ideas of principle—Platonic ideas, can occur only within the sovereign precincts of the individual mind's cognitive processes, and never within the channels of communication as such. It is in the "decoding" of the metaphors appearing in the channels of communication, that a metaphor uttered by one person is decoded, to extract its Platonic ideas, by another. Exemplary is the replication of the act of original, valid, axiomatic-revolutionary principle of nature. This decoding takes the form of a change of hypothesis (i.e., a *monad*), and also the discernment of a "universal characteristic" associated with that changed hypothesis.

Thus, are the ideas produced by the cognitive processes of one from even the distant past, become an integral part of the knowledge of a person in the present. So, do those from the present, transmit the heritage of human knowledge, from both present and past, into the individual cognitive processes of those of future generations. So, in this, and in no other possible way, are the generations of

mankind, past, present, and future, bound together as one.

In this same way, we know the future. We have efficient knowledge of the future, to the degree we know those characteristics of the future implicit in the choices of hypothesis upon which we choose to act in the present. It is by choosing among the characteristics represented by choice of hypothesis, that that predetermination is made efficient, and that we become accountable for the future consequences of the commissions and omissions of choice we make today.

If we recognize the universal characteristic of that skein of human progress to which we are committed, we have, in that, the guidance we require, to reach the future, through the efficient reflection of the future upon the present. Conclude with the savor of that thought, as the present author presents, once again, that picture of productive economy which he used to show, in his one-semester classes, under the rubric, "The world-wide cup of coffee."

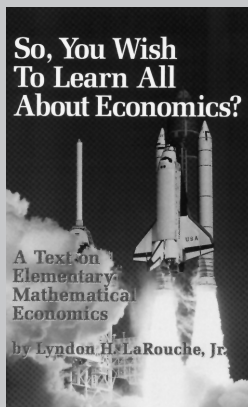
Every local act of production, today, has efficient antecedents in the past. Materials and products formerly produced, development of land-area and work-place, and relevant basic economic infrastructure previously developed and maintained, and development of persons and their ideas, are all present requirements embodied, from the past, in the present act of production. Similarly, the decision to produce tomorrow, is made in significant degree today. Investments in plant and equipment, for example, have an estimatable "half life" reaching five, seven, or more years into the future: thus, what we decide and do today, mortgages future possibilities.

For example, if we trace out the succession of antecedent bills of materials of every stage of origin of the components of a simple cup of coffee served in a restaurant, taking into account the investment in the facilities employed there, the support of the persons who prepare and serve that coffee, and the materials of the cup and saucer, milk, spoon, sugar, napkin, table, and chair, and also the means by which we were conveyed to that place, that simple cup of coffee reaches around the planet, many times, into the distant past. Look again, at that cup of coffee; think, then, what it means to be human.

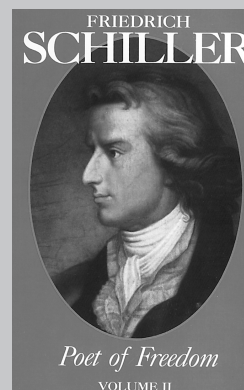
The Greek *Prometheus*, "Foresight," must triumph over the wicked oligarchical families who rule Zeus' Olympus. Ideas, and the foresight inhering in the metaphorical process by means of which ideas are developed and transmitted into practice of present and future generations, are the essence of that which distinguishes man, as *Genesis* and the *New Testament* define man and woman. That is, in larger degree than from anyone else in modern times, our heritage from Leibniz. That is the heritage of the science of physical economy.

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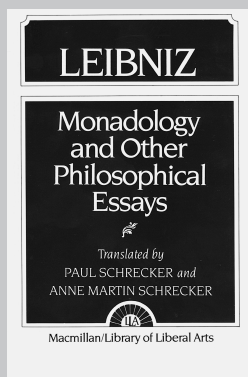
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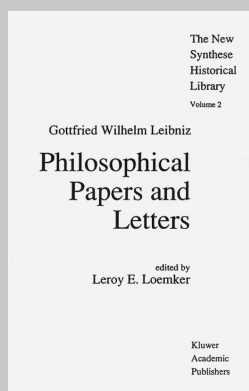
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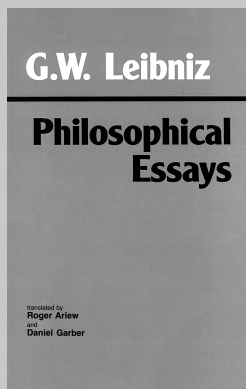
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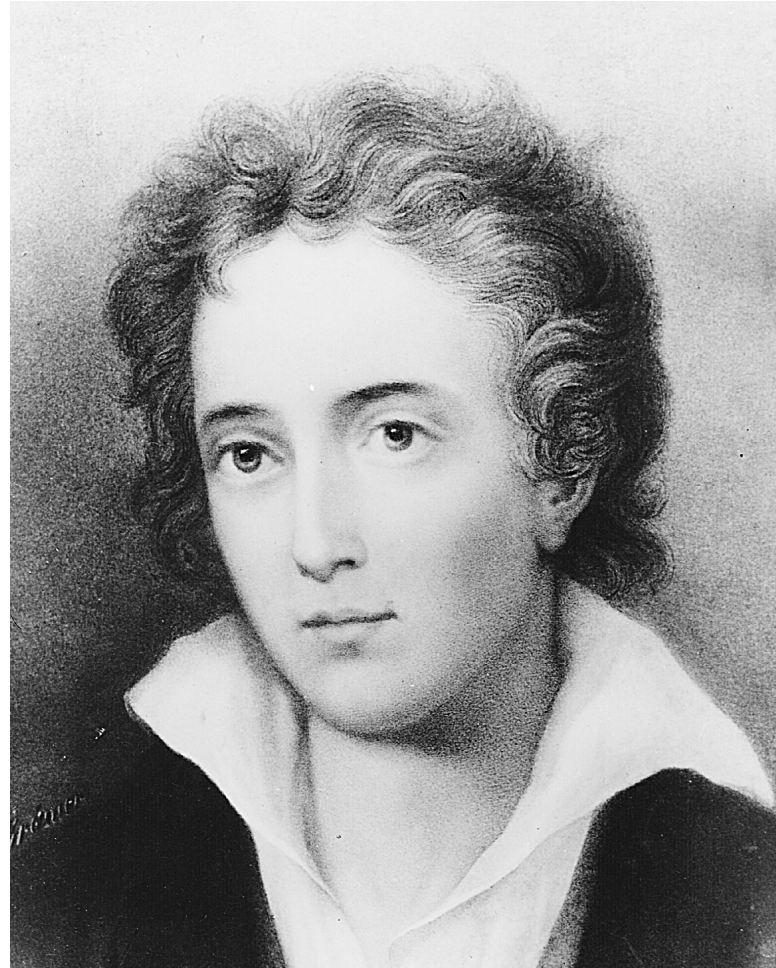
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Percy Bysshe Shelley and the *Motivführung* Principle In English Poetry

by Dan Leach



Percy Bysshe Shelley

Corbis-Bettmann

From the beginning of mankind's existence, as a truly *human* culture, Man has struggled to express the seemingly inexpressible—the idea which lies beyond the realm of the senses, yet is nevertheless real and palpable—in language. In fact, language is the very product, the footprint, of this fluid, ever-changing process, in which we re-create *ideas*, which exist as entirely “spiritual” or immaterial entities in one human mind, in another mind. This process of re-creating an idea which has no pre-existing associations or predicates in the mind of another, is called *Metaphor*.¹

Metaphor is the only way in which anything new can actually be communicated, or anything really true or profound be said, since, if it is new, it does not yet have any associated words which “trigger” the idea in another

mind. The communication of an idea must be *re-created* in the other mind, out of the pre-existing material of language, in the same way it was created in the first place. This is the essence of all truly great Art—of music, painting, drama, sculpture, and especially poetry; it is also the essence of all creative discovery in science. In this sense, all science is profoundly *poetic*, and all great poetry is scientific, properly understood.

We shall endeavor here to discover, or rediscover, as the case may be, some of the scientific principles of metaphorical thought in poetry and its relation to music, especially the method of *thorough composition*, or “*Motivführung*,” discovered by Haydn, and further developed and perfected by Mozart and Beethoven.² It is the method of *Motivführung*, which allows the mind to

grasp the creative principle underlying the entire piece as a unity.

As is the case with music proper, all poetry that is worthy of its name, derives its power from precisely this rendering intelligible the creative process itself. When we experience a new idea in our mind, communicated through the ironic juxtaposition of words which represent either sense objects or pre-existing ideas, we are experiencing the essence of our humanity—that we are not creatures of sense only, mere grovelling animals, doomed forever to a fixed range of thought. The very experience of an actual *idea* in this strict, Platonic sense, especially if it is *beautiful*, that is, rendered according to universally lawful principles of order and harmony, is *uplifting*. For it elevates us to a higher level of thought, and shows us the creative potential within our own minds.

This is often accomplished with seemingly simple, almost banal, images as the “raw material”; but it is precisely the unspoken, unwritten *idea* created through the metaphor, not the “things,” or predicates used to create it, that is the true subject. To demonstrate this, it is appropriate here to cite an example from Lord Byron, a poet who, although talented in creating beauty, was not motivated by a desire to make its creation intelligible, and degenerated into creating it merely for titillating effects—the very essence of Romanticism. Later, we shall see a higher, more noble concept in the poetry of Keats and Shelley; but, for now, Byron’s “She Walks In Beauty” will suffice to make the point.

SHE WALKS IN BEAUTY

She walks in beauty, like the night
Of cloudless climes and starry skies;
And all that’s best of dark and bright
Meet in her aspect and her eyes:
Thus mellow’d to that tender light
Which heaven to gaudy day denies.

One shade the more, one ray the less,
Had half impair’d the nameless grace
Which waves in every raven tress,
Or softly lightens o’er her face;
Where thoughts serenely sweet express
How pure, how dear their dwelling-place.

And on that cheek, and o’er that brow,
So soft, so calm, yet eloquent,
The smiles that win, the tints that glow,
But tell of days in goodness spent,
A mind at peace with all below,
A heart whose love is innocent!

We see here, in the first stanza, the ironic juxtaposition of two sensual images—one of the night, with its calm, and peace, and soft lights, and the other of a human being, a woman, whose eyes, and in the following stanzas, whose heart and soul, are compared to this sensual image. What is achieved, albeit on a very simple level, is an idea which communicates a higher spiritual truth about this person, than could a mere description of her qualities. This is why all poetry is *musical* in form: it has meter; lines with a certain number of syllables; rhythm; a characteristic metric within the line (here, it is *iambic quadrameter*, or lines of four “feet,” each consisting of one short syllable, followed by one long); and melody, or vowel and consonant sounds, arranged in ordered patterns which resonate on the mind, and thus create the ironies. These resonating vowel sounds are not only the rhymes at the end of the lines, but also “internal rhymes” within the lines, across lines, and even across stanzas. Only music can communicate real ideas, because only in this way can the ironies, in which lies the true subject matter, be generated.

Strophic poetry—poetry which repeats a certain form, such as in the first two lines of this poem, in the same form, only with a variation, as in the second two lines, (“night” and “skies,” then “bright” and “eyes”), is the form most suited to do this. In fact, music derives its form from strophic poetry, the vowel sounds corresponding exactly to pitch values of the well-tempered musical scale,³ and the interval created between two tones, when juxtaposed to another interval in this strophic manner, generating the musical ironies out of which an *idea*,—(a Platonic *One*) arises, which is not contained in the notes, or intervals—(the *Many*)—themselves.

Let us look at a poem by Percy Bysshe Shelley, which, although ostensibly on the same subject as Byron’s, is of an entirely higher order. Although this is immediately evident from its *effect* on us, emotionally, it is by endeavoring to make intelligible the reason *why*, that we come closer, hopefully, to an understanding of our subject.

TO SOPHIA

I

Thou art fair, and few are fairer
Of the Nymphs of earth or ocean;
They are robes that fit the wearer—
Those soft limbs of thine, whose motion
Ever falls and shifts and glances
As the life within them dances.

II

Thy deep eyes, a double Planet,
Gaze the wisest into madness

With soft clear fire,—the winds that fan it
Are those thoughts of tender gladness
Which, like zephyrs on the billow,
Make thy gentle soul their pillow.

III

If, whatever face thou paintest
In those eyes, grows pale with pleasure,
If the fainting soul is faintest
When it hears thy harp's wild measure,
Wonder not that when thou speakest
Of the weak my heart is weakest.

IV

As dew beneath the wind of morning,
As the sea which whirlwinds waken,
As the birds at thunder's warning,
As aught mute yet deeply shaken,
As one who feels an unseen spirit—
Is my heart when thine is near it.

How much more are we uplifted! There is a higher spiritual quality breathing forth from this poem, that is entirely lacking in the other. First, there is *change*, a noticeable ordered progression from one stanza to the next, each of which represents a completed thought, which accomplishes in six lines what Byron took three stanzas to do, and still really didn't do.

In stanza I, a beautiful metaphor is created, expressing the idea that beauty is not some static quality which we merely record through our senses, but arises out of some deeper quality that animates the physical. This simple metaphor—the spirit animating the body as the limbs move the clothes—is presented strophically, so as to create a strong “echo” with the image of the water. The “ocean” and “motion” couplet is a theme which is developed on a higher level in succeeding stanzas.

In stanza II, we again have a metaphor for this spiritual motion, only this time it is the soul being moved, like winds fanning a fire. The Platonic *One* created in the first stanza, is now the basis for the generation of a higher, richer irony, where the same wind that fans the fire that can “gaze the wisest into madness,” nevertheless rests on her soul, “like zephyrs on the billow.” The tension thus created between the apparently unattainable, otherworldly nature of ideal beauty, and the soul's longing for it, is beautifully captured in this ironic juxtaposition of these two metaphors, of motion and rest. The fact that this richer irony grew out of a simpler one, yet is consistent in its imagery—the “ocean” of the first stanza now becoming the “zephyrs on the billow”—gives this poem a special thoroughness, which is central to the principle of *Motivführung*, as we shall see.

The second stanza's central irony—the paradox created by the two metaphors—and the tension associated with it, is now the basis of stanza III, and is developed to an even higher level. Here, we have ideal beauty making one “pale” and “faint”; only now, a new idea is introduced: the soul “is faintest” when it experiences this as *music*. For the first time, the poet speaks of himself, and of his relationship to this force whose highest form is expressed in music. To fully appreciate the power of this metaphor, however, it was necessary for us to go through the process of ascending levels of metaphors in the previous stanzas.

Stanza IV contains the germ of the idea of *Motivführung* which Shelley later develops to an unparalleled richness in his “Ode to the West Wind.” Here, in rapid succession, are a series of metaphors, each of a higher order of “cardinality,” or conceptual power, because each sums up, or subsumes, a process of development implied by the poem's previous stanzas. Dew passively evaporating in the wind; the sea being stirred into motion by the wind; and then birds flying frantically before the storm; all are invested with a significance far beyond their apparent literal, or symbolic, meaning; they are true metaphors. The idea subsuming all of them—“As aught mute yet deeply shaken,” seems to perfectly express this tension between the peace and serenity of the eternal, and the energy and motion associated with the creative force. The concluding couplet provides the closure which makes clear that from the beginning of the poem, the subject was never really a woman, but this relationship between Beauty and the Artist, the creative process, and how to make this intelligible to the reader. In each stanza, the metaphor lies, in a sense, “outside” the process by which it was created. Only in the succeeding stanza, when that “One” in our minds is used as an element to create a further development, is it “named.”

In the last several years of his life, Shelley reached a level of compositional richness and profundity, as had John Keats before his death, that is unparalleled in the English language.* The great odes of Keats, the “Ode to a Nightingale”† and “Ode on a Grecian Urn,” for exam-

* Unparalleled because, although the dramas of Shakespeare unquestionably represent the high-point of conceptual power in the use of the English language previously attained, each of Shakespeare's sonnets, when taken separately, presents only one idea arising out of a series of paradoxes; and it is only with the entire series of sonnets, that we begin to understand the generative principle subsuming all of them. Edgar Allan Poe clearly understood this issue, when he wrote in “The Rationale of Verse,” that a long poem—one which cannot be read in a single sitting—does not, actually, exist: It becomes something else.

† SEE “John Keats vs. The Enlightenment,” p. 71, this issue.

ple, taken together with Shelley's "Ode to the West Wind" and "To a Skylark," and a few others, constitute a revolution in compositional method in English language poetry comparable to Haydn and Mozart's famous "*Motivführung* revolution." That such a revolution was born in the same intense atmosphere of intellectual excitement and dialogue of creative minds, is entirely lawful. Biographies of both Keats and Shelley, as well as their friend and benefactor, Leigh Hunt, all speak of gatherings at Hunt's home, where the poets would engage in all-night musical performances and discussions of Mozart, improvisational poetry writing contests, discussions of translation projects, as well as the latest political developments.

The "technology" for communicating a density of ideas, developing in an ordered process, and inducing the mind to perceive the creative principle which generates them, was pioneered in the Fourteenth century by the fathers of the Golden Renaissance, Dante Alighieri and Petrarch. In fact, the sonnet, as well as the *canzone* and other forms, was developed by them, combining certain troubador song forms with a rich Platonic philosophical outlook. Shelley, in particular, steeped himself in this Italian poetry, and must have inspired Keats with a love of it, for Keats adopted, in some of his most beautiful sonnets, the Italian form.

It was out of this atmosphere of intensive study of the classics, impassioned dialogue with his collaborators on creative method, and a burning republican zeal to communicate to Mankind an awareness of their own creative powers, and thus enable them to be truly *free*, that Shelley produced his greatest poems. Perhaps none is greater than the "Ode to the West Wind" [SEE Box, p. 54]. It never fails to evoke tears of intense sadness and longing, yet a triumphant transcendence of mortality which is universally recognized. *How* this is accomplished, is an inquiry which, even if never fully satisfied, is well worth the effort, so rich in poetic treasure is it.

As we read, or hear recited, the five stanzas of this "Ode," Shelley accomplishes a transformation within our souls comparable to that achieved in a great tragedy—except, we are enabled to overcome the tragic, not merely through the poet's saying "make me thy lyre," etc., but because we have actually reproduced, in our own minds, the process of overcoming death through creativity which the poet went through to create this poem. We are made to identify with the creative process as our own truest self, our humanity, as the poet has.

But, imagine how empty, almost childishly naive it would be, to hear the last stanza by itself, without first having gone through the whole poem. Obviously, then, much to the contrary of the linguisticians and informa-

tion theorists, words are not mere symbols of sense objects, or packets of discrete units of information. These words are imbued with a power which transcends their literal meaning, for they evoke a memory, a re-creation in the mind, of a series of transformations we have been brought through, to arrive here. These transformations are *ordered*, each stanza developing according to its own apparent internal order, followed by a *discontinuity* separating the stanzas, which leads to a new process of development on a higher level. It is only at the end, that we see the higher ordering process which subsumes the others; the reason they seem to make sense. The *musical rigor* with which Shelley does this, makes this poem one of the greatest works of art in any form.

There is a driving energy which seems to accelerate toward the ending couplet of each stanza, which is not only the product of the thought content, but also inherent in the form, which is called "*terza rima*," the Italian three-line rhyme scheme, pioneered by Dante, whom Shelley was translating at the time he wrote this.

In each group of three lines, or tercet, the first and third lines rhyme, and the middle line's ending becomes the rhyme for the first and third lines of the next group of three. This produces a continuous unfolding, which accelerates in the third and fourth group of three, as Shelley does not end the lines with punctuation, as he does in the first two groups, but lets the forward motion drive on, through the line endings, creating an almost urgent tension when compared to the first part. The vowel sounds have also shifted from the dark and somber tones such as in "thou," "Autumn," and "ghosts" (which are counterposed to the flat, lifeless quality of the short vowel in "breath," "dead," "red," "pestilence," and so on), to the still sonorous and dark "cold and low," and "blow"; but containing within them, like a seed, the word "until," which leads to the much brighter sounds: "fill," "hill," and "Spring," "dreaming earth," "sweet buds," etc. Thus, we have established in our "mind's ear," so to speak, definite tonal relationships; the one corresponding to death, loss, mortality; the other to rebirth, regeneration, and hope.

The development of these musical themes drives on to the paradoxical ending couplet, expressed as "destroyer and preserver." The musical development of this stanza has been brought to a point of *singularity*, an apparent discontinuity which, it is not clear until the end of the poem, is part of a higher continuity. In reciting this poem, as in performing a piece of music, it is crucial to "remember" the ending, so that it determines the beginning, creating the resonances in the first stanza which enable the process as a whole to be transparent in the end.

Stanza II begins, by immediately situating the

ODE TO THE WEST WIND

I

O WILD West Wind, thou breath of Autumn's being,
Thou from whose unseen presence the leaves dead
Are driven, like ghosts from an enchanter fleeing,

Yellow, and black, and pale, and hectic red,
Pestilence-stricken multitudes: O thou,
Who chariotest to their dark wintry bed

The wingèd seeds, where they lie cold and low,
Each like a corpse within its grave, until
Thine azure sister of the Spring shall blow

Her clarion o'er the dreaming earth, and fill
(Driving sweet buds like flocks to feed in air)
With living hues and odours plain and hill:

Wild Spirit, which art moving everywhere;
Destroyer and preserver; hear, oh, hear!

II

THOU on whose stream, mid the steep sky's commotion,
Loose clouds like earth's decaying leaves are shed,
Shook from the tangled boughs of Heaven and Ocean,

Angels of rain and lightning; there are spread
On the blue surface of thine aëry surge,
Like the bright hair uplifted from the head

Of some fierce Mænad, even from the dim verge
Of the horizon to the zenith's height,
The locks of the approaching storm. Thou dirge

Of the dying year, to which this closing night
Will be the dome of a vast sepulchre,
Vaulted with all thy congregated might

Of vapours, from whose solid atmosphere
Black rain, and fire, and hail will burst: oh, hear!

III

THOU who didst waken from his summer dreams
The blue Mediterranean, where he lay,
Lulled by the coil of his crystalline streams,

Beside a pumice isle in Baiae's bay,
And saw in sleep old palaces and towers
Quivering within the wave's intenser day,

All overgrown with azure moss and flowers
So sweet, the sense faints picturing them! Thou
For whose path the Atlantic's level powers

Cleave themselves into chasms, while far below
The sea blooms and oozy woods which wear
The sapless foliage of the ocean, know

Thy voice, and suddenly grow grey with fear,
And tremble and despoil themselves: oh, hear!

IV

IF I were a dead leaf thou mightest bear;
If I were a swift cloud to fly with thee;
A wave to pant beneath thy power, and share

The impulse of thy strength, only less free
Than thou, O uncontrollable! If even
I were as in my boyhood, and could be

The comrade of thy wanderings over heaven,
As then, when to outstrip thy skiey speed
Scarce seemed a vision; I would ne'er have striven

As thus with thee in prayer in my sore need.
Oh, lift me as a wave, a leaf, a cloud!
I fall upon the thorns of life! I bleed!

A heavy weight of hours has chained and bowed
One too like thee: tameless, and swift, and proud.

V

MAKE me thy lyre, even as the forest is:
What if my leaves are falling like its own!
The tumult of thy mighty harmonies

Will take from both a deep, autumnal tone,
Sweet though in sadness. Be thou, Spirit fierce,
My spirit! Be thou me, impetuous one!

Drive my dead thoughts over the universe
Like withered leaves to quicken a new birth!
And, by the incantation of this verse,

Scatter, as from an unextinguished hearth
Ashes and sparks, my words among mankind!
Be through my lips to unawakened earth

The trumpet of a prophecy! O, Wind,
If Winter comes, can Spring be far behind?

metaphor which subsumes the entire previous process of development in stanza I, as the seed-crystal of a new, higher level metaphor. Now the “earth’s decaying leaves” are compared to the clouds which, like them, appear to be driven into wild disorder by this awesome, destructive force. The energy which drives this stanza onward, mirrors the exhilaration, the paradoxical excitement we feel at the approach of an intense storm. Friedrich Schiller, in his essay “On the Sublime,” called this phenomenon the Sublime of Nature, where we are made to feel small, physically, by some awe-inspiring natural object or event, such as a mountain, the ocean, or the night sky; yet, the experience of our mind’s ability to comprehend it as a *concept*, is a sensuous experience of our humanity, of our superiority, spiritually, over Nature.

But, what is Shelley really talking about here? Is it merely a storm? No, it is Death! We have been, quite literally, uplifted to see this process of death and the *potential* of rebirth (for it is only implied in this stanza), reflected from the earth and its living processes, into the sky, the great, extended inorganic universe. The musical qualities by which this is achieved are, again, remarkable. Once again, there is a development, generally, from “darker” vowels (tones of a lower musical pitch), to ones of, if not brighter quality, at least greater intensity. They are of a higher *frequency*, in physical terms. So what we have here, is a process which mirrors, on one level—the formal—the process we saw in the first stanza, exactly as does a musical composition when, say, a modulation into a different key takes place, while the continuity of the intervals between the notes is preserved. The mind perceives the change, not as arbitrary, but as *lawful* change. As we saw in “To Sophia,” Shelley again employs the musical principle of “stretto” at the end of this stanza: does not “Black rain, and fire, and hail will burst: oh, hear!” seem to capture the essence of this entire stanza? And it also contains the “spark,” quite literally, of a metaphor which is the key to the last stanza, and should be recited accordingly.

In stanza III, we have one of the most beautiful examples of sublime melancholy in English poetry. Schiller, in his essay “Naive and Sentimental Poetry,” speaks of the use of lost beauty, lost love, or a lost golden age of humanity, to evoke the emotional state of longing for the eternal, for the Good. Here, it is evoked in a unique, almost unconscious way. Again, we are transported, lawfully, into a new metaphorical dimension; consistent with, and growing out of, the previous set of images, yet initiating a new process of development. With the second stanza’s overriding image, the Platonic “One” generated by it, in our minds, we now hear the “Thou,”

which begins the stanza in a different way than in the first or second. It has been transformed, and now is not only the “destroyer and preserver,” but also contains within it all the force and energy associated with the second stanza’s evocation of a sublime exhilarating feeling, even toward death and destruction. It is important here to remember, that, as is the case in all great poetry, these things are not to be taken *literally*, as some have suggested. Shelley did not have some Romantic fixation on death. Rather, the tension created by this developing, in successive phases of the theme, as compared to the “One” which subsumes the entire poem, is essential to the ultimate comprehension of, and emotional identification with, that idea.

One should recite the entire sentence starting with “Thou who,” through “faints picturing them!” with special attention not only to the rich, sensuous beauty of the music, but with a muted reverence for the moral beauty of the idea presented. For we now have the “wind” awakening a sleeping ocean, which is dreaming of a lost civilization. Thus, metaphorically, this process of awakening, of regenerating, has connected to the highest objective—humanity. That is the special power of this beautiful passage. That is why the “sense faints” picturing it. But the tension that has been building between the process of *Becoming*, with its paradoxes, each being superseded by another, higher set, and that seemingly ineffable, unspoken “One” which lies somehow above and beyond the process, now causes a sudden shift in mood, in tonal quality, and even in the subject.

Suddenly, the imagery reflects the death-darkness modality, literally “from top to bottom”; even the ocean floor grows “gray with fear,” bringing to a sort of closure the entire metaphorical development up to now. One cannot imagine any other process beyond here, in this mode, so complete seems the metaphorical development. Yet, we are left so utterly suspended with a sense of incompleteness, because of the still unaddressed One which lies outside the development.

So, what does Shelley do here? In a manner very similar to Beethoven’s review, in the beginning of the fourth movement of his Ninth Symphony, of the themes of the first three movements, the poet, for the first time *in his own voice*, identifies the “themes” of the first three stanzas, and where the tension is coming from. For, even the crassest nominalist who may have imagined that Shelley had been talking about the “wind” previously, would now begin to suspect that perhaps something more profound is being addressed. What could better capture the agonizing paradox of the relationship of Man’s mortal, time-bound existence, to the infinite freedom of universal

creativity itself, than this stanza? To call up the memory of childhood's innocent joy in this connection, adds a compelling universal appeal, as we all share in this sense of lost innocence; only, Shelley has here raised it to a profound level. If one can recite, or hear the concluding couplet of this stanza, without being nearly choked with tears, one hasn't understood a thing of the poem's true meaning.

The key to the transition which makes possible the final, remarkable stanza, unparalleled in poetry, is the word, "prayer," for that is what it is. The poet undergoes, and takes us through, a kind of psychological death—the death of the "ego," in stanza IV. This allows him to not merely be uplifted by the creative force, but to totally identify with it! With the "deep autumnal tones" we heard in the first stanza now totally transformed in their emotional content, we have reached a musical, as well as metaphorical, closure.

The lines "Make me thy lyre," through "Be thou me, impetuous one," are intensely uplifting enough, but the last two tercets and concluding couplet of this poem express a higher "cardinality" than even the whole previous process, which is the essence of the true "One" of Shelley's poem—the *Good* which subsumes the ordered process of Becoming. Here, in the most selfless and agapic way, the creative artist does not merely describe the act of giving beauty to mankind, but actually does it. It is the way in which *we* are transformed, which scatters the "ashes and sparks" of creativity to ourselves and future generations. This is what overcomes death. And the triumphal tone of this ending cannot fail to remind us, again, of the Ninth Symphony; for it is born of the same love of humanity which inspired Beethoven, Schiller, and all the true creative geniuses of history's Platonic-republican movement.

That Shelley should develop a creative method which parallels the *Motivführung* revolution in musical composition, is entirely lawful. For, to elevate us to such a high level, the artist must first re-create in our minds a series of metaphors, make us aware of their ascending development, and then make *intelligible*, transparent, the process which generated them. Only in this way can the mind come to know its own potential for creativity, and it is the zeal to communicate *that*, out of love of mankind, which drives the artist.

We cannot consider in this place the history of Shelley's political activities, the danger he posed to the oligarchy of his time, and, therefore, the strong likelihood that his early death was brought about by assassination.⁴ But, of his commitment to the uplifting of Man through Art, to a condition of moral freedom, as was Schiller's

commitment, there can be no doubt. One of Shelley's last projects was, in fact, to study German, so that he could translate Schiller's *Die Räuber* (*The Robbers*) into English. One can only imagine what might have been unleashed, if his and Schiller's spirits had been united and spread throughout the English-speaking world.

Shelley's tragic death at age thirty, and Keats' at twenty-four, occurred before either had fully matured in his creative powers. With the exception of the counter-efforts of the American Edgar Allan Poe, English poetry has been in degenerate decline ever since. But, by mastering the method so beautifully exemplified in the precious gems they bequeathed us—in the context of our fight to create a new Renaissance—we may indeed fulfill Shelley's prophecy, to spark a new generation of creative geniuses.

NOTES

1. For the concept of *Metaphor*, see Lyndon H. LaRouche, Jr.'s *Fidelio* "Metaphor" series: "On the Subject of Metaphor" (Vol. I, No. 3, Fall 1992, pp. 17-50), "Mozart's 1782-1786 Revolution in Music" (Vol. I, No. 4, Winter 1992, pp. 4-29), and "On the Subject of God" (Vol. II, No. 1, Spring 1993, pp. 17-48); see also Lyndon H. LaRouche, Jr., "How Hobbes' Mathematics Misshaped Modern History," *Fidelio*, Vol. V, No. 1, Spring 1996, pp. 6-30. This issue is featured in the *Symposium on the Creative Principle in Art and Science*, *Fidelio*, Vol. III, No. 4, Winter 1994, which includes "The Fraud of Algebraic Causality" (Lyndon H. LaRouche, Jr.); "Beauty as a Necessary Condition of Humanity" (Helga Zepp LaRouche); "Some Simple Examples of Poetic Metaphor" (Kenneth Kronberg); "African-American Spirituals and the Classical Setting of Strophic Poetry" (Dennis Speed); and "What Mathematics Can Learn from Classical Music" (Bruce Director).
2. On the principle of *Motivführung*, see Lyndon H. LaRouche, Jr., "Mozart's 1782-1786 Revolution in Music," *op. cit.* See also, Helga Zepp LaRouche, "The Question of Motivic Thorough Composition in Schiller's Poetry," *Fidelio*, Vol. IV, No. 4, Winter 1995.
3. See *A Manual On the Rudiments of Tuning and Registration. Book I: The Human Singing Voice*, ed. by John Sigerson and Kathy Wolfe (Washington, D.C.: Schiller Institute, 1992), pp. 159-170, for an in-depth discussion of this question. Modern experimental physics proves what was implicitly known to classical composers: that the vowel sounds in human speech have characteristic musical equivalents, based upon the formant structures of the sounds, which can be mapped onto the well-tempered scale. The pattern of vowel relationships, then, defines a musical "score," or implied score, which Schubert, for one, used as the raw material for his songs.
4. See Edward Trelawny, *Records of Shelley, Byron and the Author*, Vol. 1 (New York/London: Benjamin Blom, 1878). Trelawny, who was a friend of both Shelley and Byron in the last year or so of Shelley's life, describes an incident many years after Shelley's death, of a death-bed confession by a pirate, who claimed to have been hired to ram Shelley's boat, causing it to sink. That Shelley had powerful political enemies is indisputable, and Trelawny reports that on his death, an investigation of possible homicide was conducted, but never brought to a satisfactory conclusion. He does indicate, however, that many believed Shelley to have been assassinated by those leading forces in the British oligarchy threatened by his ideas and political activities.

John Keats Vs. The Enlightenment



The Granger Collection

by
Paul B. Gallagher

John Keats

between”—while, being mortals, we keep still the visible and sensible Nature, being transformed in our mind at the same time.

This genius of poetry, Lyndon LaRouche shows and fully defines as “Metaphor,” in articles appearing in *Fidelio* magazine.¹ In “How Hobbes’ Mathematics Misshaped Modern History,” LaRouche, early in his discussion of classical poetry, says:

The form known as the classical strophic poem, provides the poet, thus, a medium whose potential is a nest of paradoxes: within the stanza, among the stanzas, and in the poem taken as a unit-whole.

As in the idea of curvature of the meridian, in [the ancient Greek scientist] Eratosthenes’ measurements, the solution to the paradox of what is explicitly stated, lies outside any individual sense perception, any mere symbolism. Until the Twentieth-century development of rockets and supersonic jet-aircraft, led by Hermann Oberth’s team, the idea of curvature of the Earth’s surface existed only in the domain of metaphor. The distinction between non-living and living processes, is measurable in its effects, but has primary existence only in the domain of metaphor. The idea of the poetic stanza, of the poem as a whole, exists only in the domain of metaphor, but in neither sense-perception nor symbolism.

Saint Augustine, the founder of Western Christian civilization, wrote, of poetry:

The purpose of it is to lead young people of ability, and perhaps older people too, gradually, with Reason for our guide, from the things of sense, to God, in order that they may cling to Him who rules all and governs our intelligence, with no mediating Nature between. . . . It is the ascent from rhythm in sense, to the immortal rhythm which is in truth. (*De Musica*)

Great poetry describes what is visible and sensible, emotional, in such a way that we think—ascend—to the invisible, the eternal—“with no mediating Nature

The quality of Metaphor in the greatest classical poetry and tragic drama, has been under conscious attack by the deniers of universal truth, ever since Aristotle, who, in his *Poetics*, called Metaphor “strange or extravagant speech,” and bragged that by his time, “poetry has given up all those words not used in ordinary speech, which decorated the early drama” of the great Aeschylus.

After the passing of William Shakespeare and his fellow Elizabethan poets of the Sixteenth and Seventeenth centuries, this attack upon Metaphor erupted viciously from the evil Thomas Hobbes, then from the arrogant British Royal Society and the fraudulent Sir Isaac Newton. The quality of Metaphor was virtually completely extinguished—outlawed—from English poetry for more than a hundred years, until a counterattack was led by John Keats.

John Keats made a transformation in English poetry and wrote some of its most beautiful works, in a lifetime of only twenty-five years (October 1795 to January 1821). Although not a very “religious” man, Keats, in a letter of 1817, expressed the same, concerning poetry and truth, as had St. Augustine:

What the imagination seizes as Beauty, must be Truth—whether it existed before for us or not. . . . I am the more zealous in this, because I have never yet been able to perceive how anything can be known for truth by consecutive reasoning—and yet Truth must be. . . . Have you never, by being surprised with an old Melody, felt over again your very speculations and surmises at the time it first operated on your soul? Do you not remember forming to yourself the Singer’s face—more beautiful than it was possible, and yet, with the elevation of the moment, you did not think so? Even then, you were mounted, on the wings of imagination, so high that the prototype must be hereafter—that delicious face you will see.

Keats was the son of a modest English tradesman, an orphan by his early teens, sent to an ordinary school by a guardian who apprenticed him to a surgeon; he never showed anyone a poem of his own composition until he was eighteen, and he was on his death-bed with tuberculosis, too ill to compose any longer, by age twenty-four. Yet, in his very few years, he composed potent poems in virtually every form, style, and construction that Irish and English (and Italian) poets had invented over the thousand years before him. He showed ways of developing poetic stanzas, like movements of a musical composition, which had not been heard in English before, especially in his five great Odes, including the “Ode on a Grecian Urn” and “Ode to a Nightingale.”

Keats was distinctly a republican, an enthusiast of America and its War of Independence, like his great contemporary Percy Bysshe Shelley—who was said to have

died with a volume of Keats’ poetry in his hand.

By the time Keats was twenty-one, this beautiful soul was under vicious attack by the British Establishment literary reviews, which called him “Cockney vermin” and many other like insults. Even his friends reprimanded him for his “intemperate” criticisms of Sir Isaac Newton’s influence upon thought and language, for his assertions that Newton had mathematically removed the colors from the rainbow. Keats frequently made a toast: “To Newton’s health, and confusion to his mathematics.”

Of course, Keats had not made a study of the crucial issues of mathematics or physics; nor, judging from his library, did he know the work of G.W. Leibniz, against which Newton had directed his frauds. But Keats *did know*, that poetry in the English language had been destroyed since the Seventeenth century by what Keats called, in another letter the same year, “the mathematizing of language”; and he knew that this destruction had come from the direction of the influence of Newton and Descartes.

Keats’ *English* poetry survived twenty-five years of *British* attack and obscurity, many more years of misprintings and “editings,” and ranks amongst the most beautiful, truthful, and Metaphorical of all poetry in the English language. His Odes are a beautiful means of showing how Metaphor in poetry works.

Why Go Back to Keats?

Most Americans, remembering much less of Shakespeare than older Germans do of Schiller or Italians of Dante, have come to think that poetry means simply to express merely their own “true emotions,” or “inner thoughts,” with some rhymes perhaps added in. Children, in their early school years, may be encouraged to write poetry this way: “Write what *you* feel, just as you feel it.” And so, when hearing something about great classical poetry, they say earnestly, “Hamlet’s problems don’t really relate to me,” or “I don’t care about no nightingale in Egypt somewhere.”

Great poetry lifts a listener or reader away from his or her own thoughts and imaginations, to be able to look at them “from above,” and to *compare* them to those of others: to the thoughts of a beloved; or to the general or universal thoughts and emotions of fellow men and women; or to the foolish delusions of a crowd. Great poets do this, not in the simple way of describing “far-off times and places,” but by the beauty of Metaphor.

In its simplest sense, Metaphor is created when a poet uses the sense and music of poetry to cause the listener to form two distinct thoughts at once, connected to the same subject; two inner voices speaking about the same

thing—one in immediate time, like the “Melody” Keats referred to in his letter; the other coming from memory, like his “Singer’s face, more beautiful than it was possible,” and “your very speculations and surmises when it first operated on your soul.” These ideas “compare themselves to one another,” and, from the sticking irony between them, they form still another distinct thought, about the emotionally exciting possibility of *change*. Uplifting change, change to greater dignity and power, as when the prophet said, “And we shall all be changed, in a moment, in the twinkling of an eye, at the last trumpet.”

Perhaps the best-known example in all of English poetry, of such *simple* metaphor, begins with the words of Romeo and Juliet in her garden, in the middle of the night:

But soft—what light from yonder window breaks?
It is the East, and Juliet is the Sun!
Arise, fair Sun, and kill the envious Moon,
Who is already sick and pale with grief,
That thou her maid art brighter far than she. . . .

Can Juliet be both the fairest maiden of the Moon, and the Sun which eclipses the Moon? These young lovers meet only at night; throughout the tragedy they must part when dawn arrives; the day is ruled by their families’ bitter, “envious” feuding and killing. The lovers would change that whole universe, if they could, with their love. A second, even more famous passage of Metaphor follows and expresses this more strongly: Juliet talks Romeo out of his outward name, because their families are at war, and she was taught to think of his name with hate, but now of him with love:

O Romeo, Romeo, wherefore art thou Romeo?
. . .
’Tis but thy name that is my enemy;—
Thou art thyself though, not a Montague.
. . .
What’s in a name? That which we call a rose,
By any other name would smell as sweet;
So Romeo would, were he not Romeo called,
Retain that dear perfection which he owes. . . .

ROMEO:
I’ll take thee at thy word:
Call me but love, and I’ll be new baptized;
Henceforth I never will be Romeo.

These playful words carry, in a Metaphor, the thought of the entire transformation which could end the Capulet-Montague civil war that is destroying their city. These lovers are not just expressing “their inner emo-

tions,” but rather the entire world which they would change with their love.

LaRouche, in his demonstrations of “the Hamlet problem,” shows that Metaphor becomes much more powerful than these, most simple examples. Metaphor in tragic, dramatic poetry, creates in the minds of the spectators both the potential, and the *urgent necessity*, to change their entire hypotheses of understanding and acting in life. Thus, at the conclusion of *Julius Caesar*, after Brutus has unwittingly set loose the Roman mob, ignited civil war, brought upon Rome the very dictatorship he wanted to prevent, and then killed himself in despair: his enemy Marc Antony comes to Brutus’ funeral bier and says,

This was the noblest Roman of them all:
All the conspirators, save only he,
Did what they did in envy of great Caesar;
He only, in a general honest thought
And common good to all, made one of them.

Then, the spectators feel the entire tragedy pass again before their memory, searching once more their own surmises and speculations about those who lead: “What should Brutus have done?” Should they see the tragedy performed again, it will unfold with Antony’s words in their memory throughout. In the most famous of all Shakespeare’s complex Metaphors, the case of Hamlet, LaRouche shows that Shakespeare makes Hamlet flee from the necessity to choose, between two completely opposed ways of thinking and acting in the world, so that the audience, in dialogue with Hamlet’s thoughts, cannot flee that necessity.

‘Sleep and Poetry’

John Keats’ first major published poem, in 1816, “Sleep and Poetry,” was on the power of poetry, as Metaphor, to lead from images of sensuous beauty in the mind, away from the senses (“in sleep”), to the invisible beauty of truth. It begins by evoking something unnameable, invisible:

What is more gentle than a wind in summer?
What is more soothing than the pretty hummer
That stays one moment in an open flower,
And buzzes cheerily from bower to bower?
What is more tranquil than a musk-rose blowing
In a green island, far from all men’s knowing. . . .

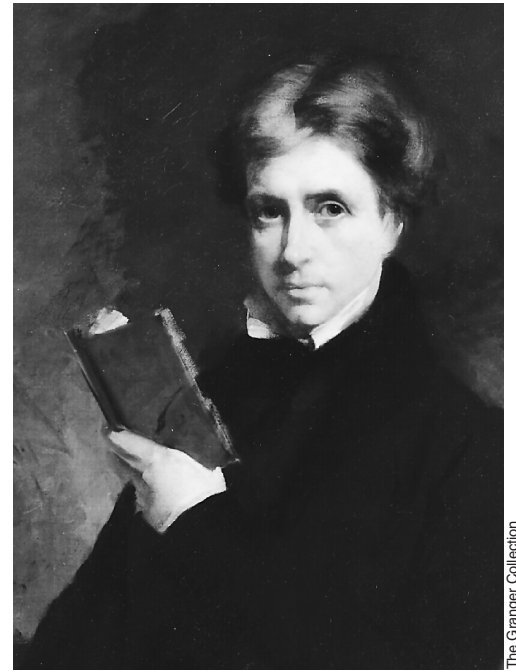
And then:

But what is higher beyond thought than thee?



Lord Byron (George Gordon). The aristocratic poet wrote an entire pamphlet defending Alexander Pope from Keats' "drivelling idiotism."

Author and critic Leigh Hunt called Keats "the most unselfish of human creatures." But, although imprisoned for his own writings, he nonetheless defended Newton's mathematics against Keats' polemics.



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Fresher than berries of a mountain tree?
More strange, more beautiful, more smooth, more regal,
Than wings of swans, than doves, than dim-seen eagle?
What is it? And to what shall I compare it?
It has a glory, and naught else can share it.
The thought thereof is awful, sweet, and holy,
Chasing away all worldliness and folly;
Coming sometimes like fearful claps of thunder,
Or the low rumblings earth's regions under;
And sometimes like a gentle whispering
Of all the secrets of some wondrous thing
That breathes about us in the vacant air;
So that we look around with prying stare,
Perhaps to see shapes of light, aërial limning,
And catch soft floatings from a faint-hearted hymning,
To see the laurel wreath, on high suspended,
That is to crown our name when life is ended.
Sometimes it gives a glory to the voice,
And from the heart up-springs, "Rejoice, Rejoice!"
Sounds that will reach to the Framers of all things,
And die away in ardent mutterings.

As to what this poem expresses, there is a letter Keats wrote eighteen months later:

[A]t once it struck me what quality went to form a man of achievement, and which Shakespeare possessed so enormously—I mean Negative Capability . . . capable of being in Uncertainties, mysteries, doubts, without any irritable searching after fact . . . with a great poet, the sense of beauty overcomes every other consideration. . . . Poetry should strike the reader as a wording of his own highest thoughts, and appear almost a remembrance.

Keats wrote directly into the teeth of the Enlightenment's definition of "poetry" for the British Isles. "Sleep and Poetry" was met with a hail of venomous abuse; from the aristocratic poet Lord Byron ("No more Keats—flay him alive; . . . there is no bearing the drivelling idiotism of the Mankin."); the Tory *Edinburgh Quarterly* ("his bookseller will not a second time venture £50 upon anything he can write"); the Whigs' *British Critic*; the Tory *Scots and Edinburgh Magazine* ("another of the Cockney school, an unclean school . . . his poetry is nothing but the most flagrant excess and exaggeration"); the Tory *Blackwood's Magazine*, encouraged by Sir Walter Scott ("It is quite ridiculous to see how the vanity of these Cockneys makes them overrate their importance, even in the eyes of us, that have always expressed such plain unvarnished contempt for them."). By warning Keats about his friend Leigh Hunt, recently imprisoned for one of his writings, the reviews intimated the same fate threatened Keats. This may seem farfetched—prison for writing metaphorical poetry—but a year later occurred a grotesque "duel," in which a publishing friend of Keats, John Christie, was shot and killed by an agent for one of the Tory "literary reviewers," whose target had been Keats himself! ("His bookseller will not a second time venture £50 upon anything he can write.")

The *Edinburgh Quarterly* stated its outrage that "there is hardly a complete couplet enclosing a complete idea in the whole book."

This strange statement marked the very heart of the battle: Keats was at war with the "closed couplet" rule of Alexander Pope's "Heroic verse," or "Augustan verse," which he detested and wished to overthrow. Pope was

the reigning literary god of the Enlightenment, whose style had been imitated by all poets and *required* by the critical establishment for a hundred years. Pope represented a literal formula for composing poetry, outlawing Metaphor, and arisen precisely from Hobbes', Newton's, and Descartes' mathematics. It was Keats and Shelley who finally overthrew this formula. Keats' battle standard was, "I have not the slightest feeling of humility towards anything in existence but the Eternal Being, the principle of Beauty, and the memory of great men" And Shelley wrote, "It is the misfortune of this age that its writers, too thoughtless of immortality, are exquisitely sensible to temporary praise or blame. They write with the fear of reviews before their eyes. This system of poetry sprang up in that torpid interval when poetry was not. Poetry, and the art which proposes to regulate and limit its powers, cannot subsist together."

The "torpid interval when poetry was not," was the descent from Shakespeare and Marlowe, to the "closed couplets" of Alexander Pope and his many imitators. This descent was the result of the attack upon Metaphor, by Thomas Hobbes and the Seventeenth-century British Royal Society.

True Couplets

Not only the greatest poetry and drama leads our thoughts from the images of the senses to the "immortal rhythm which is Truth." For thousands of years, both the greatest of epics and tragedies, and the simplest of strophic poems have done this. They evoke simultaneously with each couplet and stanza both new thought, and memory; and from these two inner voices, an underlying sense of change or surprise, called irony. Take a simple Fifteenth-century English ballad, "The Unquiet Grave," typically of seven stanzas [SEE Box].

The ballad's first stanza, like each one following to the ballad's conclusion, has two couplets, the comparison of which by the listener, generates an idea which is above both, and not in either couplet. Essential to this, is that the second couplet *echoes the first musically*—that is, the words of the second couplet may partly repeat, and partly vary those of the first; the proportional length of the two lines, the meter, the rhythm, are the same, and the couplets also "echo" by their ending rhymes. Here, the echoing couplets are clearly two different voices. In the first couplet, the young man speaks to his beloved in her grave, of the wind and rain of her funeral day; in the second couplet, we hear him speak to himself, of his sorrow in his memory of his love, alive. Between the young man's love and his thoughts of death, a Metaphor is already generated which evokes a question above both. The ballad was sung, and the singer would change into-

THE UNQUIET GRAVE

(Fifteenth Century Ballad)

The wind doth blow today, my love,
And a few small drops of rain;
I never had but one true love,
In the cold grave, she was lain.

I'll do as much for my true-love
As any young man may;
I'll sit and mourn all at her grave
For a twelve-month and a day.

The twelve-month and a day being up,
The dead began to speak:
"Oh, who sits weeping on my grave,
And will not let me sleep?"

"'Tis I, my love, sits on your grave,
And will not let you sleep;
For I crave one kiss of your clay-cold lips,
And that is all I seek."

"You crave one kiss of my clay-cold lips,
But my breath is earthy-strong;
If you have one kiss of my clay-cold lips,
Your time will not be long.

"'Tis down in yonder garden green,
Love, where we used to walk,
The finest flower that ever was seen
Is withered to a stalk.

"The stalk is withered dry, my love,
So will our hearts decay;
So make yourself content, my love,
'Til God calls you away."

nation, and by the melody of the ballad, show this change of voice.

Each new stanza, by the irony between its two couplets, presents a changed image of the same Metaphor, as the young man's longing for her physical presence, is chided and corrected by her spirit. Look at the fifth stanza, where the first lines of the couplets differ only by a word—"crave" vs. "have"—yet the ironic shift between two thoughts, is very strong.

The final stanza evokes what LaRouche calls the "Metaphor of Metaphors," which unifies even so simple a succession of stanzas as this ballad: Ironically, merely to "make yourself content" with your lot, is a lower state than love, with its striving; but to "make yourself content" in God's will even unto death, is higher.

This form of ballad was universal, perhaps the most

common form of poetry in Europe until the Renaissance; in each stanza a couplet is sung and then ironically repeated and changed by another. The two couplets make a single, indivisible poetic unit of four lines, called a *quatrain*, which generates a metaphorical idea not contained in either couplet. The second line of each couplet is metrically shorter than the first, which increases the “mocking” ironic effect. Each four-line stanza musically repeats and recalls the previous ones in memory, and generates a new metaphor, a new form of the ironic or tragic idea through which the ballad is pulling its listeners, toward the final stanza’s “Metaphor of Metaphors.”

This stanza-form originated with the Irish Christian missionary movement from the Sixth-century, devoted followers of St. Augustine. The necessity that a poetic idea be generated by a “musical” *repetition* of a verse couplet, was established in St. Augustine’s book on poetry, *De Musica*. The “musical” repetition makes the listener hear again, in memory, the poetic idea of the first couplet, while hearing the new idea of the second couplet, generating the idea of change, the irony of each stanza.

The Un-Heroic ‘Closed Couplet’

The Seventeenth/Eighteenth-century Enlightenment, steered by Venice’s cultural agents against the Renaissance, was dominated by poets who wrote great volumes of cynical, tongue-in-cheek poetry, abandoning and essentially outlawing the simple principles of Metaphor. They stripped the ballad, sonnet, *canzone*, and other fruits of poetry’s horn of plenty, down to the single, so-called “closed couplet.” They called it “Heroic,” “Augustan” (after the Caesars) and other imperial names, to hide its barren literalness, the mathematical formulae by which the poet expressed his thoughts and sense impressions, one at a time, each phrase having one and only one “precise” meaning.

Keats, in his 1819 poem, “Lamia,” included what was understood to be, a metaphorical portrait of Isaac Newton as an evil and destructive figure; even Keats’ friends rushed into print to admonish him against this. But already in “Sleep and Poetry,” Keats had raised the aristocratic storm against himself, by denouncing a certain French Academician of the Seventeenth century, Nicolas Boileau-Despréaux, and his “hard rules of poetry.” Boileau’s name is forgotten now, but at that time, it had been wielding power over the “Augustan Age of Poetry” for one hundred and fifty years.

The lines in Keats’ “Sleep and Poetry” which most drew Tory rage down upon his head, were the following (notice that in this poem, Keats was himself also composing in rhyming couplets, but they are not “closed”—as the reviewers shouted—but flowing continuously, and

metaphorically thrusting together two opposed ideas: poetry and mathematics):

. . . But ye were dead
 To things ye knew not of,—were closely wed
 To musty laws lined out with wretched rule
 And compass vile: so that ye taught a school
 Of dolts to smoothe, inlay, and clip, and fit,
 Till, like the certain wands of Jacob’s wit,
 Their verses tallied. Easy was the task:
 A thousand handicraftsman wore the mask
 Of Poesy. Ill-fated, impious race!
 That blasphemed the bright Lyrist to his face,
 And did not know it! No, they went about,
 Holding a poor, decrepit standard out,
 Marked with most flimsy mottoes, and in large
 The name of one Boileau!

This was understood to be an attack, by a young poet of genius, upon the Enlightenment’s gods of Olympus: Alexander Pope, John Dryden, Newton, and Hobbes themselves. For this, the aristocratic critical establishment set out to destroy this virtually unknown genius, whom they labeled “Cockney vermin.”

The aristocratic anarchist poet Goerge Gordon (Lord Byron), reacted to these “Boileau” lines, by writing an entire pamphlet defending Pope from Keats, although Keats had not mentioned him in any published writing. New and more furious attacks on Keats appeared in 1818, in both *Blackwood’s Magazine* and the *Edinburgh Quarterly Review*, signed “Z,” and written by Sir Walter Scott’s son-in-law, urged on by Scott himself. They charged that Keats was of “The Cockney School of Poetry”; that he wandered from thought to thought “at random,” rather than completing his images in closed couplets; that he coined new words with new meanings; and that “[h]e cannot indeed write a complete sentence, though he can spin a line.”

As to the “Cockney School,” Keats’ friend and first biographer, John Moncton Milnes, wrote: “Among the few, by 1819, not giving up the ideas of Liberty [the “Ideas of 1776”—PBG], were the men of letters, who were designated, in ridicule, the Cockney School. In art, they imitated the forms of the Renaissance and the Fifteenth century; thus, they were accused of ‘affecting archaisms.’ ” They were linked to the Weimar Circle of Germany, whose greatest member had been the Poet of Freedom, Friedrich Schiller. Percy Shelley was close friends with the “Cockney School” poets, especially the recently imprisoned Leigh Hunt. Hunt wrote that Keats “was the most unselfish of human creatures. . . . He was haughty, and had a fierce hatred of rank. He looked upon a man of birth as his natural enemy.”

But how had “closed couplets” and “complete sentences” become requirements for writing poetry?

In the years after Shakespeare’s death, while some who collaborated in the great poetry and drama of the Elizabethan period were still alive, Francis Bacon and Thomas Hobbes launched a “new poetic criticism,” which buried that poetry, and substituted the bald and barren rhyming of Enlightenment poets. Bacon was the Chancellor and controller of James I’s court. Hobbes began as Bacon’s secretary, and was trained as an agent of Venice’s growing cultural control of England; he dominated British political-economic doctrine with works like *The Leviathan*—claiming that all knowledge is derived of the senses, and all human morality is nothing but the

pursuit of pleasure and fear of punishment.³

Hobbes, and his literary epigones, also dominated British Enlightenment literary criticism. His dogma was, that the effect of poetry upon the mind was *not* based upon the interplay of thoughts and new ideas whose discovery it evokes; not upon universal ideas of Beauty and the Good; but upon the *sense images*, and their evocation of “the passions.”

Hobbes’ ideas and Boileau’s “rules” dominated English poetry for two hundred years: the so-called “Augustan Age.” With tragic suddenness, the great poetic beauty and laughter of the era from Chaucer to Marlowe and Shakespeare, gave way to the sterile rhyming of, by, and for aristocrats around the Stuart, Orange, and

Hobbes vs. Shakespeare, on Love

Thomas Hobbes’ first poetic sycophant was Sir William Davenant, whose long-forgotten, 6,800-line unfinished epic *Gondibert*, was praised by Hobbes as *at least* the equal of Homer’s *Iliad* and *Odyssey*. According to Hobbes, Sir William’s ability to portray human love was such, that “there has nothing been said of that subject, neither by the ancient or modern poets, comparable to it.”

Let us put Hobbes’ judgment to the test, and compare a mere six-line song of William Shakespeare, with a song of Davenant, both being on the theme of the sorrow of betrayed love. Keep in mind that Davenant was born while Shakespeare still lived; witness what a falling off took place, in merely one generation, with the help of old Hobbes.

Shakespeare’s song is sung by a forlorn character in the play *Measure for Measure*. Although short, it joins in metaphor the distinct and bitter sadness of a lover’s betrayal, with the clear and true praise of the remembered beauty of the unfaithful one; hence, past and present are joined into a single idea.

Take, O take those lips away,
That so sweetly were forsworn;
And those eyes, the break of day,
Lights that do mislead the morn:
But my kisses, bring again, bring again;
Seals of love, but seal’d in vain, seal’d in vain.

The power of Metaphor is concentrated in the second couplet, wherein the painful beauty of this little song, the pain of constant remembrance of beauty which passes, is generated. This poem is definitely guilty of violating the Hobbesian standard, by

“expressing more than is perfectly conceived.”

Davenant’s song, which conforms perfectly to Hobbes’ rules against the use of Metaphor—a standard which continues to dominate poetry to this day—does, indeed, convey one and only one emotional image, one single, “true inner feeling.” It is the true feeling of maudlin self-pity:

Roses and pinks will be strewn where you go;
Whilst I walk in shades of willow, willow.
When I am dead let him that did slay me
Be but so good as kindly to lay me
There were neglected lovers mourn,
Where lamps and hallow’d tapers burn,
Where clerks in choirs sad dirges sing,
Where sweetly bells at burials ring.

My rose of youth is gone,
Withered as soon as blown.
Lovers, go ring my knell.
Beauty and love, farewell.
And lest virgins forsaken
Should perhaps be mistaken
In seeking my grave, alas! Let them know
I lie near a shade of willow, willow.

Put away your hankies, readers. The beginning “closed couplet,” shows that Sir William thought himself a poet worthy of Hobbes’ praise. The song as a whole, is the kind of “true passion” which the great Renaissance author Miguel Cervantes put into the mouth of his poor Don Quixote, in order to demonstrate, with great humor and compassion, that the poor Don had utterly lost his mind!

—PBG

Hanover/Windsor courts. To this day, Hobbes' doctrines about poetry are still the dominant theory of poetry taught in schools, magazines, etc.—which accounts for their being believed by nearly everyone.

Hobbes and Boileau's dogmas were exactly the same, although Boileau acknowledged them to come from Aristotle and the Roman oligarchs Longinus and Quintillian, while Hobbes' admirers claimed he had newly invented them, himself. All that poetry aims at, they claimed, is to paint perfect sense-images of objects or beings; to transport the reader, as nearly as possible, "as if" the very objects or beings themselves, were physically present to his sense; and thus to stir "the passions" (or, as we are taught today, "my true inner feelings").

But what of the relationships, which the reader's or listener's mind perceives among these "object images"? Those were governed, according to Hobbes, Boileau, *et al.*, by strict logical rules of consistency, Aristotelean syllogisms. Any of the perceived relationships among object-images in poetry, while possibly involving unusual sights and sounds from faraway times and places, etc., had nonetheless to appear logically consistent and *probable* to the "better quality" of readers.

Hobbes' theories are well represented by the following comments, drawn from his 1650 essay on poetry, "The Answer to the Preface to Gondibert" and his 1648 *Elements of Philosophy*:

Poetic Imagination, then, is nothing but *decaying sense*. This *decaying sense*, when we would express the thing itself (I mean the *phantasm* itself), we call *Imagination*, . . . Imagination being only of those things which have been formerly perceived by Sense.

But you will say, by what Sense shall we take notice of Sense? I answer, by Sense itself, namely, by the Memory which for some time remains in us of things sensible.

For Memory is the world, though not really, yet so in a looking-glass, in which the Judgment, the severer sister, busieth herself in a grave and rigid examination of all the parts of Nature, and in registering by letters their orders, causes, uses, differences, and resemblances; whereby the Fancy, when any work of Poetry is to be performed, finds her material at hand and prepared for use, . . . copious images discreetly ordered, and perfectly registered in the Memory

The Fancy combines its phantasms, not according to an idea of beauty implanted in the mind from above, . . . but from principles derived from the habit of proceeding from causes to their effects. [emphasis added]

On such a foundation, these anti-poets constructed a schema, with two qualities of the poet: Fancy (also called Imagination, or Wit), the synthetic quality which puts

sense images together, in striking or unusual combinations; and Judgment, the analytic quality which finds the distinctions between images, and their logical, cause-and-effect relations. For two hundred years, critics judged poets, by whether they "had more of Wit, or more of Judgment," or even "combined a good Wit, with a good Judgment." Hobbesian "Wit" was said to produce lively sense images, to stimulate the inner emotions and passions; Boileau's rules of "poetic Judgement" were used to cut and clip these images, (as Keats denounced the process), and fit them into a Procrustean bed of rhyming "closed couplets," formed as nearly as possible into complete, logical sentences.

The core of Hobbes' dogma was that poetic imagery, and memory, must be "decayed"—that is, less powerful, less moving—relative to the original sense experience. Poetry, therefore, is nothing but an inferior copy of life; the best it can attain, is to move our "inner feelings" and passions, "almost as if" we were having the sensual experiences themselves "right now"—not merely reading or reciting a poem.

This dogma is completely false. It is the opposite of the truth which great poets prove by Metaphor; for, in Keats' phrase, the singer's face is "*more beautiful than it was possible*." The face and words of Shakespeare's Juliet Capulet in her garden, after we have watched the Montagues and Capulets murder one another through the streets of Verona, are beautiful: not because, by "Fancy," it is "as if" we had become fourteen years old again; but, because we are seeing and hearing the *potential for a great and beautiful change*, as Juliet and Romeo joke the names of Montague and Capulet, into the name of love.

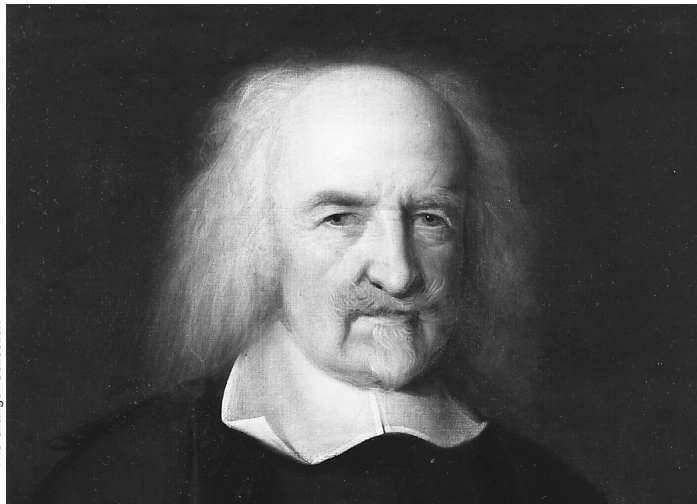
To Hobbes, "metaphors" in poetry, were summed up by this example: "Old men are stubble." All the characteristics of "stubble," he said, call to mind all of the ways, in which old men are like "stubble." This is an efficient, logical way, he thought, for one simple sense-image, to be the *symbol* for another. In his essay, "The Virtues of an Heroic Poem," he re-emphasized: "A metaphor is a comparison contracted into a word." But if a poet evoked the interplay of ideas, the *process of change and discovery of a new idea*, in just a few words, Hobbes denounced it, as

the ambitious obscurity of expressing more than is perfectly conceived; or perfect conception in fewer words than it requires. Which expressions, though they have the honor to be called strong lines, are indeed no better than riddles, and not only to the reader, but . . . to the poet himself, dark and troublesome.

Hobbes lavished praise on the puerile, now long-forgotten verses of contemporary sycophants like Sir William Davenant, whose 6,800-line unfinished epic

Thomas Hobbes (right).
Philosophical agent of
Venice's Paolo Sarpi at the
court of James I, he wrote
tracts attacking poetic
Metaphor, in favor of
Aristotelean sense certainty.

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Oligarchical poets John
Dryden (bottom left) and
Alexander Pope (bottom
right). Followers of Hobbes'
poetic dicta, by banning
Metaphor from poetry, they
banished creative thought.



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"Gondibert," was the subject of Hobbes' essay quoted above [SEE Box]; the Hon. Edward Howard, author of the heroic poem "The British Princess"; Walter Charlton; John Dennis; John Wilmot (Earl of Rochester); Abraham Cowley, whose "Pindaric Odes," included in its "Ode to Mr. Hobs," the thoroughly "closed couplet,"

From words, which are but Pictures of the Thought,
To things, the Mind's right Object, he it brought.

Thomas Shadess; and, finally, John Dryden ("Imaging is, in itself, the very height and life of Poetry."). Hobbes' dogma of "Wit" and "Judgment" was exactly carried over by John Locke into his 1690 *Essays on Human Understanding*. When all of them, joined by Newton, Boyle, and others, had formed the British Royal Society, that society pronounced (in 1687):

We glory in the plain Style, not in all these seeming Mysteries, this vicious abundance of Phrase, this trick of Metaphors, which makes so great a noise in the world. . . . We would have Reason set out in plain undeceiving expressions.

In Jonathan Swift's famous 1724 satire, *Gulliver's Travels*, Gulliver observes on the floating island of Laputa, a committee of crazed scientists, trying to agree on a reform of the language so that each word will have one, and only one, precise meaning. As far as possible, they wish to eliminate verbs and adjectives, leaving only nouns—exact names. These geniuses' ultimate aim is to eliminate words entirely, such that people will converse by carrying objects around and showing them to each other!

In the 1680's, a committee of Sir Isaac Newton's British Royal Society had been formed for precisely such "reform of the language," to abolish Metaphor in favor of precise word-meanings modelled on mathematics (although not, as in Swift's creative embellishment, to abolish human speech entirely!). It was headed by John Dryden, the poet laureate of the Stuart Restoration courts, and the exemplar of Nicolas Boileau's rules of poetry.

By the late Seventeenth century, the "closed couplet" ruled, and through the Eighteenth century it ruled

absolutely, with Alexander Pope the dictator of style, not only in English but in other languages; an astounding thirty editions of his complete works were published during that century. The “closed couplet” was an isolated unit of two rhyming lines, which were to express a precise, literal thought or image, which had to be completed within the couplet, preferably with a period at the end. Even between the two lines, there was to be a break or pause; long poems became merely a succession of indicative statements. There were many rules too tiresome to relate; the best way to see the *abolition of Metaphor*, is look at examples of Pope:

In poets as true genius is but rare,
 True taste as seldom is the critic's share;
 Both must alike from heaven derive their light.
 Those born to judge, as well as those to write.
 Let such teach others who themselves excel.
 And censure freely who have written well. . . .

No couplet shows any ironic or metaphorical connection to those before and after, no musical counterpoint—the relation among successive couplets is one of *purely logical* reinforcement, like a series of axioms of mathematics. Here is Pope writing about himself:

That not in fancy's maze he wandered long,
 But stooped to truth, and moralized his song;
 That not for fame, but virtue's better end,
 He stood the furious foe, the timid friend,
 The damning critic, half-approving wit,
 The coxcomb hit, or fearing to be hit.
 Laughed at the loss of friends he never had,
 The dull, the proud, the wicked, and the mad. . . .

“Stooped to truth,” indeed!

Chapman's Homer

John Dryden, in 1670, had arrogantly published a “translation” of works of the great *English poet* Geoffrey Chaucer, into “heroic” closed couplets. Alexander Pope, in the 1720's, published translations of Homer's *Iliad* and *Odyssey* into the same: “as he felt sure Homer would have written them had he lived in England in our century.” Here, at least, Pope was “freely translating” from Greek. In 1725 he went further, and brought out “a new Shakespeare,” amended and rewritten by Pope to contemporary taste! This did not quite prevail, but Pope's “Homer” became the standard English translation.

While Keats was still twenty, he wrote his most famous sonnet, on his discovery of George Chapman's

older, 1611 translation of Homer into real English poetry. Keats was astounded and delighted by Chapman's Homer, and here is why. Compare the two translations of a few lines from the *Odyssey*, describing Odysseus after his shipwreck and near-drowning. First, Chapman:

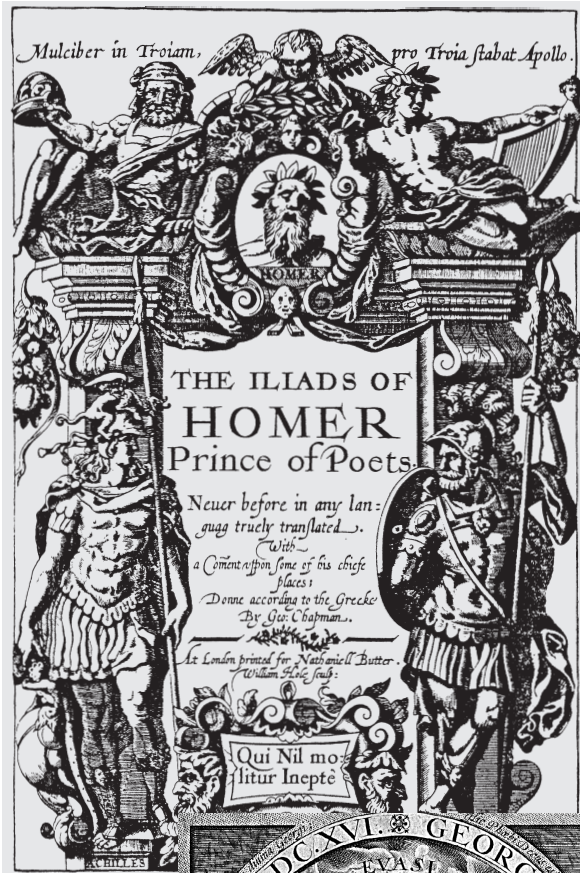
Then forth he came, his both knees faltering, both
 His strong hands hanging down, and all with froth
 His cheeks and nostrils flowing, voice and breath
 Spent to all use, and down he sank to death.
 The sea had soaked his heart through; all his veins
 His toils had wracked t'a labouring woman's pains.

Now, Pope, who had “freely translated” Homer's lines into a single closed couplet:

From mouth and nose the briny torrent ran,
 And lost in lassitude lay all the man.

Chapman's couplets, full of life and near-death, actually create, together in the reader's mind, the opposed thoughts that Odysseus has both drowned and survived! These thoughts rise away from, and absolutely defy, any precise, literal “meaning” of the phrases. Pope's deadly couplet, on the other hand, is virtually in literal Latin; yet it is also nonsensical. His whim to have “torrents” run from one human nose, comes from his intention to use words according to the precise conventions coming from Boileau's Rules and the Royal Society's formulae: salt=“briny”; flow of water=“torrent”; weakness=“lassitude”; the sea=“the surge”; and so many others, which became sickeningly familiar in poetry from the late Seventeenth century onwards.

George Chapman had been Shakespeare's contemporary, and Christopher Marlowe's friend and collaborator. Alexander Pope was the reigning poet of Europe in the Eighteenth century. Thus, we are seeing here, how far English poetry had been destroyed from within, by the “mathematizing of language” of Hobbes, the Royal Society, Descartes, Boileau, Newton, Locke, *et al.*: exactly what young John Keats was inspired to overthrow. Look now, at the end of Book II of Homer's *Odyssey*, when Odysseus' young son, Telemachus, sails for Sparta, to begin searching for his long-lost father. These fourteen lines of Chapman's translation, clearly express the two active forces at work: the seamen, and the goddess Pallas Athena, “grey-eyed seed of Jove,” the patroness and guide to Odysseus' wisdom, who holds the ship in her care. Additionally, Chapman achieves in strong detail the work of sailing, closely following the Homeric original. In so doing, Chapman's running and rhyming couplets are anything but “closed”:



Right: George Chapman, friend of Marlowe and contemporary of Shakespeare, he translated the Homeric epics into true English verse.

Above: Title page, Chapman's translation of Homer's *Iliad*.



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A beechen Mast then in the hollow base
 They put, and hoisted, fixt it in his place
 With cables, and with well-wreath'd halsers hoise
 Their white sails; which grey Pallas now employes
 With full and fore-gales, through the dark deep maine.
 The purple waves, (so swift cut), roar'd againe
 Against the ship sides, that now ranne and plow'd
 The rugged seas up. Then, the men bestow'd
 Their Armes about the ship, and sacrifice,
 With crown'd wine cups, to th'endless Deities,
 They offer'd up. Of all yet thron'd above,

ON FIRST LOOKING INTO CHAPMAN'S HOMER

MUCH have I travelled in the realms of gold,
 And many goodly states and kingdoms seen;
 Round many western islands have I been
 Which bards in fealty to Apollo hold.
 Oft of one wide expanse have I been told
 That deep-browed Homer ruled as his demesne;
 Yet did I never breathe its pure serene
 'Til I heard Chapman speak out loud and bold:
 Then felt I like some watcher of the skies,
 When a new planet swims into his ken;
 Or like stout Cortez, when with eagle eyes
 He stared at the Pacific—and all his men
 Looked at each other with a wild surmise—
 Silent, upon a peak in Darien.

They most observ'd the grey-ey'd seed of Jove,
 Who from the evening till the morning rose,
 And all day long, their voyage did dispose.

By Pope's formulae, Homer's and Chapman's fourteen lines become ten; the details of ship-work become vague generalities; the presence of Pallas Athena as protectress disappears, leaving just a stylized ship-voyage. Pope was so careless, that he changed Athena's eye color ("blue-ey'd"), and made the voyage end at dawn, when it clearly goes on through the next day. The only thing that mattered to him, were his painted images and "heroic couplets"; the final one, as bald as a TV jingle:

High o'er the roaring waves the spreading sails
 Bow the tall mast, and swell before the gales;
 The crooked keel the parting surge divides,
 And to the stern retreating roll the tides.
 And now they ship their oars, and crown with wine
 The holy goblet to the powers divine:
 Imploring all the gods that reign above,
 But chief the blue-ey'd progeny of Jove.

Thus all the night they stem the Liquid way,
 And end their voyage with the morning ray.

Thus, Homer's great epics of Western civilization, were hidden under a sterile plastic cover, by Alexander Pope, and Pope's "Old Hobb."

Keats, now liberated from the Pope translation, was immediately moved, according to his friend Richard Cowden Clarke, by these very lines and others, to write his sonnet "On First Looking into Chapman's Homer" [SEE Box]. It is a Metaphor of Metaphors, of *discovery of*

the unknown, surprise, change toward perfection.

In the sonnet, the characteristic units of Metaphor are quatrains, which work like the stanzas of strophic poems. The first quatrain sings of great voyages of discovery—but they are of poetry, of the beautiful isles ruled by poets under a common allegiance. The second quatrain evokes a greater, anticipated discovery: the “wide expanse” ruled by Homer, known to the voyager but unknown, never seen, until—Chapman’s Homer. It was Keats’ method to link the two quatrains together as musical echoes, by rhyming the last line of the first quatrain, with the first line of the next, so that the same rhymes are repeated, in the same way, in each quatrain. This had been developed by the great Dante in his *canzone* five hundred years earlier.

Thus the two quatrains are like the parts of a movement of a classical musical composition, consisting of a theme or musical idea, and its repetition and variation. But the last six lines comprise both a new development, and a final “Metaphor of Metaphors.” And these six lines, though marked as three couplets by their rhymes, are the antithesis of “closed couplets.” They are a continuous six-line succession of Metaphors, which suspend a single Metaphor, of the wordless amazement of discovery, of what eye has not seen, nor ear has not heard.

Keats intensified this effect, by making eight of the fourteen lines, especially the final two, begin with the surprise of a long, bold syllable (which was not how sonnet lines were supposed to begin by Enlightenment rules). In the two quatrains, such lines alternate; in the continuous sextet of lines, they dominate. In reciting the poem, one fairly shouts out “Then . . .,” the opening word of the sextet of lines, the new Metaphor. And at the final two lines, tremendous emphasis of the voice falls upon the opening syllable “Looked . . .,” and then even more upon the first syllable of “Silent . . .” Thus the poem does, in fact, end with a decisive musical couplet, even though that couplet begins right in the midst of a phrase, with “Looked. . . .”

This Metaphor—the silence of one “wild surmise” falling upon “all his men” at once, like shepherds when the angel of God appears to them in the heavens—is the sign marking the true subject of the sonnet.

Keats protested as well, against Dryden’s “translation” of Chaucer, whose poetry was one of Keats’ sources of musical inspiration, from the Middle English. Here are lines from Chaucer’s “Knight’s Tale,” in *The Canterbury Tales*:

“O chaste goddesse of the wodes grene,
To whom bothe hevene and erthe and see is sene,
Quene of the regne of Pluto derk and lowe,
Goddesse of maydens, that myn herte hast knowe

Full many a yeer, and woost what I desire,
As keepe me fro they vengeaunce and thyn ire, . . .”

Rhymed couplets, but continuous in development of ideas and images. And, here is Dryden’s “translation” into “closed couplets” of precise decorative and “grammatically correct” formulations:

“O Goddess. Haunter of the Woodland Green,
To whom both Heav’n and Earth and Seas are seen;
Queen of the nether Skies, where half the year
Thy silver beams descend, and light the gloomy sphere;
Goddess of maids, and Conscious of our Hearts,
So keep me from the vengeance of thy Darts, . . .”

Denial of the Senses

John Keats wrote both poems and letters in passionate denunciation of what the Enlightenment British literary establishment had done, to drive into misery Scotland’s great national poet and composer, Robert Burns. From Burns, Keats learned a new construction for the old ballads, increasing their ironic power. Traditionally, the ballad’s quatrain varied the length of its lines in the proportion 4-3-4-3, the shorter lines “mocking” the longer. But in the “Burns Stanza,” the lines were in the proportion 4-4-4-2-4-2, packing all the “bite” of the foreshortening into the double ironies of the fourth and the last lines. Burns used this ironic power for humorous or, in the best sense, patriotic purposes; Keats was enraged that Burns had been prevented from writing tragic poetry, of the greatest metaphorical beauty, having been thrust instead by the British cultural mafia into the role of “satirist,” even while they abused and impoverished him.

Keats used Burns’ method in composing his powerful tragic ballad, “La Belle Dame sans Merci” [SEE Box]. Its Metaphors arise from the story of Circe in Greek mythology—although that is never referenced explicitly. Circe ensnared her victims in the most intense pleasures of the senses, until suddenly they found that she had turned them into swine, or chained them in a Hell of the most horrible sensual tortures. Keats, in reciting his own ballad, again according to his friend Cowden Clarke, recited the short, stanza-ending lines approximately as indicated below. He was using the half-length last line to create tragic, not humorous, irony. The first stanza of “La Belle Dame,”

O what can ail thee, knight-at-arms,
Alone, and palely loitering?
The sedge has withered from the lake,
And ___no___ birds ___sing___.

LA BELLE DAME SANS MERCI: A BALLAD

I

O what can ail thee, knight-at-arms,
Alone and palely loitering?
The sedge has withered from the lake,
And no birds sing.

II

O what can ail thee, knight-at-arms,
So haggard and so woe-begone?
The squirrel's granary is full,
And the harvest's done.

III

I see a lily on thy brow,
With anguish moist and fever-dew,
And on thy cheeks a fading rose
Fast withereth too.

IV

I met a lady in the meads,
Full beautiful—a faery's child,
Her hair was long, her foot was light,
And her eyes were wild.

V

I made a garland for her head,
And bracelets too, and fragrant zone;
She looked at me as she did love,
And made sweet moan.

VI

I set her on my pacing steed,
And nothing else saw all day long,
For sidelong would she bend, and sing
A faery's song.

VII

She found me roots or relish sweet,
And honey wild, and manna-dew,
And sure in language strange she said—
'I love thee true.'

VIII

She took me to her elfin grot,
And there she wept and sighed full sore,
And there I shut her wild wild eyes
With kisses four.

IX

And there she lullèd me asleep
And there I dreamed—Ah! woe betide!—
The latest dream I ever dreamt
On the cold hill side.

X

I saw pale kings and princes too,
Pale warriors, death-pale were they all;
They cried—'La Belle Dame sans Merci
Thee hath in thrall!'

XI

I saw their starved lips in the gloam,
With horrid warning gapèd wide,
And I awoke and found me here,
On the cold hill's side.

XII

And this is why I sojourn here
Alone and palely loitering,
Though the sedge is withered from the lake,
And no birds sing.

immediately, by the contrast between its two couplets, generates a paradox of sense-impressions: Is it that the knight must flee at once, and not loiter by this desolate winter lake? Or has the knight's ominous ailment caused the desolation?

In the fourth stanza, the knight begins to tell of his dream of the senses. Each successive stanza, by its paired couplets, raises the tension between the knight's desperate, tragic striving to have the entrancing object of his senses, La Belle Dame, who has vanished; and the languid, ineffable behavior of the fairy maiden, which signals that she did not exist, except as the Metaphor of the knight's terrible mental illness. And in each stanza, the dramatic musical contrast between the two couplets—the

fact that the fourth line is half-length and is slowly tolled in the recitation—aids in giving the ballad its unusual, tragic quality. The final stanza,

And this is why I sojourn here
Alone and palely loitering;
Though the sedge is withered from the lake,
And ___no___birds___sing___.

shows that the opening stanzas, were merely variations of the concluding Metaphor. No companion, no grasses, no singing of birds, no color in his cheek, no will to flee from this soundless suspension; the falseness and powerlessness of the senses.

Compare Alexander Pope, even when he wrote, apparently, not in “closed couplets,” but in the *form* of the ballad; although he called this an ode, “Ode on Solitude”:

Happy the man whose wish and care
A few paternal acres bound,
Content to breathe his native air,
In his own ground.

Whose herds with milk, whose fields with bread,
Whose flocks supply him with attire;
Whose trees in summer yield him shade,
In winter fire. . . .

No question, but that it feels good to grow old with some wealth and property, wouldn't you say? No question, no paradox, no thought of change, no Metaphor—nor any poetry.

‘Ode to a Nightingale’

When Keats spent his two months in Scotland in 1818, he took with him only one book: an edition of collected works of Dante Alighieri. Dante had developed the full concept of composition of the poetic stanza, as a movement of a work of music, which can be seen in Keats' great odes, for which he has always been best known.

Dante also taught, that that poetic form which can express irony through the content of *tragic* Metaphor, is the highest, and this he called the *canzone*—“a composition in the Tragic style, of equal stanzas, without choral interludes . . . that, in which the whole art of the *canzone* is contained, should be called *stanza*, that is a room, or receptacle, for the whole art.”

What we saw was true of the quatrain stanza of the ballad, Dante developed further:

A stanza is a structure of lines and syllables, limited with reference to a certain musical setting. . . . Every stanza is set (musically) for the reception of a certain Ode. . . . Subsequent stanzas may only be clothed with the musical art of the first stanza.

In other words, the musical “odes,” set out in the first stanza of a *canzone*, must be repeated in each successive stanza, although the final stanza could be lengthened by a repetition after its last group of lines, which Dante called by the musical term “coda.” An “ode” was a group of poetic lines, which employed a certain pattern of meter, rhythm and rhyme, *and expressed a distinct thought-object*. The first ode of a stanza was to be repeated a second time, now expressing a second poetic idea; then, if the stanza continued, a new ode was heard (this was the

volta, or turning point of the stanza); then another; and the stanza would be concluded by a couplet which “summed up” the Metaphor of that stanza.

For example, in the simple ballad, the stanza presents only one ode—a couplet—which is then repeated ironically, as discussed earlier. In a sonnet such as Keats' on Chapman's Homer, the first ode is the opening quatrain, which is then linked by rhymes to its own repeat, the second quatrain, with its new thought-object. The *volta*, or turning point, is between the end of the repeated quatrains, and the beginning of the continuous sextet of lines, which is the second ode. This second ode concludes with a “coda,” the final couplet, the “Metaphor of Metaphors” of the sonnet.

In one of Dante's tragic *canzone*, this kind of development only completes the first stanza, of six. Each new stanza has the same musical odes. Each successive stanza begins by taking up anew, the thought-object which has just been restated, ironically, in the final couplet of the previous stanza, and beginning to change it. And so on, to the final stanza and its concluding couplet, which rise above the entire poem.

The stanzas of Dante's *canzone* function like the movements of a classical musical composition. John Keats composed his great odes in this way, including his famous “Ode to a Nightingale” [SEE Box]. Once again, it celebrates the renunciation of the senses and sense-certainty, to arrive at an invisible beauty of ideas, an immortal song of Truth, which is poetry.

Like all of Keats' odes, “Ode to a Nightingale” was composed in stanzas of ten lines, each stanza beginning with a quatrain—a couplet which is then musically repeated, evoking a definite thought-object. Then begins a second “ode,” or new development of the idea, consisting of a continuous flow of six lines with three rhymes. The “coda” is marked by Keats' placement of a short line, to be sung slowly and with emphasis, leading into the final couplet of the stanza. The ratio of the short line is three measures to five measures (3:5); the proportion which Dante had employed in his *canzoni*, and praised for its “excellence.”

The very first stanza opens with the senses put to sleep in the beginning quatrain, as if in death; and closes in complete contrast, with the lively joy of the nightingale singing, unseen, in the shadows. But the *volta*, the turning point, is at the beginning of the second “ode,” in lines five and six. Right there, a great irony is already created. *Read* the stanza silently and you will hear, in your mind, the sad, drowsy poet envying the happy songbird. But then, *recite* the stanza, and you will hear a totally different idea: The poet becomes more happy, in the evident joy of the bird's song, than is the bird! Keats' Metaphor is

ODE TO A NIGHTINGALE

I

My heart aches, and a drowsy numbness pains
My sense, as though of hemlock I had drunk,
Or emptied some dull opiate to the drains
One minute past, and Lethe-wards had sunk:
'Tis not through envy of thy happy lot,
But being too happy in thine happiness—
That thou, light-wingèd Dryad of the trees,
In some melodious plot
Of beechen green, and shadows numberless,
Singest of summer in full-throated ease.

II

O, for a draught of vintage! that hath been
Cooled a long age in the deep-delvèd earth,
Tasting of Flora and the country green,
Dance, and Provençal song, and sunburnt mirth!
O for a beaker full of the warm South,
Full of the true, the blushful Hippocrene,
With beaded bubbles winding at the brim,
And purple-stainèd mouth,
That I might drink, and leave the world unseen,
And with thee fade away into the forest dim—

III

Fade far away, dissolve, and quite forget
What thou among the leaves hast never known,
The weariness, the fever, and the fret
Here, where men sit and hear each other groan;
Where palsy shakes a few, sad, last grey hairs,
Where youth grows pale, and spectre-thin, and dies;
Where but to think is to be full of sorrow
And leaden-eyed despairs;
Where Beauty cannot keep her lustrous eyes,
Or new Love pine at them beyond tomorrow.

IV

Away! away! for I will fly to thee,
Not charioted by Bacchus and his pards,
But on the viewless wings of Poesy,
Though the dull brain perplexes and retards.
Already with thee! tender is the night,
And haply the Queen-Moon is on her throne,
Clustered around by all her starry Fays;
But here there is no light,
Save what from heaven is with the breezes blown
Through verdurous glooms and winding mossy ways.

V

I cannot see what flowers are at my feet,
Nor what soft incense hangs upon the boughs,
But, in embalmèd darkness, guess each sweet
Wherewith the seasonable month endows
The grass, the thicket, and the fruit-tree wild—
White hawthorn, and the pastoral eglantine;
Fast fading violets covered up in leaves;
And mid-May's eldest child,
The coming musk-rose, full of dewy wine,
The murmurous haunt of flies on summer eves.

VI

Darkling I listen; and, for many a time
I have been half in love with easeful Death,
Called him soft names in many a musèd rhyme,
To take into the air my quiet breath;
Now more than ever seems it rich to die,
To cease upon the midnight with no pain,
While thou art pouring forth thy soul abroad
In such an ecstasy!
Still wouldst thou sing, and I have ears in vain—
To thy high requiem become a sod.

VII

Thou wast not born for death, immortal Bird!
No hungry generations tread thee down;
The voice I hear this passing night was heard
In ancient days by emperor and clown:
Perhaps the self-same song that found a path
Through the sad heart of Ruth, when, sick for home,
She stood in tears amid the alien corn;
The same that oft-times hath
Charmed magic casements, opening on the foam
Of perilous seas, in faery lands forlorn.

VIII

Forlorn! the very word is like a bell
To toll me back from thee to my sole self!
Adieu! the fancy cannot cheat so well
As she is famed to do, deceiving elf.
Adieu! adieu! thy plaintive anthem fades
Past the near meadows, over the still stream,
Up the hill-side; and now 'tis buried deep
In the next valley-glades:
Was it a vision, or a waking dream?
Fled is that music—Do I wake or sleep?

already beginning to appear. For now, it is in the paradoxical image of the full-throated ease of the singer, and the lethargic ease of the poet, whose heart aches, as the song begins to pour out, because he is too happy!

As the second stanza opens, the quatrain takes the first stanza's hemlock, and transforms it to delicious wine; the "full-throated ease" of the nightingale, from the end of stanza one, now takes over the mind. Through this stanza, another paradox for the senses. The quatrain is based upon images of sensual pleasure; then the ode even intensifies these, up through the slow line, "And purple-stained mouth." But the closing couplet makes a sudden change, as this wine makes the mortal body fade away, unseen. At the end of this "second movement" of the piece, the concluding "Metaphor of Metaphors" is now present.

It is evident how, as the stanzas progress, each opening couplet pushes, polemically, against the suspended Metaphor from the previous stanza. This can be shown by a shift of voice in recitation. In the fourth stanza—"Away!"—there is a greater transformation than any before it. The quatrain, against wine or any sensual pleasure, opposes the invisible power of poetry, and at the beginning of the ode—"Already with thee!"—the poet finds and joins the serene and secret nightingale. But! The bird's song is found in the mind alone; now come images of such black night that nothing can be found, even the shining of the Moon and stars are only guesses; and in the coda of this stanza comes the extraordinary and paradoxical image of heavenly light being blown by the wind through the forest, in complete darkness.

Keats' Metaphor of Metaphors is now working in mind as the fifth "movement" recreates the same paradox, of "guessing" at sense impressions of Nature, which, in the opening stanza, appeared so tangible and obvious. Keats is creating exactly what St. Augustine described: "from the things of sense, to God, in order that they may cling to Him who rules our intelligence, with no mediating Nature between. . . ."

And Keats is doing this, with a simple, everyday irony, known to anyone who has ever put a canary out on the back porch; a tiny bird, so small as to be virtually without substance, filling the forest with great, invisible, unfindable song. He had written a little song, which was like a study for the "Ode":

FAERY BIRD SONG

Shed no tear—O, shed no tear!
 The flower will bloom another year.
 Weep no more! O, weep no more!
 Young buds sleep in the root's white core.
 Dry your eyes! O, dry your eyes!

For I was taught in Paradise
 To ease my breast of melodies—
 Shed _____no_____tear.

Overhead! look overhead!
 'Mong the blossoms white and red.
 Look up, Look up. I flutter now
 Upon this flush pomegranate bough.
 See me! 'tis this silvery bill
 That ever cures the good man's ill.
 Shed no tear! O shed no tear!
 The flower will bloom another year.
 Adieu, Adieu—I fly, adieu,
 I vanish in the heaven's blue—
 Adieu, _____Adieu!

In the "Ode to a Nightingale," once the nightingale's song has been lifted, by these paradoxes, musical movement by movement, away from all sense impressions and sensual pleasures, the full Truth of the Metaphor appears in the sixth and seventh stanzas. Is this grasping of unknown, unseen, unheard melody, what awaits us in death? Keats, at about this time, wrote the epitaph for his own grave: "Here lies a man, whose name was writ in water."

Shakespeare's Hamlet appears, metaphorically: In the quatrain opening the sixth stanza, the poet wishes "not to be." The ode at first intensifies this, but then completely overturns it—this power of song is the reason for living. The "coda" of that stanza restates the same: The nightingale's song will live, though the poet die, and be his requiem. The seventh stanza opens with a quatrain suddenly opening into all of human history, and the immortal beauty of human art. From the quatrain of this stanza, to its ode, to its coda, there are startling shifts of the imagination, the joy of created beauty over and against the sadness of the mortal heart. The sixth and seventh stanzas are amazing, and a challenge to recite. By the end of stanza seven, the Metaphor is fully expressed. Keats' subject, was the great joy and love felt in composing a beautiful poem, no matter the state of mind or aching senses before the composing begins; the nightingale, metaphorically, is his own song. As the song has its joy, its creator is even happier. And this happiness is not of the senses, nor of the happiness of a life without care—as the Book of Ruth in the Old Testament was written to show—but the love of divinely given power of human creativity and love for God.

The slow final "movement" opens, even more strictly and musically than the others, by ironically restating the previous stanza's final couplet. The last stanza's conclusion of the Metaphor, is governed by Keats' idea, stated in letters, that a poem should rise to its most intense beauty just before the end:

Who read for me, the sonnet, swelling loudly
Up to its climax, and then dying proudly.

Or, as expressed in "Sleep and Poetry":

Sometimes it gives a glory to the voice,
And from the heart up-springs, "Rejoice, Rejoice!"
Sounds that will reach the Framer of all things,
And die away in ardent mutterings.

The "Ode to a Nightingale" is surely as beautiful a musical composition, as one of Dante's great *canzoni* from which came this method of composing in stanzas. What is said here about its content is only the simple and obvious. The purpose is to show the compositional method appropriate to the Metaphor: The opening movement as quatrain of repeated couplets; the *volta*, or turn, into the ode, or continuous sextet of lines; the "coda," or final couplet, which is both part of the ode, and a distinct recapitulation in itself. Keats did not use the form in just the same way in each stanza, nor the overall form in the same way in each ode; neither had Dante. Keats' long poems and sonnets had appeared to *break* the rules of Enlightenment poetry: his method in his odes and other stanza poems, is better said to have been *unknown* to those rules.

Throughout the Nineteenth century, biographers of Keats, while calling him a "genius," defended Boileau and the "rules" of Enlightenment poetry, against him. William Michael Rossetti's 1887 *Life of John Keats*, for example, denounced just that beauty of the seventh stanza of the "Ode to a Nightingale":

The nightingale itself is pronounced immortal. But this cannot stand the test of a moment's reflection. Man, as a race, is as deathless as is the nightingale as a race: while the nightingale as an individual bird has a life . . . still more fleeting, than a man as an individual.

Mr. Rossetti had made a syllogism: Old men are stubble; nightingales grow old much more quickly than men; therefore, nightingales are stubble.

'The Immortal Rhythm in Truth'

Keats' friend, Thomas Haydon, a young painter and archeologist, placed the heads of some well-known figures in his mural, "Christ's Entry into Jerusalem." Keats objected strongly when Haydon proposed to paint in Newton; Keats argued that Newton's influence had destroyed poetry, but Haydon went ahead, to brief critical praise. Keats' early friend Leigh Hunt felt constrained to defend Newton against Keats, in a review of

Keats' "Lamia" in Hunt's magazine, *The Examiner*, insisting poetry and Newton's mathematics must coexist. By 1819, British establishment reviews praising Shelley, still lacerated Keats, as *Blackwood's Magazine* in February, 1819:

We should just as much think of being wrath with vermin, unless they had entered our apartments, as with the Cockney poets. . . . Last of all, what should forbid us to announce our opinion, that Mr. Shelley, as a man of genius, is not merely superior, either to Mr. Hunt, or to Mr. Keats, but altogether out of their sphere.

By then Keats was trying to earn money to survive, by writing plays for London's Drury Lane theatre, and seeking work as a surgeon on a merchant vessel.

Haydon's mural, Hunt's *Examiner*, and *Blackwood's* are forgotten (except in Edgar Allan Poe's hilarious satires); not so Keats' poems, for which he battled the Enlightenment. Keats was firm in his judgment that "the lines of Pope's verse are like mice, compared to my own." When the reviews attacked his second volume, "Endymion," he wrote: "I was never afraid of failure; for I would rather fail, than not be among the greatest." And in another letter: "I find I can have no enjoyment in the world but the continual pursuit of knowledge. I find that there is no worthy pursuit, but the idea of doing some good to the world."

But after Keats, Shelley, and, later, the American Poe,⁴ poetry fell again under the dead weight of Hobbesian mathematics. It became the "true emotions" or "plain sense" of those poets who continued to write with stanza, meter, and rhyme; or the unmusical chaos of seeking "deeper meaning" in so-called free verse, beginning with the British literary establishment's promotion of Walt Whitman.

To restore Metaphor to English poetry, we must begin by returning to the music of John Keats.

NOTES

1. See the following works by Lyndon H. LaRouche, Jr., in previous issues of *Fidelio*: The "Metaphor" series: "On the Subject of Metaphor" (Vol. I, No. 3, Fall 1992, pp. 17-50), "Mozart's 1782-1786 Revolution in Music" (Vol. I, No. 4, Winter 1992, pp. 4-29), and "On the Subject of God" (Vol. II, No. 1, Spring 1993, pp. 17-48); "The Fraud of Algebraic Causality," in the *Symposium on the Creative Principle in Art and Science* (Vol. III, No. 4, Winter 1994, pp. 57-68,); and "How Hobbes' Mathematics Misshaped Modern History" (Vol. V, No. 1, Spring 1996, pp. 6-30).
2. *Op. cit.*
3. See Brian Lantz, "Thomas Hobbes: Fascist Exponent of Enlightenment Science," *Fidelio*, Vol. V, No. 1, Spring 1996, pp. 31-37, for further background on Hobbes and his attack on Metaphor.
4. See, for example, Poe's essay "Mellonta Tauta," with its soaring satire on the creeping and crawling methods of, respectively, Aries Tottle and Hog (F. Bacon).

Some Thoughts on the First Human Society Following the Guiding Thread Of the Mosaic Documents

Transition of Man to Freedom and Humanity

(1789)

Friedrich Schiller

THE FOLLOWING ESSAY *was originally presented by Friedrich Schiller during the summer semester of 1789 in Jena, Germany, where he was a Professor of History, as part of a series of lectures on Universal History, The lecture series included his famous inaugural address entitled "What Is, and to What End Do We Study, Universal History?," as well as "The Legislation of Lycurgus and Solon," and "The Mission of Moses." This essay first appeared in print in Schiller's Thalia in 1790.*

As the subtitle lecture indicates, Schiller conceived of the Fall, as described by Moses, as, on the one hand, introducing evil into the world, but, on the other hand, as necessitating, and in that sense making possible, the development of mankind's moral freedom. As Schiller puts it: ". . . out of a Paradise of ignorance and bondage, he was supposed to work himself upward, were it even a thousand years later, to a Paradise of knowledge and freedom; such a one, namely, where he would have harkened to the moral law in his breast equally as unswervingly, as he had at first obeyed instinct"

Thus, Schiller identifies the paradoxical nature of human existence. Man cannot return to a lost Paradise, where, like the animals, he merely obeys instinct; but rather, man must struggle to create a paradise, based upon the image of God within him, his capacity for creative reason and love. The latter capacity must become as though an instinct to him. Only then is man truly free.

This theme, developed here by Schiller using the Mosaic texts, was later developed by him in his aesthetic writings, such as the "Letters on the Aesthetical Education of Man" and "On Naive and Sentimental Poetry." Even today, man's still unfinished task remains to create a truly human society, based not upon "might, Fortune, and a ready militia," but rather, upon that brotherly love which distinguishes man from the beast.

With respect to the guiding group of instincts, which still at present control the unthinking animal, Providence had to establish man in life, and, as his Reason was still undeveloped, stand behind him like a vigilant nurse. Through hunger and thirst, the necessity of nourishment made itself known to him; what he needed to satisfy himself was placed in ample supply around him, and through smell and taste, it guided him in choosing. Providence has shown his nakedness indulgence through a gentle climate, and through a universal peace surrounding him, made his defenseless life secure. The preservation of his species was assured through the sexual instinct. Like the plants and animals, man was thus completed. His Reason too had already begun to develop long ago. Because Nature still thought for, provided for, and acted for him, he was able to direct his strength that much more easily and unhindered to serene conception: His Reason, still undistracted by any care, could, undisturbed, build and tune the tender play of ideas through its tool, language. He still looked out at the Creation with the eyes of a fortunate being; his happy nature conceived all phenomena in an unselfish and pure way; and laid them down pure and clear in an alert faculty of memory. Soft and smiling was thus the beginning of man, and this had to be, since he was supposed to strengthen himself for the combat which stood before him.

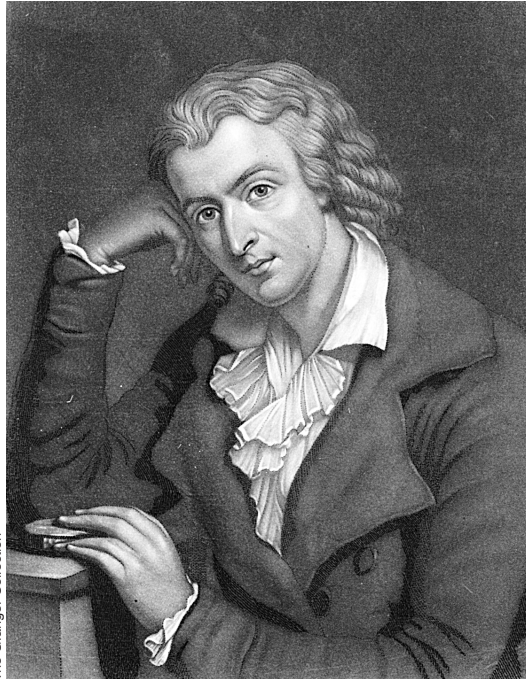
If we thus posit, Providence would quietly be on his side during this phase, then from man would come into being the most fortunate and the most intellectually developed of all the animals—however, he never would have stepped out of the guardianship of natural instinct; his actions would have never become free and moral; he would have never risen beyond the limits of animal nature. He would have spent an eternal childhood in libertine tranquility, and the circle, in which he would have moved, would have been the smallest possible: from fleshly appetites to enjoyment, from enjoyment to rest, and from rest, back to appetite.

However, man was ordained to something completely different, and the strengths that lie in him, called him

to a completely different happiness. What Nature in his infancy had undertaken for him, he was now supposed to undertake for himself, as soon as he was of age. He himself was supposed to become the creator of his own happiness, and only the share which he would have in it, was supposed to determine the degree of this good fortune. He was supposed to learn to rediscover the state of innocence, which he had now lost, through *his Reason*, and as a free reasoning mind return there, whence he had emerged as a *vegetative being* and a creature of instinct; out of a Paradise of ignorance and

bondage, he was supposed to work himself upward, were it even a thousand years later, to a Paradise of knowledge and freedom; such a one, namely, where he would have harkened to the moral law in his breast equally as unswervingly, as he had at first obeyed instinct, as the plants and animals obey it still. What was thus inevitable? What had to happen, if he was supposed to approach to this distant, set goal? As soon as his Reason had merely proven its first powers, Nature expelled him out of her care-giving arms; or, more correctly said, he himself, piqued by an impulse, of which he was not yet capable, and not comprehending what he does in this moment of greatness, he, on his own, broke from the guiding group of instincts,

and with his still weak Reason, accompanied by instinct only from afar, he threw himself into the wild play of life; he set out on the dangerous path to moral freedom. If we, therefore, change that voice of God in Eden, which forbade to him the Tree of Knowledge, into a voice of his instinct, which pulled him back from this tree, thus his supposed disobedience against that divine order is nothing other than—a fall away from his instinct—thus the first declaration of his self-acting; the first daring deed of his Reason; the first beginning of his moral being. The fall of man away from instincts, which indeed brought moral evil into Creation; however, only in order to make the moral good in it possible; that falling away is without contradiction the most fortunate and the greatest event in the history of mankind; his freedom traces itself from this moment; the first remote foundation of his morality was laid here. The



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Friedrich Schiller

folk teacher is entirely right if he describes this occurrence as a *Fall* of the first man, and where it can be done, draws profitable moral teaching from it; however, the philosopher is not less right, to wish happiness for human nature in the large on this important step toward perfection. The first is right, to call it a fall, because man became from an innocent creature, a guilty one; from a perfect pupil of nature, an imperfect moral being, from a fortunate instrument, an unfortunate artist.

The philosopher is right, to call it a giant step of mankind, because mankind through it went from being a slave of natural instinct to a freely-acting creature; from an automaton to a moral being, and with this step he first mounted the ladder which will lead him, after a lapse of many thousands of years, to self-control. Now the path which he had to take to pleasure became longer. In the beginning, he had only to stretch out his hand in order to have satisfaction immediately follow desires; now, however, he had to insert reflection, industry, and labor between the desires and their satisfaction. The peace between him and the animal was revoked. Need drove them now against his settlements; yes, against him himself, and through his Reason, by artifice, he had to provide his own security against them and a superiority of strength which Nature had denied to him; he had to invent weapons and secure his sleep from this enemy through strong dwellings. However, here already Nature compensated him with the joys of the Mind, for what she had taken from him in pleasures of the vegetative domain. The self-sown vegetable surprised him with a delicious flavor, which he had not become acquainted with before this; sleep overcame him after tiring work, and under his self-built roof was sweeter than in the indolent rest of his Paradise. In battle with the tiger, which fell to him, he rejoiced over the discovered strength of his limbs and cunning, and with every overcome danger, he could thank his own self for the gift of his life.

Now he was already too noble for Paradise, and he did not know his own self, if, under pressure of need, and under the burden of cares, he wished himself back there. An inner, impatient impulse, the awakened drive to act for himself, would have pursued him soon in his idle happiness, and spoiled for him the joys, which he had not created for his own self. He would have changed Paradise into a wilderness, and after that have made the wilderness into Paradise. But lucky for the human species, if it had had no worse enemy to fight than the idleness of the land, the fury of wild animals, and a stormy Nature! Need drove him, passions awakened, and armed him soon against his own kind. With men he

had to struggle over his existence, a long, extended, still-unfinished struggle, but in this struggle alone could he develop his Reason and morality.

Domestic Life

The first sons, which the mother of mankind bore, had a very important advantage over their parents: They were raised by human beings. All improvements, which the parents had to accomplish through their own selves, and thus far more slowly, came to their children quite easily, and had already been handed down to these children playing at a tender age, and with the sincerity of parental love. With the first son, thus, who was born from the wife, the great instrument began to become effective—the instrument through which the whole of mankind had obtained its development, and will continue to obtain it—namely, tradition, or the transmission of ideas.

The Mosaic documents leave us here, and skip over a space of fifteen or more years, in order to present to us the two brothers as already grown adults. However, the time between is important for the story of mankind, and if the writings leave us, then Reason must fill in the lacuna.

The birth of a son, his nourishment, his nursing and his upbringing increased the knowledge, experience, and responsibility of the first humans with an important addition, which we must carefully record.

Without doubt, the first mother learned the required duties of a mother from the animals, just as she probably had learned from necessity the means of help at birth. The care for children made her attentive to innumerable small comforts, which up to now had been unknown to her; a multitude of things, of which she learned to make use, increased, and mother love became ingenious in invention.

Until now, both had only *one* social relation; had known only *one* kind of love, because each had in the other only one object before him. Now, with a new object, they learned a new kind of love; to know a new moral relationship—*parental* love. This new feeling of love was of a purer kind than the first; it was completely unselfish; at first, the former had been based merely on pleasure, and on the mutual need for companionship.

Therefore, with this new experience, already they entered a higher stage of morality—they became ennobled.

However, the parental love, in which they are both united for their child, now also caused not a small change in the relationship in which, until now, they had stood to each other alone. The care, the joy, the tender concern in which they united for the joint object of their love, tied new and more beautiful bonds between themselves. On this occasion each discovered in the other new, moral,

beautiful characteristics, and each and every one of such discoveries elevated and improved their relations. The husband loved in the wife the mother, the mother of his beloved son. The wife honored and loved in the husband the father, the provider of her child. The merely moral pleasure in each other raised itself to respect; out of selfish sexual love developed the beautiful phenomenon of *married* love.

These moral experiences would soon be enriched with new ones. The children grew up this way, and, little by little, a tender bond also united them. The child considered himself the most loved as a child, because each creature would simply love himself in beings like him. *Brotherly love* developed in the tender, imperceptible threads—a new experience for the first parents. They now saw, for the first time, *outside* themselves, an image of companionship and benevolence; they recognized their own emotions again, only in a more youthful mirror.

Until now, both had lived, so long as they were alone, only in the present and in the past, but now the distant future began to promise them joy. So as they watched their children grow up around them, and every day a new capability developed in them, smiling vistas of the future opened up to them, when these children were to one day become men like them; in their hearts awoke a new emotion—*hope*. What a limitless range becomes opened to mankind through hope! Until now, they had enjoyed each pleasure only once, only in the present—in anticipation, each future joy before them would be experienced innumerable times.

As the children now truly matured, what variety appeared all at once in the first human society! Each idea which they had communicated to them, had in each soul developed differently, and now took them by surprise by its originality. Now the circulation of ideas came alive; the moral emotion established itself by use and developed by practice; language was already richer and already rendered more precise, and already dared to express finer emotions; new experiences in nature all around them, and new applications of the already known. Now man kept his attentiveness completely occupied. Now, there was no longer any danger that they would descend to the imitation of animals!

Difference of Way of Life

The advance in culture manifested itself even by the first generation. Adam cultivated the field; by this time we see one of his sons take up a new branch of agriculture: the breeding of livestock. Human society thus differentiates itself here already into two different occupations, farmers and shepherds.

The first man went to school with Nature, and he learned from her all the useful arts of life. With attentive study, the order according to which the plants regenerate themselves, could not remain hidden from him long. He saw Nature itself sow and water; his imitative instinct awoke, and soon need spurred him, to lend his arm to Nature, and to assist her spontaneous abundance through ingenuity.

However, one must not believe the first cultivation to have immediately been grain-growing, for which even then great preparations are necessary; and it is customary for the course of nature, at all times, to progress from the simple to the complex. Probably rice was one of the first plants which man cultivated; Nature invited him to it, because rice grew wild in India, and the oldest historians speak of rice cultivation as one of the oldest agricultural arts. Man noticed that in a persisting drought, plants droop, but after a rain, they quickly recover. He noticed further, that where a passing storm left silt behind, the fertility was greater. He utilized these two discoveries; he gave his plants an artificial rain, and brought silt to his fields, if no river was in the vicinity, which could provide him with it. He learned to fertilize and water.

The step which he took to the use of animals appeared to be more difficult: but he also began here, as everywhere, with the unsophisticated and the innocent at first, and he contented himself perhaps for many generations with the milk of animals, before he laid hand on their lives. Without doubt, it was mother's milk which invited him to the attempt, to make use of animal milk. However, no sooner had he become acquainted with this new nourishment, than he got it under his control for good. In order to have this nourishment, at any time ready and in supply, it ought not to be left to chance, whether when he became hungry, such an animal was going to provide this to him. Thus, he hit upon the idea of always gathering a certain number of such animals around himself; he put together a herd for himself; however, he had to seek this among those animals that live gregariously, and he had to transpose them out of the condition of wild freedom into the condition of captivity and peaceful rest; that is, he had to tame them. However, before he ventured to others, which were wilder in nature and superior to him in natural armaments and abilities, he attempted it first with those to which he himself was superior in strength, and which possessed less savageness from Nature. Therefore, he tended sheep earlier than he tended swine, oxen, and horses.

As soon as he had robbed his animals of their freedom, he was placed in the necessity of having to nourish them himself, and to care for them. Thus, in this way, he became a shepherd, and so long as the society was still

small, Nature could offer nourishment in abundance to his small herd. He had no other labor than to locate pastureland, and if it was grazed, to replace it with another. The richest abundance rewarded him for this easy occupation, and the yield of his labor was subjected to no fluctuation either by season or by weather. An all-around delight was the lot of the pastoral state; freedom and a joyful leisure its character.

It was completely otherwise with the farmer. This one was slavishly bound to the soil, to what he had planted, and with the way of life which he took up, he had given up every freedom of his domicile. He had to carefully prepare the delicate constitution of the plant which he cultivated, and rush to assist its growth through ingenuity and work, while the other left his herd to care for itself. Lack of tools initially made each task harder for him, and for all that, he was hardly equal to the task with only two hands. How difficult his way of life had to be, before the ploughshare lightened it for him; before he mastered the harnessed bull, to share the work with him.

The tilling of the soil, the sowing and watering, the harvest itself, how many tasks all this required! And which labor only after the harvest, not until the product of his industry was completely ripened, to be enjoyed by him. How often he himself had to fight to defend his cultivated fields against savage animals which attacked them; to guard or to fence them off; often perhaps to struggle for them even with danger to his life! And, for all that, how uncertain was the product of his labor for him; still, always, in the power of the weather and the season! A passing storm, a falling hail was enough, to yet rob him of the objective, and expose him to pitiless want. Thus, hard, unequal, and precarious was the lot of the farmer as opposed to the easy, peaceful lot of the shepherd, and the

soul in one must degenerate to a hardened substance through so much work.

Did it now occur to him, to compare this hard fate with the happy life of a shepherd, then he had to notice this inequality; he must—according to his sensuous way of conceiving—regard the former as a preferred favorite of heaven.

Envy grew in his breast; this unfortunate emotion had to develop among mankind at the first inequality. With

jealousy, he now viewed the blessings of the shepherd, who grazed peacefully opposite him in the shade, while the blazing sun pierced his own self, and work strained sweat out of his brow. The carefree happiness of the shepherd caused him pain. He hated him because of his good fortune, and despised him on account of his leisure. So he harbored a quiet anger against him in his heart, which had to break out into violence at the next provocation. However, this occasion could not be long in coming. Until this time, the right of each one still had no fixed limits, and no laws yet existed, which would have distinguished things of mine and yours from one another. Each one still believed he had an equal claim to the whole earth,



because the distribution in ownership was first to be forced through the arising collision. Now supposing, the shepherd had grazed all areas around and about with his herd, and also, however, felt no desire to camp far from his family in distant regions—what was he therefore to do? What must naturally occur to him? He drove his herd into the cultivated areas of the farmer, or at least, let it happen, that the herd itself took this course. Here, there was richer provision for his sheep, and there was yet no law which might restrain him. Everything that he could grasp, was his—so reasoned childish mankind.

Now, thus, for the first time, man came into collision

with man; in the place of savage animals, with which the farmer had to deal so far, now came man. The latter now appeared against him as a hostile beast of prey, who wanted to ravage his cultivated fields. No wonder, that he perceived him as exactly the species as he had perceived the beast of prey, which man now imitated. Hatred, which he had already carried in his breast long years, contributed to embittering him, and a murderous blow with the cudgel avenged him at once for the long good fortune of his envied neighbor.

Thus sadly ended the first collision of men.

Uplifted Social Equality

Several words of the original document allow us to conclude, that polygamy in those early times would have been something rare, and thus, in those days, it would have already become custom, to restrict oneself in marriage and to be content with *one* wife. Proper marriages, however, appear to indicate an already established morality and refinement, which in those early times one should hardly have expected. Usually, men only arrive at the introduction of order through the consequences of disorder, and lawlessness previously, generally, leads to law.

This introduction of proper marriages thus appears to have come to pass not so much through laws as by custom. The first man could not live other than in the married state, and the example of the first already had for the second an agreed force of law. With a single couple had the human species begun. In this example, Nature had thus made known her will, so to speak.

Therefore, if one assumes that in the very first times, the ratio of number between both sexes would have been equal, then in this way, Nature already regulated what mankind had not arranged. Each took only one wife, because only one remained for him.

Even if a considerable disproportion in the number of the two sexes finally appeared, and choices occurred, this order was already fixed in this way through observance, and no one dared to violate the ways of forefathers lightly through innovation.

Likewise, the marriage system would in and of itself set in place a certain natural rule in the society. Nature had established the authority of the father, since she made the helpless child dependent upon the father, and the child is accustomed to honor his will from a tender age. The son had to maintain this feeling throughout his entire life. Were he now also himself a father, his son, likewise, could not regard the person without reverence, whom he saw to be treated with such respect by his father, and keeping silent, he had to concede a higher authority to the father of his father. This authority of the

family males had to multiply itself in the same degree with each increase of the family, and with each succeeding generation of his elders, and the greater experience, the result of so long a life, had to give him, in addition, a natural superiority over everyone who was younger. The head of the family was thus the highest authority over every matter at issue, and through long observance of this custom, at last a natural, gentle, supreme authority established itself: the rule of Patriarchs, which, however, did not revoke a universal equality about it, but, on the contrary, established it.

However, this equality could not always continue. Some were less industrious; some less favored by good fortune and their soil; some were born weaker than others; thus there were the Strong and the Weak; the Brave and the Faint-Hearted; the Rich and the Poor. The Weak and the Poor had to beg; the Rich were able to give and to deny. The dependence of man upon men began.

The nature of things had to establish it, that those of advanced age be freed from work, and the young man take over affairs for the old man, and the son for the gray father. This duty of Nature soon became copied by design. The wish must have arisen for many, to combine the peaceful rest of the old man with the pleasure of the youth, and to get someone who henceforth would take on the duties of a son for him. His eye noticed the poor or weak man, who asked his protection, or laid claim to his excess. The poor and the weak needed his help; he, on the other hand, needed the industry of the poor. The one thus became the requirement of the other. The poor and the weak served and received; the strong and the rich gave and went idle.

The first distinction of classes. The rich man became richer through the industry of the poor; to increase his riches, he increased the number of his servants; he thus saw many around him, who were less fortunate than he; many depended upon him. The rich man had a sense of himself, and became proud. He began to confuse the instruments of his good fortune with the instruments of his will. The work of many occurred for the good of him alone; thus he concluded these many were to exist for his sake alone—he had only a small step to Despot.

The son of the rich began to seem better to himself than the sons of his father's servants. Heaven had favored him more than these; he was therefore dearer to heaven. He called himself Son of Heaven, as we call the favorites of Fortune "Sons of Fortune." Opposed to him, the Son of Heaven, was the servant only a son of man. From this came the distinction in *Genesis* between the children of Elohim and the children of man.

Good fortune led the rich man to idleness, idleness led him to lust, and, finally, to vice. To fill up his life, he had

to increase the number of his pleasures; already the ordinary measure of Nature no longer sufficed to satisfy the glutton, who in his indolent rest, pondered delights.

He had to have everything better and in richer measure than the servant. The servant still contented himself with *one* wife. He permitted himself more wives. Constant delight, however, dulled and bored him. He had to think of something to lift him up through an artificial thrill. A new step. He did not prefer what only satisfied the sensuous instinct; he wanted greater and more refined joys contained in pleasure. Permitted pleasures satisfied him no longer; his appetite now fell on the hidden. A wife alone no longer attracts him. He by this time demands beauty from her.

Among the daughters of his servants, he discovers beautiful wives. His fortune had made him proud; pride and security made him defiant. He easily persuaded himself that everything that belonged to his servants was his. Since everything depended on him, he therefore permitted himself everything. The daughter of his servant was too lowly as a wife for him; however, she was used all the same for the satisfaction of his lust. A new, important step of refinement, towards a change for the worse.

However, as soon as the example was once set in this way, the corruption of morals had to soon become common. Namely, the fewer laws of restraint it found, which would have been able to put a stop to it, the nearer the society in which this immorality arose still was to the state of innocence, the more rapaciously it had to spread itself.

The right of the strong arose; might empowered by repression, and, for the first time, tyrants appeared.

The document specifies them as Sons of Joy—as the illegitimate children, who were begotten in unlawful intercourse. Can one take this as literally true, then in this feature lies a great refinement that no one, to my knowledge, has yet explained. These bastard sons inherited the pride of the father, but not his goods. Perhaps the father loved them and gave them preference in his lifetime, but they were shut out and barred from his lawful inheritance as soon as he was dead. Ejected from a family into which they were forced by unjust means, they saw themselves alone and abandoned in the whole wide world; they belonged to no one, and nothing belonged to them; in those days, however, there was no other way of life in the world, as one had to be either a master, or the servant of a master.

Lacking being the first, they seemed to themselves too proud for the last; also, they were bred too comfortably to learn to serve. What were they supposed to do? The obscurity surrounding their birth, and strong limbs, were all that remained for them; only the memory of former

affluence, and a heart, which was embittered toward society, accompanied them in wretchedness. Hunger made them robbers; the fortune of robbers, adventurers; and, finally, even heroes.

Soon they became frightening to the peaceful farmhand, to the defenseless shepherd, and extorted from him, what they wanted. Their success and their acts of conquest made them notorious far and wide, and the comfortable abundance of this new way of life indeed made some join their band. So they became powerful, and, as the writings say, famous people.

This prevailing disorder in the first society were ended finally, probably, with order, and the equality adopted at one time among men led, from the patriarchal rule, to monarchy—one of these adventurers, more powerful and more daring than the others, had constituted himself as their master, built a strong city and founded the first state; however, still too early this phenomenon came into being that rules the destiny of the world, and a frightening natural occurrence suddenly stopped all steps, which the human species was to accomplish in the idea of its improvement.

The First King

Asia, abandoned during the Flood by its human inhabitants, soon had to fall prey to wild animals, which increased themselves rapidly and in greater number in so fertile a soil, as resulted from the Flood, and spread their domination there, where mankind was too weak to stop it. Thus, every tract of land, which the new human species cultivated, had to first be wrested from the wild animals, and to be further defended against them by cunning and force. Our Europe is now cleansed of these wild inhabitants, and we can hardly imagine the misery that had oppressed those times; however, as terrifying as this trouble must have been, let us, from several places in the document, conclude with the customs of the earliest peoples, and, above all, with those of the Greeks, who recognized immortality and the God-like dignity of the conquerors of wild beasts.

In this way Oedipus became the King of the Thebans, because he exterminated the ravaging sphinx; so gained Perseus, Hercules, Theseus, and many others, their posthumous fame and their apotheoses. Whoever labored in this way for the annihilation of these universal fiends, was the greatest benefactor of mankind, and, to be successful in it, he also had to really combine in himself exceptional gifts. The pursuit of these animals was, before war among men themselves began to rage, the proper work of heroes. Probably, this hunt was commenced in a great band, which the bravest always commanded, name-

ly that one, for whom his courage and his intellect afforded a *natural* superiority over the others. This one then gave his name to the most important of the battle deeds, and this name invited many hundreds to join his retinue, in order to perform deeds of bravery under him. Since these hunts had to be undertaken with certain well-planned logistics, which the commander designed and directed, through that planning, he thus quietly placed himself in a position to allot to the rest their roles and to make *his* will into that of theirs. One became imperceptibly accustomed to achieve results for him, and to submit to his better judgments. Had he distinguished himself through deeds of personal courage, through boldness of spirit, and strength of arms; awe and admiration worked to his advantage, so that, in the end, people blindly accepted his leadership. If quarrels now emerged between his hunting companions, which among such a numerous, rough, hunting band, could not fail to appear for long; thus was he, whom all feared and honored, the most natural judge of disputes, and the reverence and awe of his personal bravery was enough, to give his pronouncements force. A commander-in-chief and judge thus already arose out of a leader of the hunting bands.

Were the spoils now divided, the greater portion, in all fairness, had to fall to him, the leader, and since he did not consume such for himself, he thus had something with which to bind the others to him, and could therefore attract followers and companions. Soon a number of the bravest men assembled themselves, whom he always, through new good deeds, sought to multiply around his person; and, unnoticed, he had created out of it a type of *bodyguard*, a band of Mamelukes, which supported his arrogance with wild zeal, and through their number, struck terror into anyone who was willing to oppose him.

Since his hunts became useful for all landowners and shepherds, whose borders he cleansed of ravaging beasts, in this way, it was possible, initially that a freely-given gift of the fruits of the fields and the herd would have been offered to him for this useful work, which he later allowed himself to seek as an earned tribute, and, finally, extorted as a debt and a duty-bound offering. These acquisitions he also distributed among the most able of his band, and that way always further enlarged the number of his followers. Since his hunts more frequently led him through pasture and fields, which suffered damages in these passages, many landowners found it for the better to pay off this obligation in advance through a voluntary gift, which he subsequently collected in the same way from all others whose he *could* have damaged. Through such and similar means, he increased his riches, and through these, his following, which, finally, grew to a small army,

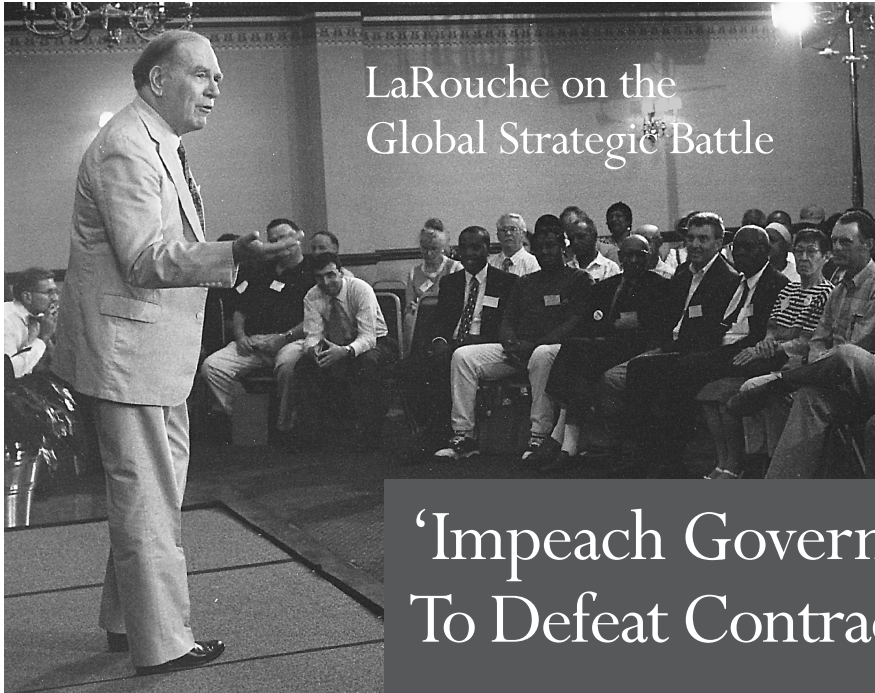
which was all the more frightening, because it had hardened itself toward every danger and task in battle with the lion and tiger, and through its rugged handiwork, was turned wild. Terror now arose from his name, and no one would any longer dare to refuse a request from him. Did disputes occur between one of his band and one of foreign parts, so the hunter naturally appealed to his leader and protector, and the latter learned in this way to spread his jurisdiction also over things which did not concern the hunt. Now he lacked nothing more from being a king than solemn recognition, and could one well deny him this, at the head of his armed and imperious troops? He was the most fit to rule, because he was the most powerful to enforce his commands. He was the universal benefactor of all, since one was in debt to him for peace and security in the face of the common enemy. He was already in possession of the authority, because the mightiest were at his command.

On a similar model, the ancestors of Alarich, Attila, and Meroveus came to be kings of their peoples. It was exactly this way with the Greek kings, which Homer shows us in the *Iliad*. All were first leaders of a fighting band, conquerors of monsters, benefactors of their nations. From the fighting chiefs they became, little by little, arbitrators and judges; with the plunder gained, they bought themselves a following, which made them powerful and terrible. Finally, through might, they raised themselves to the throne.

There is the example of Dejoces in Media, to whom the people freely assigned the kingly title; subsequently, he had made himself useful to the same as judge. However, one is wrong to apply this example to the emergence of the *first* kings. When the Medes made Dejoces their king, they were already a *people*; already formed a political society; in the previous case, on the contrary, the first political society was supposed to be established through the first king. The Medes had borne the oppressing yoke of the Assyrian monarchs; the king, of whom we are now speaking, was the first in the world, and the people that submitted itself to him, a society of freeborn men, who had up to that time experienced no dominion over themselves. A dominion already formerly endured can very well be *reestablished* in this peaceful way; however, a totally new and unknown one can not be installed in this peaceful way.

Thus, it appears more appropriate to the way things happened, that the first *king* was a usurper, who was put on the throne not by the free, unanimous call of the nation (because there was still no nation then); but rather, by might, and Fortune, and a ready militia.

—translated by Anita Gallagher



EIRNS/Stuart Lewis

‘Impeach Governor Ridge To Defeat Contract on America!’

Lyndon H. LaRouche, Jr., keynotes EIR seminar, “It’s the Financial System, Stupid!”

first thing you have to do is to get the troops out of their barracks.

Attack on Axioms

LaRouche explained that his attack is not on specific issues, but on *axioms*. “People don’t have opinions; opinions have them!”

To solve a political problem, such as why people tolerate the Nazi-like policies of Tom Ridge, we have to find the

Presidential candidate and economist Lyndon H. LaRouche, Jr., was the keynote speaker at a July 17 *Executive Intelligence Review* seminar in Washington, D.C., entitled, “It’s the Financial System, Stupid!”

Attending the invitation-only seminar were 120 people, including former U.S. Congressmen, current and former state legislators, diplomats and political leaders from nations in Africa, Europe, and Ibero-America, members of the press, and representatives of trade union, religious, and Civil Rights organizations from the Washington, D.C. area.

LaRouche’s subject was the “global, strategic” battle that is taking place in Pennsylvania, created by his call for the impeachment of Gov. Tom Ridge for Nazi-like crimes against humanity.

Cross the River

In outlining how he had chosen Ridge as his target, LaRouche pointed to the example of 1793 France, overrun by enemy armies that were victorious on every front. Military defeat was inevitable, said LaRouche, until Lazare Carnot reorganized the French military, firing major generals who had committed two “terrible crimes”: They failed to cross the river during the night, and



EIRNS/Donald Mallory

Philadelphians rally to impeach Pennsylvania Governor Tom Ridge for Nazi-like crimes against humanity, July 1996.

spent too much time in the barracks.

Rather than confronting the enemy on a broad front, Carnot focussed the military power of France on specific points, to turn the flank of the enemy and rout him.

That is exactly what we’re doing in Pennsylvania, LaRouche said. In order to ensure that the Democrats win the House and Senate in November, and to defeat the “Contract On America,” the

axioms, like Socrates in a Platonic dialogue. We must “smoke out the axiomatic assumptions that control people.”

The things in your mind control you, he said, precisely because you are unaware of them. “Think about the way you think,” he challenged the audience. When faced with an event, you will evoke a proposition in one way or other, and say, how shall I respond to this? You articulate a response; that’s a proposition. But you’re

not necessarily wedded to it. If you take the responsibility to examine what you really want to do, and act on it, then it becomes a theorem. You say, “Does this proposition pass the test?” Should you correct what is to become a theorem, you end up with an opinion, a considered opinion, which decides how you would act.

But, now step back and examine this, said LaRouche. You don’t respond to events, to reality. Your assessments are controlled by beliefs that are largely hidden from you. This is responsible for every decision you make. This is what controls you; it’s like puppets and puppet strings. You’re controlled by your axioms, your postulates, your definitions.

The progress which mankind has made over the centuries, LaRouche said, is based precisely on the fact that man can free himself from this process. He’s not just a jackass who has to be exactly like his father, and his father before him. If human beings behaved like this, like Prince Philip, like a higher ape, they would make monkeys of us all!

However, LaRouche said, we *can* examine beliefs. The process of scientific and technological innovation is a *violation* of what your father and grandfather did. It is the process of discovery, which sets us above Prince Philip. The basis for that process is described in *Genesis* 1:26-30—man is created *in the image of God*.

Impeach Tom Ridge

LaRouche reviewed the evidence against Ridge: “This is not an act of first impression. We have to impeach Ridge for crimes for which Nazis were indicted, sentenced, and executed at Nuremberg. This is not an analogy. This is a real, honest, God-fearing crime.”

“This man, under the pretext of balancing the budget, with other resorts at hand, set out to kill people, knowing that this would kill people. He has targeted a group of 220,000 relatively helpless people in the Commonwealth of Pennsylvania, for withdrawing of their medical cards, which would cause, according to the best estimate, 3,500 deaths within the first six months.”

If you actually get Ridge impeached, LaRouche said, this will change the national elections. He pointed to the fact that Dole was then seriously considering

733 State Representatives Sign LaRouche Exoneration Call

Support in the United States for the exoneration of Lyndon H. LaRouche, Jr., has reached unprecedented proportions, as 733 current and former state representatives of both major political parties had, by Aug. 3, signed an open letter to President Bill Clinton, calling upon him to exonerate Lyndon LaRouche. This represents approximately ten percent of the number of elected state representatives in the nation.

States in which more than ten legislators have endorsed the Open Letter, include: Alabama (29), Arkansas (17), Connecticut (14), Idaho (17), Indiana (12), Kansas (12), Kentucky (14), Louisiana (17), Maine (12), Michigan (19), Mississippi (60), Missouri (10), Montana (37), New Hampshire (52), New Mexico (25), North Carolina (21), North Dakota (37), Oklahoma (14), Pennsylvania (20), Puerto Rico (20), South Carolina (25), South Dakota (23), Tennessee (32), Utah (17), Vermont (19), West Virginia (16), and Wyoming (13).

In addition, the call has been endorsed by 29 former U.S. Congressmen, 415 elected municipal and county officials, 60 U.S. religious leaders, 300 human rights and community leaders, and over 160 trade union and farm organization leaders.

Internationally, signators include three former heads of state, including former Presidents Arturo Frondizi of Argentina and Manuel Solis Palma of Panama, and other leaders, such as former Prime Minister Dr. Abdelhamid Brahimi of Algeria; Dr. Jozef Mikloško, former Vice Prime Minister of former Czechoslovakia; Prof. Dr. Hans R. Klecatsky, former Justice Minister of Austria; Yao-Tung Chao,

Minister of Economic Affairs, Taiwan; and Mounir Chafiq, Chairman of the Islamic World Organization for Human Rights in Amman, Jordan.

Federal Judge Denies Habeas

Despite this growing movement for exoneration, on July 26 U.S. District Court Judge Richard L. Williams refused to overturn the fraudulent conviction of LaRouche associate Michael Billington in the Commonwealth of Virginia. Ignoring all evidence presented in a two-day hearing in May, in which Billington proved he was denied a fair trial, the judge instead launched a venal attack on LaRouche, and anyone associated with him.

“Billington wished to make his trial a platform to defend and extol the virtues of various LaRouche entities and LaRouche himself . . .,” Williams blathered in his opinion.

Contrary to this politically motivated ruling, Billington proved at the May hearing that he was denied his constitutional right to a lawyer, while other evidence presented at the hearing showed that his lawyer’s trial performance was so poor, that he agreed to let the prosecutor present false evidence, which helped lead to Billington’s conviction.

Other documents showed that prosecutors withheld exculpatory evidence during the trial—but in January, Judge Williams refused to hear evidence of prosecutorial misconduct.

Billington and four other LaRouche associates—Anita and Paul Gallagher, Laurence Hecht, and Donald Phau—remain incarcerated in Virginia. Mr. Billington is serving a sentence of seventy-seven years.

Ridge, a mass-murdering criminal, as his vice-presidential running-mate.

LaRouche discussed the policy of putting a tax on speculative financial

transactions, which has been introduced in Pennsylvania’s Legislature, as a real solution to the budget deficit—one which won’t kill thousands of people.

Schiller Institute Delegation Visits China

Helga Zepp LaRouche Addresses Development

Helga Zepp LaRouche, founder of the Schiller Institute and wife of Lyndon H. LaRouche, Jr., led a delegation to the International Symposium on Economic Development of the Regions Along the New Eurasian Continental Bridge, held in Beijing, China, May 7-9.

The symposium, attended by approximately 400 delegates from 34 countries and 13 international organizations, was organized by the State Science and Technology Commission, the State Planning Commission, and the Ministry of Foreign Trade and Economic Cooperation of the People's Republic of China. The United Nations Development Program, World Bank, and Asian Development Bank were among the sponsors.

On May 8, Mrs. LaRouche was an official speaker at one of three day-long conference workshops, on "Trade and Economic Cooperation in the Eurasian Continental Area." She spoke on "Building the Silk Road Landbridge: The Basis for the Mutual Security Interests of Asia and Europe." There is no real "clash of civilizations," she said; "There is no such contradiction among world cultures, that cannot be overcome." She outlined the program of her husband, Lyndon LaRouche, for Eurasian development, and his campaign since 1988, to realize this policy for reconstruction of the world economy. Her speech was reproduced for distribution to the entire conference.

Other delegates accompanying her were Jonathan Tennenbaum and Mary Burdman, of the German Schiller Institute. Dr. Tennenbaum was an official speaker at a conference workshop also, on "Infrastructure Facilities Towards the Eurasian Continent."



Schiller Institute

Right: *Helga Zepp LaRouche leaves podium after addressing the "Trade and Economic Cooperation" workshop of the Beijing conference.*

Above: *Mrs. LaRouche addresses an audience of professors and students.*



Schiller Institute

The impact of the Schiller Institute presence, was made clear on the last day of the conference. In the concluding general meeting, reports were given on the three programs of the day before. The rapporteur on the "Trade and Economic Cooperation" workshop told the assembled 400 delegates: "We had many helpful suggestions on the conference. . . . One was that there should be more contributions by women. It was the sense of the leaders of our workshop, that the best contributions were by women. These included the president of the Schiller Institute, and the director of the Development Research Center of the State Council."

The clash between the policies of the British Empire, and its emanations such as the United Nations and World Bank, and the commitment of nations like China and Iran, to build the Eurasian

Landbridge, was made clear from the first day of the conference. This was shown by the differences between the speeches of the many Chinese national and provincial officials, emphasizing their economic achievements and commitment to further development, and a proud speech from the Iranian Foreign Ministry on his nation's new silk route, and the nasty lectures delivered by Sir Leon Brittan, demanding that China toe the imperial line on the World Trade Organization and the free market.

Mrs. LaRouche and the Schiller Institute delegation also were able to discuss with other institutes and groups

Conference in Beijing



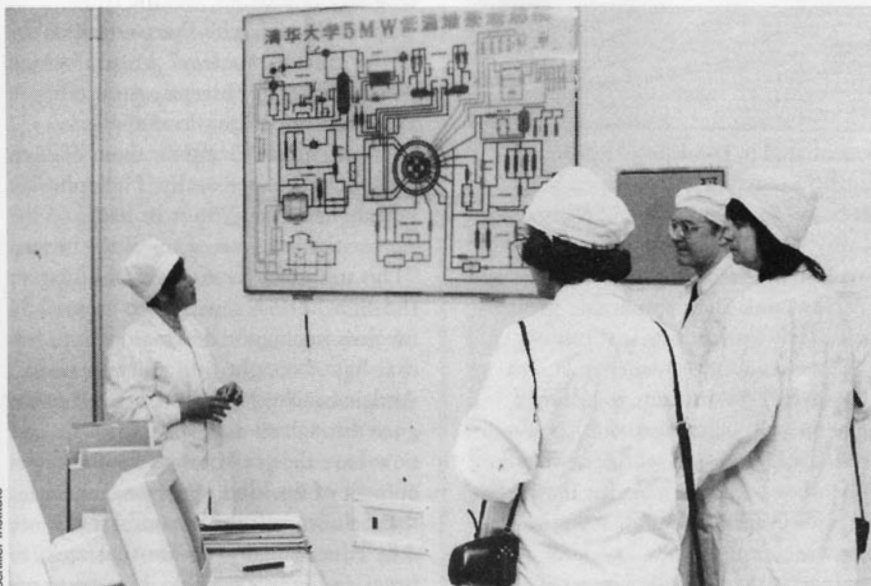
Schiller Institute

Visiting a farming village in Hebei province: center, Mrs. LaRouche; right, Mary Burdman.

in Beijing, many issues, ranging from the world financial crisis, economic development, LaRouche's role in the United States and Russia, to the importance of Nineteenth-century German poet Friedrich Schiller in the current world breakdown crisis. The delegation visited the site where China—alone of all the nations in the world—is building

an experimental HTR nuclear reactor, and made a visit to a farming village outside Beijing, where they spoke with local officials and were welcomed into two farmers' homes.

Mrs. LaRouche's commentary, "China, Twenty-Five Years Later," appears on p. 88 of this issue.



Schiller Institute

At the nuclear energy insitute of Qinghua University, where an experimental HTR reactor is under construction. Delegation (right): Mary Burdman, Jonathan Tennenbaum, Helga Zepp LaRouche.

Mexican Forum Mobilizes Against I.M.F.

Delegates to the Fifth "There Is Life After the Death of the I.M.F." National Forum, held July 19 in the Mexican city of Hermosillo, Sonora, resolved to organize a continent-wide mobilization against the International Monetary Fund to be held Oct. 12.

The resolution, adopted by 220 delegates, calls upon every nation in the Americas to support the "LaRouche plan," also known as the Emergency Bill for the Bankruptcy Reorganization of the Economy, which has already been introduced into the Congress of Mexico and the Congress of Argentina.

'Crimes Against Humanity'

The delegates also resolved to mobilize international support for the effort to impeach Governor Tom Ridge of Pennsylvania for "crimes against humanity," and to back a bill introduced into the Pennsylvania State Legislature to tax the sale and transfer of financial securities.

They also pledged to press for the exoneration of Lyndon LaRouche, and for the release of the five of his associates who are political prisoners in the Commonwealth of Virginia; to reaffirm their call for a Nuremberg Tribunal to bring the I.M.F. to trial for the crime of genocide; to reiterate their demand for an emergency program of public works to stave off imminent famine in Mexico; and to support the Latin American Bishops' conference (CELAM) condemnation of the foreign debt as illegal usury.

Schiller Institute Promotes Classical Curriculum Education Hearing in Russian Parliament

On May 21, the Education Commission of the Duma (the Parliament of the Russian Federation) convened a half-day hearing in Moscow on “Education and National Security.” Over 430 experts and representatives came, from regional governments across Russia.

The Schiller Institute was the only non-Russian organization invited to address the hearings. Institute representative Anno Hellenbroich of Germany, was the seventh speaker, following government ministers, commission chairmen, and rapporteurs. He discussed shaping education according to the Classical principles of the Humboldt education reforms of Nineteenth-century Germany. Organizers of the hearing had invited the Schiller Institute to participate, because they knew that in the years since its founding by Helga Zepp LaRouche, the Institute has become a leading independent source of ideas in the fight for human civilization, for the dignity of the individual, for human rights, and for education.

Mrs. LaRouche submitted a paper for the hearing entitled, “Education and National Security: The Moral-Philosoph-



Schiller Institute spokesman Anno Hellenbroich conducts a rehearsal of the J.S. Bach “St. John’s Passion,” in preparation for an Institute performance, Wiesbaden, Germany, March 1996. Mr. Hellenbroich, the only foreign guest to address the Russian Duma education hearings, spoke on “Classical Curriculum and Socratic Dialogue.”

ical Foundations of National Economy,” which, with Hellenbroich’s address on “Classical Curriculum and Socratic Dialogue: An Answer to the Challenges of the Twenty-first Century,” was included in the written proceedings.

As a concept for “education and national security,” the Schiller Institute

presentation focussed on the development of Eurasia as a common goal for all humanity. Crucially important for this undertaking, is the Platonic method of hypothesis-formation. Students must become conversant with all the main human “languages”: spoken language, the language of hearing, and the language of vision. Hellenbroich’s sharp attack on the “information society” utopia which George Soros is currently promoting in Eastern Europe, drew loud applause.

Then, summarizing the thesis of Zepp LaRouche’s paper orally, Hellenbroich said that education must be based on the proper transmission of universal history: “This transmission of universal history in the Schillerian sense, thus primarily involves tracing the development of ideas that have brought humanity forward.” And, in conclusion: “Once the student has gone through all these disciplines, . . . we now have the prerequisites for the development of the kind of personal character that Schiller calls the ‘beautiful soul.’ . . . Any educational program that seeks to foster, in the best possible way, the sovereign nation-state, as well as the creative abilities of its citizens, must be oriented toward these ideals.”

Schiller Institute Established in Poland

The Schiller Institute held its founding meeting on April 20 in the Polish capital of Warsaw, after officially registering in early February with the Warsaw Associations Tribunal. The Institute’s board and review committee were elected, as was its chairman, Anna Kaczor.

The Schiller Institute then conducted twelve seminars over a span of eight days, involving a total of 300 participants, including parliamentarians of various parties, elements of the Solidarnosc trade union, and representatives of political parties and universities.

The Schiller Institute delegation

was invited to speak by three branches of Solidarnosc: the Upper Silesia trade union for mining and energy in Katowice, the Solidarnosc group at the Polish Academy of Science in Warsaw, and the comparable group at Warsaw Polytechnic Institute.

The Economic Academy in Cracow invited the Institute to lecture on Lyndon LaRouche’s textbook, *So, You Wish To Know All About Economics?*, which has been available for the past year in a Polish edition. The same lecture was repeated a few days later, at a seminar at the Catholic University of Lublin, in which sixty students and members of Solidarnosc participated.

‘Music Manual’ Released in Rome, Milan

On June 9 in Rome, Italy, at the main auditorium of the Pontifical Institute for Sacred Music, the book *Canto e diapason* (*Singing and Standard Pitch*), was released. The book, written by several authors at the initiative of Lyndon LaRouche, was originally published in the United States by the Schiller Institute in 1992. The Italian edition was edited by the Schiller Institute of Germany, and published by the Casa Editrice Carrara, a publishing company in Bergamo, Italy. A similar conference had been held May 29 in Milan.

Canto e diapason demonstrates, with more than 1,000 examples drawn from the Classical repertoire, that the correct standard pitch for the human voice is the one which corresponds to a middle-C of 256 Hz (full vibrations per second). The Italian composer Giuseppe Verdi, in 1884, promoted a decree which established a concert A of 432 vibrations, calculated on the basis of that middle-C. The Schiller Institute has promoted a return to that pitch, and more than 2,000 singers from all over the world, from Plácido Domingo to Mirella Freni, have supported the initiative.

At the June 9 event in Rome, baritone Renato Bruson gave examples of the difference between the “Verdi tuning” and today’s ultra-high tuning, by performing passages from a Verdi aria, “O dei verd’anni miei,” from the opera *Ernani*, first with an A pitched at 445 Hz, and then with the “Verdi A” of 432 Hz. “With A=432 you can already hear the difference in the delicacy of the sound,” said the famous baritone.

Project co-editor Liliana Celani of the Schiller Institute, explained that the *Canto e diapason* manual was designed to provide a framework for work in the conservatories. The revolutionary hypothesis on which the book is based, is that vocal registers defined by C=256 are reflected in the intonation of Classical poetry, and hence in music, as a derivation of poetry. The great composers were aware of this, and wrote by respecting and utilizing the vocal-instrumental registers.

Right: Italian edition of the Schiller Institute’s “Manual on Tuning and Registration,” features Italian composer Giuseppe Verdi on its cover.

Below: Soprano Antonella Banaudi demonstrates arias sung at C=256 Hz, versus today’s ultra-high tuning, at the Milan conference. Seated at right are editors Liliana Celani and Arturo Sacchetti.



EIRNS/Andrew Spannaus

Maestro Arturo Sacchetti—the other project co-editor of the Italian edition, who is the former artistic director of Radio Vatican—explained why he had given the preface the polemical title “A Lost Battle?,” with a question mark at the end. The reason was the distressing indifference shown by the presumed experts, i.e., by the artistic directors and non-singer musicians, regarding the problem of the pitch.

Professor Francesco Marsili Felician-geli, a neurologist and speech therapist, who was formerly a successful singer under the stage name of Bruno Landi, intervened on the topic, “Pitch and Health.” He explained that C=256 is the

frequency at which human DNA is tuned. The 256 nanometers of DNA correspond to the 42nd octave above 256 cycles. “The first vital step for molecular biology,” the Professor said, “is C=256, both for the DNA helix and for the musicality of the genesis of life. The singer has a natural tuning, or else pathological processes will enter in.”

A brief message was read to the conference from Lyndon LaRouche, who inspired the initial writing of the Manual. He stressed the unity between art and science, comparing Bach, Mozart, and Beethoven’s musical creativity to fundamental discoveries in physical science.

China, Twenty-Five Years Later

It should not be surprising, that the picture that Western “studies” and media reports paint about China, has little to do with the real historical processes going on in this country, whose culture is one of the cradles of humanity. Twenty-five years after my first visit, I have just visited the People’s Republic of China for the second time. I believe that the comparison of the situation, then and now, says more about the reality of the situation in the “Middle Kingdom,” where one-fifth of humanity lives, than all the widespread reports about China.

When I first visited China in summer 1971, the Cultural Revolution was in full swing. The Gang of Four dominated politics, the Red Guards had done everything possible to drown China’s ancient cultural heritage in red paint, and the intellectuals were considered “class enemies” who had to be re-educated through physical labor in the countryside or in cadre schools. Among the strongest of my impressions, were the propaganda and the revolutionary Beijing Operas which were blasting from ever-present loudspeakers.

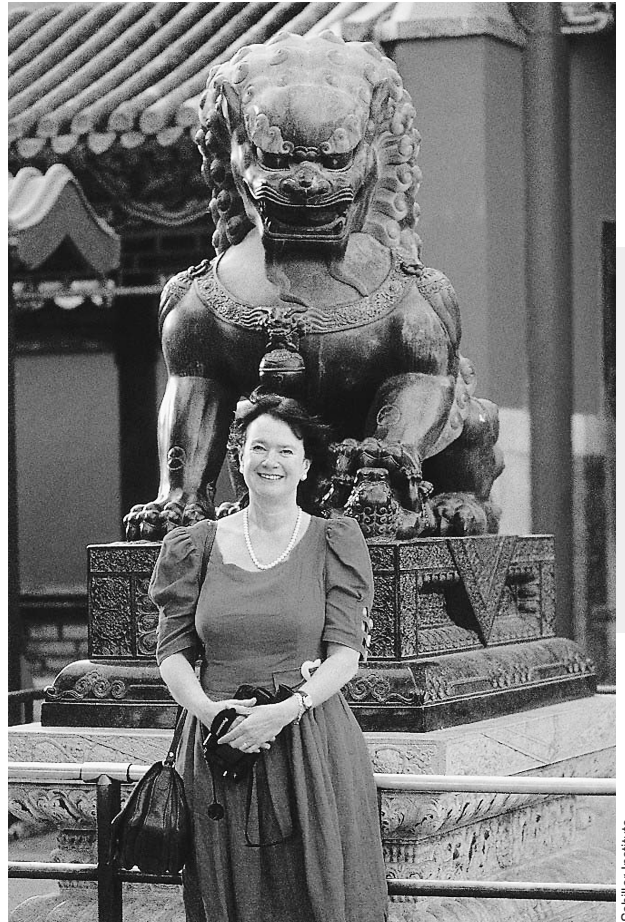
China, which Leibniz called, with Europe, one of the two poles of civilization, lived through one of the darkest chapters of its 5,000-year history. As a young journalist, I was one of the first Western visitors who could visit China after years of isolation. When I just now returned to Beijing at the beginning of May, to participate in the International Symposium on Economic Development of the Regions Along the New Eurasian Continental Bridge, I felt, during the first days, like a traveller in a time machine. Beijing was hardly recognizable. Of course, I had been hearing and reading numerous reports about the impressive development of China, but only this personal comparison enabled me to find the expression which these reports omitted: There is no country in the world, which has seen such a dramatic change in the past twenty-five years, not only in vast parts of the country, in economic terms, but also

psychologically!

The comparison to Germany between 1945 and 1970 struck me. Even if China is, certainly, still governed by communist structures, fear and paranoia in the population had given place to a kind of calm optimism, and a very different dimension of the culture of the country, besides communism, became evident.

The enormous optimism and the will to develop, alone, which were expressed by the Chinese side at the symposium, were impressive. While the title of the conference already contains the concept of “development corridors,” as proposed by Lyndon LaRouche, several provincial governors said explicitly, that the aim of this program was not only the infrastructural integration of Eurasia, but also that the inner and western regions of China had first to be brought to the economic level of the developed east of the country, and then to a world level. This thought alone represents the exact opposite to that of the Gang of Four.

Beyond the economic component, the chairman of the symposium, State Councillor Song Jian, emphasized the great, civilizing effect which the building of the Silk Road has represented for the development of humanity for 2,000 years. According to Song Jian, when the first land corridor connected Europe, Africa, and Asia, during the reign of Emperor Han Wu of the Han dynasty, when commercial camel transport crossed the mountains and travelled



Schiller Institute

across China, and Central, South, and West Asia, to Europe and North Africa, these contacts laid the seeds of civilization and friendship along the Silk Road. According to Song Jian, the new Continental Bridge, also, should not be regarded only as a transport line, but also as an important connection for the exchange of goods and technology, cultural communication, and friendships among the peoples of Euro-Asia.

The worth of this kind of political approach, cannot be overestimated. The contrast to the evil geopolitical theses of Samuel Huntington, about the alleged “looming clash of civilizations,” is obvious. Huntington today is on the spiritual level of the Cultural Revolution: “Let the foreign devils kill each other!” was the rallying cry then; now, it is the essence of his “study” today.

British Sabotage Efforts

Despite the effort from the side of the British faction, through the European Commission, and especially Sir Leon Brittan, to delay and sabotage this symposium, and finally, when all these tactics failed, to force the programmatic perspective of the Continental Bridge into the vise of British free-trade politics, by, at least, integrating it into the framework of the March Asia-Europe Meeting in Bangkok, this conference

Schiller Institute founder Helga Zepp LaRouche reports on her return visit to China, and of her experience of this vast nation's optimism and will to develop

represents an historical breakthrough.

Now, with the establishment of the New Eurasian Continental Bridge, the issue is on the table, and, at least, ratified as government policy by the government of China: this, which might be called *the* project of the Twentieth century, which the British-dominated oligarchical faction has already started two world wars to prevent. Since the times of French Foreign Minister Gabriel Hanotaux, Georg von Siemens, Count Sergei Witte of Russia, and Dr. Sun Yat-sen, the father of modern China, at the turn of the Twentieth century, it has been clear that the economic and cultural integration of the Eurasian continent is the decisive step needed to overcome the oligarchical system and its imperialist and colonialist variations.

The geopoliticians around Karl Haushofer, Houston Stuart Chamberlain, and Halford Mackinder have, since that period, been painfully aware of the danger that successful national economic cooperation, on the basis of community of principle, would render British balance-of-power political manipulation ineffectual, and make the British empire irrelevant. The potential for such cooperation was demonstrated through the

construction of the Berlin-Baghdad Railroad and the railroad from Paris to Vladivostok.

Edward VII used all his evil energies, first as Prince of Wales, and later as King, to destroy this potential cooperation, through the anti-German Entente Cordiale, and later the Triple Entente, the Russo-Japanese War, and wars in the Balkans, until, finally, the chessboard had been set up for World War I. The larger portion of the tragedies of the Twentieth century, including two world wars, were the result of these British policies.

Now, at the end of this century, China is the country which, more than any other, has made the expansion of the Continental Bridge its state policy. This year, the government integrated the expansion of the Continental Bridge into the Ninth Five-Year Plan of National and Economic and Social Development, and the Long-Term Targets for the Year 2010.

Rich Culture, Complex History

But, is not China ruled by the last important communist dictatorship? Does not China represent the biggest military threat of the future? Did not Lester Brown, of the Worldwatch Institute, recently say, that the earth's food chain is threatened by so many Chinese?

Perhaps the picture becomes clearer, if one takes the following into consideration: Like Germany, China is a country with a very rich culture, and very complex history. Some of these problems are, so to speak, home-grown, i.e., they result from Chinese or German philosophical tendencies; others are the result of universal conflicts of history. Yet, if you study universal history, in its entirety, it emerges that the only thing that matters, is whether the axioms that underlie the thinking and direction of politics, are such as characterize a developing society, or a society destined to destruction.

Even if it perhaps shocks the reader: From this standpoint, one can only draw one conclusion from the lack of cultural optimism in the United States today, as compared to thirty years ago, and the lemming-like tendency towards self-destruction of the Europeans: The West,

the United States and Europe, but also Russia, are on a course that is taking them to their own deconstruction. China, on the other side, is developing itself in a direction, that is striving to build, and to overcome backwardness, and which even has the potential to enable China to, once again in its long history, make a universal contribution.

The ten years of the Cultural Revolution, one part of which I experienced in the summer and autumn of 1971, was a time of waves of open denunciations, kidnappings, and lasting terror against intellectuals, "pessimists," "Party enemies," and "reactionary elements," who wanted to "institutionalize capitalism" in China.

First Mao personally, and then the Gang of Four, had given free rein to the Red Guards, the radicalized Maoist youth, to go after the alleged dissidents and class enemies. Art treasures from the old China, and foreign representatives of world literature, were considered equally reactionary, and often fell victim to blind destruction. Sending scientists and highly qualified workers to work camps and the countryside, meant an immense waste of productive resources.

At the time, I visited Shanghai, Qingdao, Tianjin, and Beijing, and from these cities I was able to make a number of excursions into neighboring areas. I visited some industries and workshops, housing areas for workers, some of the then-famous children's palaces, several villages, schools, kindergartens, and performances of the revolutionary Beijing Opera.

In many personal discussions, people reported to me—many of them older people, especially in Shanghai, who spoke German or English—about their experiences and the conditions which had existed before the foundation of the People's Republic, and the improvements which had taken place since then. At times, an old man or woman telling me this, would have tears in their eyes.

The streets in the cities were dominated by huge numbers of bicycles, rickshaws, but few cars. The apartments in workers' housing areas, with one or two rooms, had to shelter families of three generations. Many houses in the coun-

tryside had dirt floors, and were heated by ovens, which extended from the kitchen to the bed. Usually there was no electricity or running water.

Today, the cities such as Beijing or Shanghai give the impression of a huge construction site. There are already a large number of modern buildings, business centers, banks, and housing areas. During rush hour, there are traffic jams no smaller than in other big cities of the world. The number of cars is the same as bicycles, and many of the roads in and between the cities have been expanded, and, in some parts, they are comparable to modern highways in Europe. Investment in agriculture during the past years has led to sometimes impressive increases of productivity. Also in the countryside, roads are being built everywhere. New villages with much better houses have been built, which now, often, have central heating and running water.

But, perhaps the most telling difference, is the changed psychology of the population. They express a calm determination to go forward, and a will to never again let such catastrophic events happen, as did during the Cultural Revolution.

The experience of the extreme deconstruction of those ten years, has brought about a shock which could perhaps be compared to the experience of the collapse in Germany in 1945. One should add, that there are Chinese intellectuals today who compare the rule of the Gang of Four with the "Gang of the Führer" of the Nazis. However, while Germany, through the policies of "re-education," was not allowed to find the way back to the roots of its own positive culture, the German classics, but rather had Anglo-American values forced upon them by diktat, at least part of the Chinese elite have found their way to the more profound foundations of Chinese culture. Confucian thought is reflected in many political examples.

The Confucian Concept of 'Li'

Confucius (born 551 B.C. in the southwest of today's Shandong Province) himself lived in a time of profound social change. He opposed the despotism and arbitrariness of his time, with a moral teaching whose highest aim was a

reconstruction of society out of chaos. For Confucius, the society of his time had left the right track, and was without a *Tao* (a path). The destruction of the previously valid rules of human society, the attack on traditional authority from below, and the decay of order; all this Confucius tried to work against. He thought that there was correspondence between cosmic and human order, a conception which is coherent with Platonic natural law. "It was Heaven which brought about the moral forces, which are in me," he said.

The idea of correspondence between cosmic and earthly order became a lasting foundation of political culture in China.

A central notion of Confucianism was *li*, which demanded that one had to fulfill the place one has in society. Acting according to *li*, is a precondition for the ordering of the social cosmos. It also means that society should not allow any break between past and present; it is the expression of being human, of cultured humanity. "The virtuous man knows his duties, the lower order only sees his own advantage."

For Confucius and Confucianism, therefore, the position of the individual depended on the grade of his or her moral perfection. As for Nicolaus of Cusa, it was not birth or family relations that determined rank in society, but rather morality and way of life. In addition, every individual has to perfect himself morally through the acquisition of knowledge.

The moral quality, *jen*, which means humanity, or "love of man," defines a whole scale of behavior. *Jen* and *li* also give man the duty to take care of the well-being of his own people. Confucius demanded that morality and power form a unity. These thoughts, which can only be sketched here, put Confucius within the highest order in the history of humanist thought.

Mencius vs. Mo-zi

Mencius, born about a hundred years later, who developed Confucius' ideas further, led the fight against the ideology of Mo-zi (Micius), and of Mohism, which is named after him. This is the idea that every individual is only trying

to maximize his own benefits, including at the cost of others. According to Mencius, the orientation to "benefits" was preventing the unity of society. Mencius was deeply convinced that the world could be brought into order, only on the basis of Confucian values. Like his teacher, Mencius' thinking was also characterized by deep cultural optimism. The nature of man is good, therefore also the world can become good.

There is no doubt, that there is a real elite in China, which is thinking about the problems confronting the world today, on the basis of this philosophy. On the basis of Confucian and neo-Confucian thinking, both the nation's own history and the problems of the world are considered. Thus, Mencius' rejection of Mo-zi represents a point of departure against the negative effects of free trade.

Representatives of this elite are convinced that a society in which every individual is only running after material values and only wants to maximize his personal benefit, will lose control over civilization. One asks, what should the meaning of civilization be, in the coming century? If the presently dominant philosophy of the West would simply be expanded worldwide, humanity falls into catastrophe.

Therefore, there is consideration of how to redefine the notion of wealth, from the standpoint of common well-being, and also, how a new international system of law and a new parliamentary system can be created.

Representatives of this elite, are convinced that something must urgently be done to change the course of the world, and that a new civilization has to be created, which will allow a real dialogue between the cultures of East and West for their mutual benefit. China is ready to bring into this dialogue, the entire wealth of its old Classical culture, of which not least is the beauty of its art, which is of such value for society.

In conclusion, I want to say, that my travel to China twenty-five years later, is among my most rewarding experiences. Schiller and Leibniz would agree with me when I say: If it is China that thus takes the cause of humanity forward, so be it!

—Helga Zepp LaRouche

The Hon. Harold James,
 Pennsylvania House of Representatives

‘The government is
 supposed to be *for* people’

Harold James (D) has served in the Pennsylvania House of Representatives since 1989, and is currently chairman of the state’s Legislative Black Caucus. Born August 7, 1942, he received the Good Conduct medal while serving in the U.S. Army, and the Valor Award while serving as a police officer in Philadelphia from 1965 until his retirement in 1987.

As a police officer, he worked against racial discrimination and injustice. In 1972, he helped form the National Black Police Association, and became its chairman in 1976. In 1977, he became president of the Guardian Civic League in Philadelphia.

This interview was conducted by Phil Valenti on July 25, 1996.

Fidelio: Last year, the National Black Caucus of State Legislators (N.B.C.S.L.) passed a resolution calling for a Congressional investigation of corruption in the Department of Justice, charging the D.O.J. with political targeting of Black elected officials, and Lyndon LaRouche, among others. Do you believe there is a conspiracy to target groups like Black elected officials?

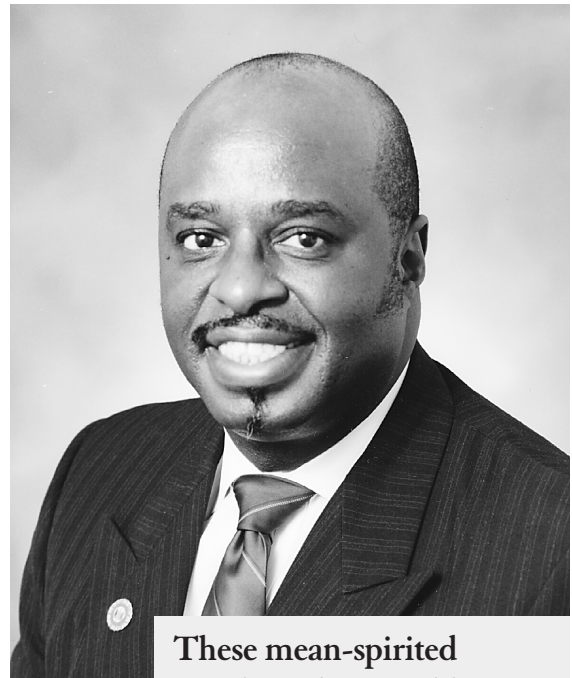
Rep. James: Yes, I do believe—I know that it’s happened, I know that it’s happening. And, I’m not talking about people who cause themselves to do anything wrong or illegal. But, I think that there’s an over-emphasis by certain factions within the Justice Department, within law enforcement, that target African-Americans and minorities who are outspoken, who are independent-thinking, and who expose travesties of justice.

When I met people from the Schiller Institute who asked me about the LaRouche exoneration, I looked at it, and I looked at the fact that they had set up

hearings to examine it, and call for the investigation, and I thought it was important—because lots of times we have a lot of bureaucrats who, as the policymakers change over four years or over elections, a lot of these bureaucrats stay in place, and a lot of time they are insensitive, they are racist in a lot of their policies and opinions. And I think they participate in those kinds of investigations, or those kinds of targeting, that would expose or try to find things which would cause outspoken people embarrassment, or to get them in trouble, or set them up with stings—or, sometimes, to the extent of planting evidence, and situations similar to that.

I know that happens. If you even look at myself, and saw how the police department did me in, when I was just talking about injustices in the police department. And now, in the political arena, I’m pretty sure that it may happen to me soon, that they may try to look for things or find things, in terms of trying to cause you to be embarrassed, or cause you to be investigated, to the extent that it will ruin your reputation and/or your credibility.

Fidelio: Mr. LaRouche has pointed to Dick Morris, President Clinton’s campaign adviser, who used to work for Trent Lott and Jesse Helms—who actually ran Jesse Helms’ racist campaign against Harvey Gantt six years ago, for U.S. Senate in North Carolina. Do you think it would help if some of the people with these attitudes at the higher levels of



These mean-spirited people in the Republican administration represent a bacteria themselves, in some conservative politicians, who’re mean-spirited towards the working populace, heartless to the working poor, indifferent to the elderly, and reckless toward our children, which is our next generation. We have to rise up.

the Democratic Party were removed from their positions?

Rep. James: Oh, yes, I think that’s important. I mean, if you’re going to have people who run racist campaigns—like, we have a legislator who admitted to making racist remarks about a race of people—and then they are still in office, and are still an influence in the Democratic Party, or any party, then let them set up the David Duke Party. Then we’ll all know where they’re coming from, as opposed to getting caught with their sheets off. I think it’s sad that Democrats, or any policymakers, or any leaders, or

People have been coming into my office, fearful that they're not going to be able to make it. Because, if they are unable to get their prescriptions, this could lead to more serious illnesses, and eventually to their death. What are they going to do?

anybody, who hopefully want to reflect the views of all the people, can support or be associated with, racist bigots.

Fidelio: You are one of the 700-plus state legislators who signed the Open Letter to President Clinton, calling for the exoneration of Mr. LaRouche. Can you tell us how you see the importance of Mr. LaRouche's ideas for the United States?

Rep. James: In my limited observation of Mr. LaRouche, it seems that he is very wise as it relates to economy or financial endeavors and, from my understanding, he has made some forecasts or predictions of situations that have happened. It happened in Orange County, as relates to derivatives and financial transactions, etc. If he's able to make those kind of predictions, and they've come out, then I think we need to observe that; our financial people need to observe that, just to make sure that we, or other entities or municipalities or other counties, don't lose because of not paying attention to some financial information.

Fidelio: You are a leader in the fight against Governor Ridge's elimination of medical assistance for 220,000 working poor and disabled people in Pennsylvania. In your speech on the floor of the House on May 15, you said: "Mr. Speaker, when Pennsylvanians begin to die, as a result of the Governor signing this report, I foresee, upon proper complaint, the U.S. Attorney General's office considering an indictment against Mr. Ridge, possibly for homicide." Please tell us what Ridge did, and what its impact will be.

Rep. James: What Ridge did, in terms of trying to balance the budget, was that he cut nearly 250,000 people, who are going to lose their benefits, out of medical assistance. These were not people on welfare; these are people who are working poor, medically needy only, and disabled. This

is going to cause hospitals to close down, jobs to be lost. Just to wipe out 250,000 people because you want to balance the budget, to save \$210 million on the backs of the working poor.

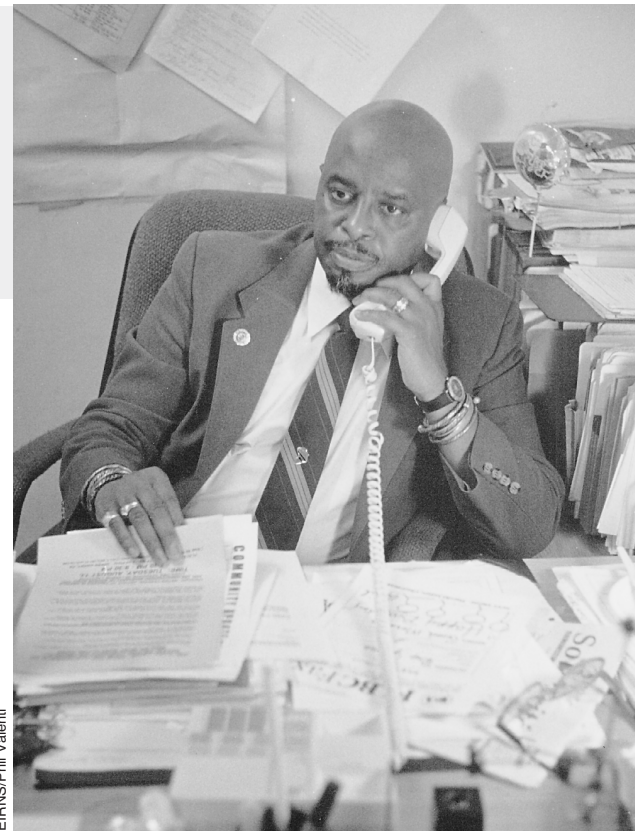
People are going to possibly die as a result of a decision made by us as legislators and led by Governor Ridge, in terms of trying to balance the budget so that he can look good for Washington, and look good for Gingrich and Dole. I think it's mean-spirited, and we as policymakers have to be held accountable for some of our actions that hurt or harm people.

So, just the fact that a governor can do this, and it can be shown that this helped cause the deaths of people, and that someone should start taking actions as a result of this—I think as policymakers, we'll have to look more at what we do, not cut people off in a way that's going definitely to contribute to, or lead to them dying.

That is not what the government should be about. The government is supposed to be *for* people, not for them to die, or to lose all their health benefits. We should be giving everyone health benefits.

Fidelio: Lyndon LaRouche, on May 16, the day that Ridge signed this bill, called for Ridge to be impeached, saying that this is mass murder, and comparing it to the same kind of crime that the Nazi war criminals were convicted of at the Nuremberg Tribunals. What was your response?

Rep. James: I thought it was a good idea, because if you have a governor who doesn't care about the health or well-being of the people, and who is doing this



EURNS/Phil Valent

to balance the budget on the backs of those people, then it's a good idea. As it is related to, what you just described in the Nuremberg Trials, and this is the same mechanism that was used, then someone needs to look at that, so that we can be in front of it, and don't wait till the tragedy has happened as a result of nobody doing enough about that before.

Fidelio: The pamphlet that's now being circulated by the LaRouche campaign shows that Hitler also began by eliminating budgets for the poor, the elderly, and the mentally disabled, for economic motives, and that ultimately those "small beginnings" were what led to the Holocaust later on.

Rep. James: I think the people have to rise up and do something about it, and I think that if a groundswell of people would impact upon the policymakers, that you cannot do these things to us that are going to hurt us, cause us to die, we just have to do something. You talk about illness and sickness: These mean-spirited people in the Republican administration are part of the disease, and I mentioned it in my remarks on

My bill would put a two-tenths of a percent tax on the selling of stocks, bonds, derivatives, and other financial securities, which today are not even taxed at all. That would hopefully increase revenue, to help restore funding cuts in Pennsylvania's medical assistance programs, and other vital services, that were cut by our mean-spirited Governor and the mean-spirited Republican administration.

the floor, that they represent a bacteria themselves, going on in some conservative politicians, who demonstrate that they're mean-spirited towards the working populace, heartless to the working poor, indifferent to the elderly, and reckless toward our children, which is our next generation. We have to rise up.

Fidelio: Mr. LaRouche has caused a big uproar by calling this a "Nazi" crime. What do you think about calling Ridge's policy a Nazi policy?

Rep. James: I don't think I know enough about it to correlate or relate the two. I just haven't read that much on it. But I know that this is a devastating policy, that it's going to cause people to lose their lives. We've already had representatives that have been holding meetings. People have been coming into my office, fearful that they're not going to be able to make it. Because, if they are unable to get their prescriptions, this could lead to more serious illnesses, and eventually to their death. What are they going to do? And if that can be attributed to a policy that we implement, then there may be some liability that the people can get from the government or state, as a result of somebody dying.

But why do we have to wait till somebody dies? Let's go to prevention. Let's give everybody health care. Let's deal with the root causes of crime, so we can stop all the building of jails and making it the new industrial complex.

Fidelio: On June 27, you introduced House Bill 2833 to address the issue of financing. Could you discuss that?

Rep. James: I introduced this bill on the last day of the session, before our summer break, after reviewing some information that had been shared with me by

yourself and the Schiller Institute, in terms of a possibility of implementing a securities transfer tax, that would put a small sales tax on financial transactions, which are made by wealthy individuals. My bill would put a two-tenths of a percent tax on the selling of stocks, bonds, derivatives, and other financial securities, which today are not even taxed at all. When you compare that small sales tax, to the sales tax which we have in our state—which is six percent, where everybody pays, poor, disadvantaged, everybody has got to pay six percent sales tax—and where you have these wealthy financial investors making these kind of transactions, and gambling, and doing this without paying any tax! They can afford to pay two-tenths of a percent.

So, I introduced a bill that would hopefully increase revenue, to help restore funding cuts in Pennsylvania's medical assistance programs, and other vital services, that were cut by our mean-spirited Governor and the mean-spirited Republican administration. So they made these cuts, and now here is an opportunity where we can raise some revenue. At twenty cents per one hundred dollars, it can hardly be noticed by the average person investing in stocks and bonds, but if you trade \$100,000, the tax would only be \$200. And these are the people that are selling and making these transactions every day.

The revenue that can be raised goes up into the high millions of dollars, enough that would definitely be able to restore the \$210 million that was cut out of medical assistance, and much more than that in terms of vital services that we need in Pennsylvania.

I'm on the finance committee, so I've talked to the majority chairman and the Democratic chairman and asked them

to have some informational meetings on the impact of this on the investment community and possibly increase a lot of our revenues, to explore this. I hadn't heard about it or thought about it before, but I do know that Senator Jeff Bingaman (D-NM) had come up with this kind of idea as it relates to Congress. And I'll share this with our financial people. So that's why I would like to put together an informational meeting with the committee, to explore this more.

Fidelio: Do you see the potential that this could be introduced in other states?

Rep. James: Yes. I had the opportunity to be at the Eastern Regional Conference of the Council of State Governments and met legislators from New Jersey and New York, who were interested in it. Even at a meeting in Washington, D.C. that same week, legislators from Mississippi, Indiana, and Tennessee all got copies of the legislation, and were interested in it, in terms of introducing this in other states. When I go out to the National Council of State Legislators and meet with other legislators, and also other members of the National Black Caucus of State Legislators that we'll be meeting out there in St. Louis, I'm going to share this opportunity with them.

What we are all looking for is not taxing poor or middle income people more, but if we can tax the ones that can afford it, or not so much just tax them, but get them to help contribute by long-term investment in job creation, I think it would be beneficial to the economic development in our community and to the working poor and the average middle class American.

Fidelio: Anything you wish to add?

Rep. James: I just hope, that with your network, you will continue to explore the rising racism that's coming up, and that's being more exposed in our legislators and racist public policymakers throughout the country, and hope that you will start compiling information. I would definitely encourage the N.B.C.S.L. to work closely with you on that, and also the Legislative Black Caucus, as we continue to expose that. There's nothing worse than having racist public policymakers.

A Renaissance Homage to Science and Art

The May 21 opening of the *Gubbio Studiolo* from the Palace of Duke Federico da Montefeltro at the Metropolitan Museum of Art in New York has created enormous excitement, especially among lovers of the Renaissance period. After almost thirty years in storage, this extraordinary work of art—made by woodworkers in Renaissance Florence—can now be seen by visitors from all over the world, an event made all the more important by there being only two such artifacts known in

the entire world. Only five are known to have been built at all, of which three were destroyed during World War II, and the Gubbio Studiolo is the only one in the Western hemisphere.

The Studiolo is a small, decorated study, used as a private retreat in the palace at Gubbio of the Duke of Urbino, Federico da Montefeltro. It provided a place where Federico could concentrate on intellectual pursuits and receive private visitors. Measuring 16 ft. 10 in. by 12 ft. 9 in., with a ceiling height of 17 ft. 5 in., its walls are covered with panels fashioned by a woodworking technique called *intarsia*, which arrived in Europe from the Islamic world beginning approximately the Tenth century A.D., and was further developed in early Fifteenth-century Florence. *Intarsia* cutters used the wood of about fifteen species of indigenous Italian trees, to create astonishing, three-dimensional *trompe l'oeil* images.



Interior of the recently restored Gubbio Studiolo, showing intarsia panelling.

The Gubbio Studiolo was originally built between 1478 and 1483, as part of the expansion of the Ducal palace that began in 1476 under the patronage of Federico (1422-1482). The panels were designed to effect the illusion of an interior with open cupboards, in which are depicted books, musical and scientific instruments, Federico's coat of arms, pieces of armor, etc. The wooden panels surround the room on all sides, rising to a height of 8 ft. 9 in.

Above the panelling, a series of paintings were installed on the long side facing the windows, and on the two short ends. A Latin inscription, couched in classical hexameters and pentameters, was carved in gilded letters against a blue background that runs around all the walls of the room, between the *intarsia* panels and the paintings hung above them. It reads: *Aspicis. Eternos. Venerande. Matris. Alumnos. Doctrina. Excelsos. Ingenioque. Viros. Ut. Nuda.*

Cervice. Cadant. Ante [Ora parentis] Supplic. Iter. Flexo. Procubuere. Genu. Iustitia. Pietas. Vincit. Reverenda. Nec. Ullum. Poenitet. Altrici. Succubuisse. Sue. ("See how the eternal students of the venerable mother, men exalted in learning and in genius, fall forward, suppliantly with bared neck and flexed knee, before the face of their parent. Their reverend piety prevails over justice and none repents for having yielded to his foster mother.")

The Latin text is related to the oil-on-poplar paintings, representing the seven Liberal Arts, which were hung in the Studiolo, of which two are now in the collection of the National Gallery in London. All the paintings depict a male figure kneeling before a beautiful woman. For example, in the painting representing *Astronomy*, the male figure kneels before the lady, and offers her an armillary sphere. The Studiolo's long wall was occupied by the language arts of the Trivium: *Rhetoric* in the center, flanked by *Grammar* and *Dialectic*. The two short walls exhibited the mathematical arts of the Quadrivium: above the entrance, *Astronomy* beside *Geometry*, and, on the opposite short wall, *Music* beside *Arithmetic*.

Federico da Montefeltro, A Renaissance Man

Federico commissioned two such studiolo: one at the Ducal palace in Urbino, completed in 1476, and the one in Gub-



"Astronomy." The allegorical painting of one of the seven Liberal Arts, now in Berlin, once graced the walls of the Studiolo; it prominently features an armillary sphere.

bio, which was assigned to the workshop of Giuliano da Maiano, among the most celebrated Florentine *intarsiatori* of the Fifteenth century. This was the time of Filippo Brunelleschi's development of linear perspective. Federico, a close friend of the famous architect Leon Battista Alberti and of the Sienese humanist Pope, Pius II, "made of Urbino the center of a cultivated society which rivaled that of Lorenzo the Magnificent and his Florence in attracting and helping poets, scholars, and artists," reports Vincenzo Labella in his book, *A Season of Giants, 1492-1508*.

It was in Urbino, a few miles north of Gubbio, in the Umbria region of Italy, that the great Raphael Sanzio was born in 1483, the year after Federico's death. Raphael's father, Giovanni di Santi di Pietro, was a painter and poet at the court of the Montefeltro, and a close friend of the artist Piero della Francesca. (Piero painted a well-known, magnificent altarpiece for the Montefeltro in 1469-72, showing Federico kneeling on the right of the Madonna and Child, surrounded by saints and angels.)

Thus, the young Raphael grew up surrounded by the love of knowledge, art, and beauty, as he walked through the corridors and hallways of the Ducal palace at Urbino—a palace, designed for Federico by the architect Luciano Laurana, which is itself considered "a masterpiece that stands as one of the greatest edifices of the Renaissance." Raphael was so proud of his birthplace that he signed two of his works, the *Wedding of the Holy Virgin* and the *Deposition from the Cross*, Raphael Urbinas.

Measure and Proportion

The beautiful Spring 1996 *Bulletin of the Metropolitan Museum of Art* is dedicated to this extraordinary masterpiece, and the work undertaken for its restoration. (The Studiolo has been restored three times: first, between 1874 and 1877; second, in 1938; and now, the recently completed restoration, performed under the direction of Antoine M. Wilmering and Olga Raggio.)

The *Bulletin* reports Federico's high regard for mathematics and geometry: "In a famous passage he issued to Laurana, he stated that in his view mathe-

matics and geometry, being based on scientific truths, are 'the most important of the Liberal Arts, as well as the very foundation of architecture.'" Among the objects portrayed in the cabinets, pride of place is given to scientific and musical instruments.

The inside back cover of this issue of *Fidelio* shows details of a number of the panels in the Gubbio Studiolo, along with a contemporary portrait of Federico and a humanist scholar. You can see, in the upper left corner inside one cabinet, dividers, a cittern, an hourglass, and behind them, a plumb bob and set square. All four, including the musical cittern, are instruments of measurement and proportion. A facing panel depicts, along with a brass candlestick, more musical instruments: a harp, a jingle ring, and a tuning key.

—Ana Maria Mendoza



Facade (above) and interior courtyard (left) of the other Ducal palace, at Urbino, which was designed by the architect Luciano Laurana. The palace was a haunt of the artist Raphael in his youth.

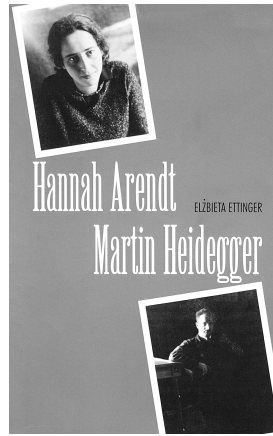
Is Love Blind?

Any book which reminds us that Martin Heidegger—Nobel Prize winner, genius of phenomenology, inspirer of “liberation theology,” of existentialism, of deconstructionism, and of miscellaneous other modern “isms,” not to mention being, arguably, the most-influential academic philosopher of the Twentieth century—was really just a Nazi, is certainly useful.

Unfortunately, that is about the only utility of M.I.T. Professor Ettinger’s slim volume. Otherwise, the book is a quasi-feminist attempt to explain why, in 1924, a Jewish leftist university student named Hannah Arendt could hurl herself into the bed of her married, vaguely Roman Catholic, obviously fascistic philosophy instructor. Arendt, as many people know, left Germany as the Nazis came to power, and became a famous left-wing critic and analyst of totalitarianism; at the same time, her quondam lover Heidegger became a card-carrying National Socialist, and hatchet-man for Nazi purges in German academia.

Professor Ettinger’s conclusions are based on three, interrelated myths. The first, and most important, myth is that Heidegger’s embrace of Nazism was a tragic “lapse,” a momentary betrayal of the philosophical ideals which could attract so many people, both then and since. The second, is that Heidegger, a Catholic seminarian in younger days, somehow became morally deranged under the influence of his wife, who insisted that they not baptize their children—despite efforts by Catholic churchmen like Archbishop Conrad Groeber to recapture him. And the third, is that even an intellectual heavyweight like Arendt can sometimes fall head over heels, and maintain an unhealthy relationship long after it should have ended.

You may notice that these myths are actually three variations of the same theme: that love is blind, and causes temporary insanity to boot. Therefore, Arendt must be excused, because Heidegger seduced her; just as Heidegger



Hannah Arendt/
Martin Heidegger
by Elzbieta Ettinger
Yale University Press,
New Haven, 1995

150 pages, hardbound, \$16.00

must be forgiven because, first, his wife drew him away from religion, and, later, Adolf Hitler lured him away from rationality in general. It’s all very neat, and, as usual in our politically-correct society, nobody is ultimately to blame.

True Love

These myths must be counterposed to the reality that, in terms of core philosophy, both Heidegger and Arendt changed only cosmetically between 1924 and 1964; there were no fundamental “lapses.” The key to this, is that the true love of both was, actually, *Aristotle*. For instance, Arendt’s original enthusiasm for Heidegger was based on his militant Aristoteleanism. Although she tried to downplay this aspect of the affair in later years, we have the testimony of her fellow Heidegger classmate, Hans-Georg Gadamer. Gadamer, who later became one of postwar West Germany’s most influential academics, reports that the university community of the 1920’s was electrified by Heidegger’s savage, nihilistic use of the Aristotelean dialectic to bring about (in the 1922 words of Heidegger himself) “the destruction of what is transmitted in our intellectual history.” Both Arendt and Gadamer attended what the students called “the Aristotle breakfasts,” 7 A.M. picnics with Heidegger. Heidegger’s version of the Aristotelean method was key to Arendt’s choice

of the subject for her Ph.D. thesis, which was, ironically, “St. Augustine’s Concept of Love.” None of this, unfortunately, is reported by author Ettinger.

Heidegger’s own history is a fascinating case study of the evil caused by the love of Aristotle. Ettinger does highlight Archbishop Groeber’s postwar discussions with Heidegger, but she neglects to mention that, when he was a parish priest, Groeber gave the 17-year-old *gymnasium* student Heidegger a copy of Franz Brentano’s 1862 book *On the Several Senses of Being in Aristotle*. As his autobiographical writings make clear, this book confirmed Heidegger as an Aristotelean, and inspired him to a life of academic philosophy. Brentano, a failed priest who was sponsored by sections of the British aristocracy, was the primary figure in an Aristotle revival inside the Catholic Church during the last third of the Nineteenth century. (Brentano was also pivotal in popularizing Aristotle outside the Catholic Church. He personally trained Edmund Husserl, who became Heidegger’s teacher; and was the philosophy instructor and mentor of Sigmund Freud.)

The fact that Aristoteleanism was still considered a legitimate methodology in Catholicism—despite several efforts, including those led by Pope Leo XIII—allowed people like Heidegger to consider themselves Christians, when they were really turning into quite the opposite. Heidegger’s embrace of Nazism, for instance, was entirely on “spiritual” grounds: Hitler was needed, he said, to return Germany to its “essential nature,” as defined by Aristotle. During the Nazi period, Heidegger abjured his Catholicism to please his new political masters. Nonetheless, as an Aristotelean, he retained great popularity with students from the Jesuit and Franciscan orders, both of which had houses at the University of Freiburg. One of his wartime Jesuit students, Father Karl Rahner, used Heidegger’s epistemology as the basis for his own “Transcendental Thomism,” which in turn became the theoretical foundation of Liberation Theology.

Heidegger himself exploited the fact of his wartime popularity with certain Catholic clerics to claim that he was

really an anti-Nazi; in some interviews before his death, he even went so far as to make the grotesque implication that he was connected to the courageous White Rose group of Catholic resisters to Nazism. In 1954, when radical envi-

ronmentalism was just beginning to emerge, Heidegger published a major paper, claiming that technology, with its alleged alienating effect on spirituality, was the *real* cause of fascism. To the last, Heidegger maintained the standpoint

which Aristotle pioneered in the *Nicomachean Ethics*: if changes in public opinion have made an idea plausible, then that idea can appear ethically correct—no matter how immoral it is.

—Michael J. Minnicino

The Goldhagen Fraud Cannot Succeed

Daniel Goldhagen's ethnic vilification, *Hitler's Willing Executioners*, alleges that the Nazi mass murder of Jews occurred because of an ancient anti-Semitism, intrinsic and peculiar to the German people.

Released in March 1996, this book was received with outrage by those who despise such a spur to hatred. World-renowned violinist Yehudi Menuhin told a German TV interviewer April 19, that the book was "a disgrace," and that its author "should be totally ashamed." Moshe Zimmermann, German history professor at Jerusalem's Hebrew University, wrote in the April 29 *Neue Zürcher Zeitung*, "A mythological, or even quasi-racist definition of the concept of 'the Germans,' which in Goldhagen's case lurks in the background of his work, is scientifically and morally unacceptable." The *Frankfurter Allgemeine Zeitung* reported April 30 that former Israeli Foreign Minister Abba Eban, speaking in Washington earlier that month, had rejected Goldhagen's thesis of "collective guilt."

Goldhagen mimics the tedious methods of the anti-Semites. He has shopped through what other writers, in particular vague sociologists, have said against the ethnic group he targets; this he repackages as the thousand-year story of evil Germany. He is so perversely thorough, as to denounce as "anti-Semites" those Germans who resisted Hitler, and those who in previous centuries had worked for the emancipation of the Jews.

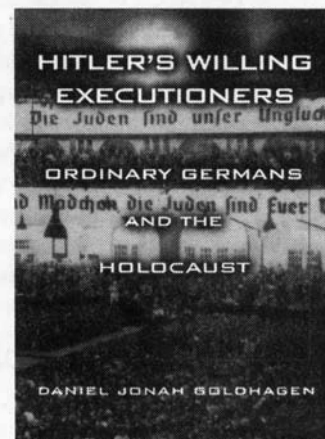
Goldhagen's final chapters catalogue with gruesome details the Nazi shootings of terrorized Jewish civilians. The reader is supposed to be so bloodily numb by the end of the book, that he will succumb to the outrageous, racist *explanation* of these crimes, which was presented in the first chapters.

Although the book has been criticized, it has not yet been widely subjected to analysis as a political provocation, with reference to the identity and intentions of those behind it. We are simply presented with author Goldhagen, a young Harvard University teacher, whose publisher is the old-line Alfred A. Knopf company.

This reviewer, however—being aware of the *British* geopolitical campaign against Germany as a new "Fourth Reich," aimed at preventing Germany, in alliance with the United States under President Clinton's leadership, from contributing to the economic development of Eurasia,—visited Harvard, interviewed Goldhagen, probed his sponsors' backgrounds, and studied the history of the Knopf firm.

The real origins of the book cannot long be kept from the wider public in America, or in Germany, where a translation will be distributed this fall. And once exposed as British gangsterism, this fraud will become a mere embarrassment to its sponsors.

Daniel Goldhagen is employed by the Minda de Gunzburg Center for European Studies at Harvard. Goldhagen's salary is paid by a certain Guido Goldman, who heads the German studies program at the de Gunzburg Center. This Goldman has great access to German and American officialdom, owing to the splendid, humanist reputation of his father, Jewish leader Nahum Goldmann (1895-1982). The elder Goldmann led a 1930's political battle against the Hitler regime (employing this reviewer's father as a strategist), and worked for postwar German-Jewish reconciliation and for Arab-Israeli peace. But unlike his father, Guido is a playboy jet setter, a protégé and intimate companion of Henry Kissinger. Goldman is officially a leading Ameri-



Hitler's Willing Executioners: Ordinary Germans and the Holocaust

by Daniel J. Goldhagen
Alfred A. Knopf, New York, 1996
622 pages, hardbound, \$30.00

can agent for British military intelligence's International Institute for Strategic Studies.

The center employing Goldhagen was built with money from Baroness Aileen "Minda" Bronfman de Gunzburg, daughter of mobster Sam Bronfman, the founder of Seagram's Liquor and a 50/50 partner with the British whiskey trust. Minda's brother Edgar Bronfman took the World Jewish Congress leadership from Nahum Goldmann, and perverted it to British geopolitics.

Beginning in 1967, Henry Kissinger and Guido Goldman together organized the "German studies" program which employs Goldhagen. This project arose following the murder of President John F. Kennedy. British intelligence leader David Ormsby-Gore (Lord Harlech), and his closest U.S. allies headed by Averell Harriman, created a reactionary British geopolitical center at Harvard, usurping the slain President's name for a "John F. Kennedy School of Government." Kissinger, Goldman, and others who went on to manage the "German

studies” program, were affiliates of this British incursion.

In 1994, a pro-feudalist British gentleman named Gary Marks, then fortuitously the chairman of an awards committee of the American Political Science Association, declared Daniel Goldhagen’s Harvard school project the U.S.A.’s best dissertation in the field of comparative politics. The Goldhagen piece, thus boosted into the news as Reputable Scholarship, was reworked and published by Knopf.

Alfred A. Knopf is a subsidiary of Random House, itself part of the publishing apparatus of the Newhouse fam-

ily. This multibillion-dollar empire was created by boss Si Newhouse’s closest lifelong friend and in-house attorney, organized crime manager Roy M. Cohn. From the 1950’s until his 1986 death from AIDS, Cohn used his Mafia clients and associates (the Gambino family, Joe Bonanno, Moe Dalitz, the Vito Genovese group, Meyer Lansky), and his protector, FBI chief Gay Edgar Hoover, to push the expansion of the Newhouse newspaper and magazine empire, until Newhouse’s agents controlled nearly fifty percent of America’s newsstands.

Newhouse and Cohn bought Ran-

dom House and Knopf, and brought in British sleaze-managers to run them. Harold Evans, former editor of the *London Times*, became president of Random House. Evans recently published the *Primary Colors* attack on President Clinton.

Newhouse’s president of Knopf is “Sonny” Mehta, the heavy-partying son of a British Empire Indian diplomat. After twenty years in the Cambridge and London jet set, Mehta turned the old-line Knopf publishing house to profitable pornography and Satanic themes. Poor Daniel Goldhagen is therefore nothing but Mehta’s latest hot property.

—Anton Chaitkin

Ending the Age of Gingrich

The value of Jim Wright’s book is that it reflects the views of a leading former Democratic officeholder, who is not a Baby Boomer, but rather of a generation shaped by having lived through the Depression and World War II. As Wright comments: “Two events had shaped my philosophy and formed my life’s driving ambition. They were the great Depression of the 1930’s and World War II. A world without war and without depression. That vision never faded.”

Wright, the former Speaker of the House of Representatives who served for thirty-four years, entered the U.S. Congress in the era of Joe McCarthy, and was forced out by the new McCarthyism of Newt Gingrich. Thus, his book documents the paradigm shift which has occurred in this country since the assassination of President Kennedy.

In a certain sense, the book is Wright’s contribution in this election year to defeating this new McCarthyism, and to reorganizing a bipartisan alliance committed to reviving the principles for which World War II was fought. As he said in his farewell speech to the House of Representatives: “All of us in both political parties must resolve to bring this period of mindless cannibalism to an end!”

At a time when Gingrichite Republicans and Democrats are intent upon reducing the role of government, Jim Wright shares the view expressed by

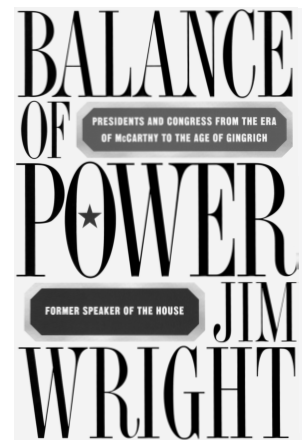
President Franklin D. Roosevelt in his 1938 message to Congress: “Government has a final responsibility for the welfare of its citizens. If private cooperative effort fails to provide work for willing hands and relief for the unfortunate, those suffering hardship through no fault of their own have a right to call upon the government for aid.”

Not What We Fought For

As Wright emphasizes, “This, for me, was the business of government and the purpose of power. . . . We had come a very long way in the first twenty-five years after World War II. Now, retrogression had set in.

“Today, a new band of Visigoths is at the gate with bulldozers and wrecking balls, gleefully preparing to tear down our temples and uproot the trees we planted. . . . They have an entirely different destination in mind. Their vision is not an egalitarian society but a predatory society, whose rewards are survival of the fittest. . . . This is not the America most folks of my generation thought we were fighting for in World War II.”

On the impact that having lived through the Depression had on his political philosophy, Wright is explicit: “The political philosophy I would carry with me to Congress must have begun taking shape, I think, in 1932, when I was nine years old. My grandfather, then 63, lost the job he’d held for twenty-three years, two years shy of a promised retirement



Balance of Power:
Presidents and Congress
from the Era of McCarthy
to the Age of Gingrich
by Jim Wright
Turner Publishing, Atlanta, 1996
528 pages, hardbound, \$25.95.

annuity. Jobs were almost nonexistent in that Depression year. My family moved from Weatherford to Fort Worth to rent an apartment in my grandparents’ house. The purpose was to provide income for them to meet mortgage payments and avoid losing their home. Even today, when I read of layoffs and unemployment, I don’t see statistics. I think of human dramas. My mind returns to that time in my youth and to a man I grew to love.”

‘People Are the Ends’

It is, therefore, no accident that in reflecting on the assassination of President Kennedy, he wrote: “Men and women of

compassion may find enduring confirmation in Kennedy's 1962 message to Congress: 'We are not developing the nation's wealth for its own sake. Wealth is the means—and people are the ends. All our material riches will avail us little if we do not use them to expand the opportunities of our people.' And just perhaps it may not be forgot: 'If a free society cannot help the many who are poor, it cannot save the few who are rich.'"

In contrast to his account of his own efforts to forge a bipartisan alliance on behalf of the general welfare of all Americans and in support of peace, Wright strongly criticizes House Speaker Newt Gingrich: "Throughout his career, Gingrich has engaged in vicious attacks upon the patriotism and personal character of his colleagues and political adversaries. He has sown the seeds of hate, whose weeds threaten his own garden. . . . In one sad sense, Gingrich is like an arsonist who torches the building without supposing that the flames could consume his own bedroom."

The Kind of America We Want

In the epilogue to the book, titled "The Kind of America We Want," Jim Wright outlines what must be done to

end the Age of Gingrich.

First, he argues that we must end the Tyranny of Hate, which has come to dominate American political life, for which he blames not only Gingrich, but the voters themselves.

Second, Wright advocates campaign finance reform: "When public offices are virtually auctioned off to the highest bidder like seats on the New York Stock Exchange, the public loses control."

Third, he argues that we must defend America's Social Compact against the new conservatives, under whose direction the gap between the poor and rich will continue to grow.

Fourth, Wright, who served in the Congress on the Public Works Committee, calls for restoring what he calls America's Public Lifelines, i.e., *infrastructure*.

Fifth, he stresses that our best investment is education. "Our biggest and most important investment deficiency has been our neglect to reinvest adequately in our national future through education. . . . While it grows harder to get in college, it grows easier to get in jail. The United States prison population grew in 1995 to an all-time high of more than 1.1 million. Our country locks up a bigger percentage of its citizens than any

other nation does. And a year in prison costs the average taxpayers more for each inmate than a year in one of America's best universities would cost."

Sixth, citing cases of abuse of power on the part of the nation's law enforcement agencies, including the I.R.S. and the Department of Justice, Wright argues that the Justice Department "must be consciously restrained from engaging in vendettas against American citizens."

And finally, seventh, he calls for a restoration of "civility" in American political life. Referring to the attacks on President Clinton as "the work of a professional hate machine," Wright at the same time, takes the American citizen to task for his appetite for "political pornography."

1996 is the Year of Decision. As the November elections approach, Jim Wright continues to shoulder his responsibility, and with this book he has imparted an understanding of what can be done in a period of crisis. It is now our responsibility to reaffirm the vision of government, which we have inherited from the generation who lived through the Depression and World War II. We owe this to our posterity.

—William F. Wertz, Jr.

Documents of the American System

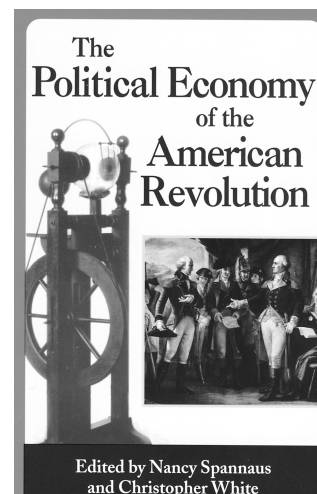
The second edition of *The Political Economy of the American Revolution*, was released July 17 by Executive Intelligence Review. This slightly expanded edition has been brought out nearly twenty years after its first publication in 1977.

The book is primarily a volume of writings from the American Founding Fathers, and their predecessors in Europe. Editors Nancy Spannaus and Christopher White have selected the writings, and written introductory essays. White's essay, "Jean-Baptiste Colbert and the Origins of Industrial Capitalism," is the fruit of his work with previously unpublished writings by King Louis XIV's Finance Minister. Colbert holds the distinction of having been both a sponsor of the universal genius Gottfried Wilhelm Leibniz, and a hero of the United States's first Treasury Secretary, Alexander Hamilton.

Spannaus has written a preface on the cameralist school of economics, of which both Leibniz and Hamilton were representatives, and which has culminated in the Christian economics of American statesman Lyndon LaRouche today. The reprint also contains her 1977 essay attacking the "Treason School" of American history.

Many of the crucial writings which define the American System as a continuation of the Italian Golden Renaissance tradition, and a war against British imperialism and free trade, are assembled in this 481-page volume. It includes, along with writings by Franklin, Washington, and Paine, major excerpts of Hamilton's seminal "Report on Manufactures," two pivotal economic writings by Leibniz, and documents from England's Tudor Renaissance.

—Molly Kronberg



The Political Economy
of the American Revolution
edited by Nancy Spannaus
and Christopher White
Executive Intelligence Review,
Washington, D.C., 1996
481 pages, paperbound, \$15.00



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“Federico da Montefeltro [left] and a Humanist Scholar”
(detail), Francesco d’Antonio del Chierico (?), c.1473-4.

A Renaissance Homage To Science and Art

Urbino, Federico da Montefeltro. Its walls are covered with a woodworking technique called *intarsia*, in which the wood of different species of trees is used to create astonishing, three-dimensional *trompe l’oeil* effects. Among the objects portrayed on the panelled walls of the *Studiolo*, pride of place is given to scientific and musical instruments.

The Duke Federico was a true man of the Renaissance, who made of Urbino a center of cultivated society which rivaled Florence in attracting poets, scholars, and artists—among them, the father of

the great painter Raphael Sanzio. Raphael’s Umbrian origins can be seen in the background details of his early masterpiece, “The Small Cowper Madonna,” which appears on the cover of this issue of *Fidelio*: for the background buildings painted by Raphael, are those of the convent and church of San Bernardino, which lie on the outskirts of his home city of Urbino.

The May 21 opening of *The Gubbio Studiolo from the Palace of Duke Federico da Montefeltro*, at New York’s Metropolitan Museum of Art, has created enormous excitement among lovers of the Italian Renaissance.

The *Studiolo* is a small, decorated study, built as a private retreat in the palace at Gubbio by the Duke of



View of *Studiolo* entrance with doors closed.

Detail of panels comprising far walls of *Studiolo*.



Detail of panel of main wall of *Studiolo*.



Metropolitan Museum of Art, Rogers Fund, 1939

The Legacy of Gottfried Wilhelm Leibniz



Corbis-Bettmann

In “Leibniz From Riemann’s Standpoint,” Lyndon H. LaRouche, Jr., affirms with his teacher G.W. Leibniz, the philosopher-statesman who founded the science of physical economy, that, “Ideas, and the foresight inhering in the metaphorical process by means of which ideas are developed and transmitted into practice of present and future generations, are the essence of that which distinguishes man, as *Genesis* and the *New Testament* define man and woman.” In introduction, Elisabeth Hellenbroich outlines Leibniz’s vision of an ecumenical alliance for the unified development of Europe, Russia, and China, which is still urgently needed today.



The Granger Collection

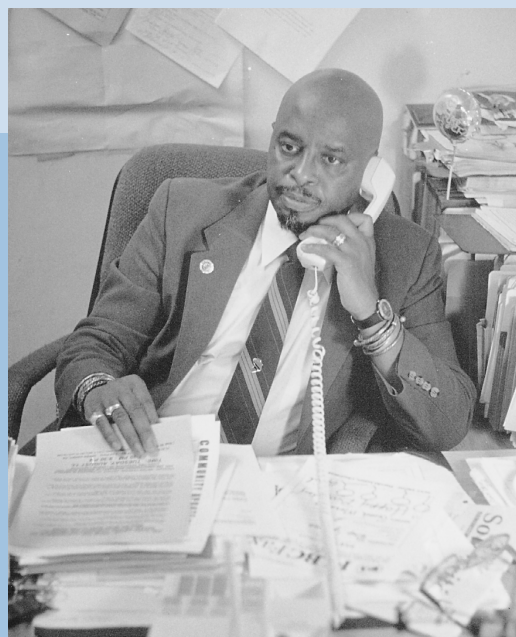
Keats and Shelley vs. ‘The Enlightenment’

Continuing our ongoing discussion of the principle of Metaphor, authors Paul Gallagher and Dan Leach demonstrate how the poets John Keats and Percy Bysshe Shelley strove to revive the Platonic method of hypothesis, against the mind-destroying “mathematization of language” installed by the oligarchical agent Thomas Hobbes.

‘Government is supposed to be for people’

An Interview with Pennsylvania State Representative Harold James

The head of the Pennsylvania Legislative Black Caucus, Representative James has joined with the Schiller Institute to oppose the homicidal policies of Governor Tom Ridge, while at the same time sponsoring a bill which calls for taxing speculation, in order to balance the budget through productive investment, rather than murdering people.



EIRNS/Phil Valenti