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Lies and Corruption Catch Up With Cheney, DeLay
Hyperinflation Hits America's Food Supply
Avian Flu Experts Sound the Alarm—Can We Act in Time?

From Kant to Riemann: The Shape of Empty Space

EIR Special Report

Towards A New Bretton Woods System

Highlights of
EIR's Berlin Seminar,
June 28-29

On June 28-29, 2005 representatives of 15 nations gathered in Berlin, to discuss, with Lyndon LaRouche, a strategy for revolutionary change in the strategic, economic, financial, and moral-cultural conditions on our planet.

Inspired and provoked by LaRouche's opening remarks, an extraordinary dialogue ensued between the American statesman, and those attending, notably including a number of senior figures having extensive experience in international diplomacy and government. Contributors came from the United States, Germany, Russia, China, India, France, Egypt, Kuwait, Italy, Israel, and South Korea.

Now *EIR* has assembled their contributions, representing a dialogue of what is emerging as the outlines of a potential new global constellation of forces, centered around the prospect of fundamental change in the United States in which the role of Lyndon LaRouche is crucial, into a single volume.

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EIR

From the Associate Editor

As the LaRouche movement mobilizes the audience for Lyndon LaRouche's Oct. 12 webcast (www.larouchepac.com at 1:00 Eastern Time), this week's *EIR* comes out in the midst of an astonishing confluence of events. The machinery by which the synarchist financial class has controlled the U.S. Congress is crumbling, with the indictment of House Majority Leader Tom DeLay, and the political and legal threat to the circles of "Scooter" Libby and his boss, Dick Cheney. LaRouche's broad assessment of these developments is reported by Jeffrey Steinberg in *National,* and in LaRouche's *Editorial.*

Last week, we put forward the idea of a "hyperinflationary shock wave" beginning to sweep across the world economy. Our *Economics* section develops some striking manifestations of this, in the case of the U.S. food supply, and also the situation facing Mississippi in the aftermath of Hurricane Katrina. See also the animations on our website (www.larouchepub.com/animations), which give a vivid idea of why the three states hit worst by Katrina were so devastated. In order to rebuild, it is clear that we need to start on a new footing: not casinos and Wal-Marts, but infrastructure and industry.

In our *Feature,* LaRouche and Bruce Director present two fascinating pedagogical studies of what constitutes true knowledge. Why is it that President G.W. Bush and his coterie of lunatics have no clue about how to cope with the oncoming hyperinflationary shock wave? LaRouche addresses this on the highest plane, with his audience being primarily the generation of 18- to 25-year-olds. "Within the state of education today," he writes, "including higher education, regrettably, little attention is paid to the crucial importance of rigorous studies in the theory of knowledge (i.e., *epistemology*), whether in poetry, science, or government. Those studies are indispensable in the efforts to prevent present trends in combined official and public opinion from plunging our society into that terrible, sophistry-ridden state of mind, the state of life-threatening ruin, into which the population of the once powerful U.S.A., as it were a fabled Rip Van Winkle, now discovers that it had been lured during its recent long sleep."

Susan Welsh

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From Kant to Riemann: The Shape of Empty Space

by Lyndon H. LaRouche, Jr.

September 10, 2005[1]

Within the state of education today, including higher education, regrettably, little attention is paid to the crucial importance of rigorous studies in the theory of knowledge (i.e., *epistemology*), whether in poetry, science, or government. Those studies are indispensable in the efforts to prevent present trends in combined official and public opinion from plunging our society into that terrible, sophistry-ridden state of mind, the state of life-threatening ruin, into which the population of the once powerful U.S.A., as it were a fabled Rip Van Winkle, now discovers that it had been lured during its recent long sleep.

The problem is, that, for mere logicians, or mere Cartesians, time is simply measurement, by a simple mechanical clock, or a fool's measurement of the space which is marked out on a changeless map. It is a space marked out by a journey, by foot, or, perhaps, by a raft run amok in the foaming rapids, or by coach or couch.

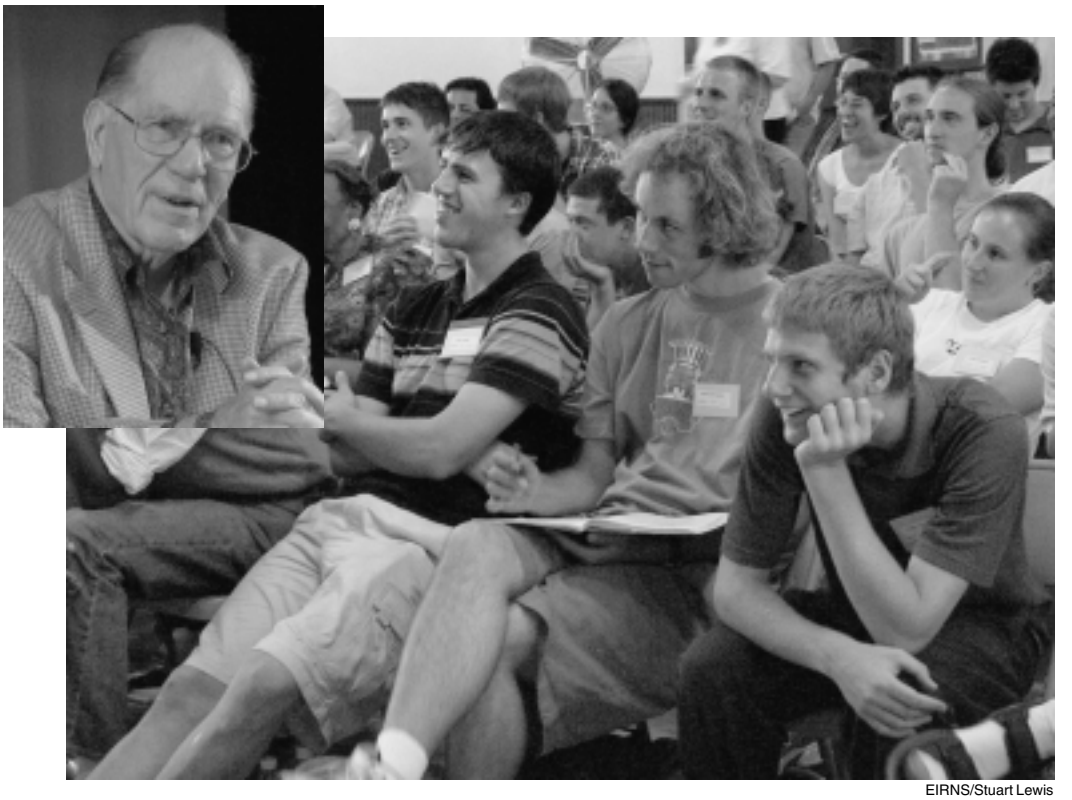
That present situation is actually a reflection of a long-term trend already underway since the death of President Franklin Roosevelt. However, the presently immediate threat of national bankruptcy, and also worse, is a consequence of more recent trends, as typified by not only the current Bush Administration, but, the prevailing trends of both popular and academic opinion during a period of the most recent three decades.

That you might better understand how our nation did this to itself, take an example from some much longer-term trends. Take as one typical example of the type of mistaken thinking which led us into this mess, the case of Wilhelm Windelband. Often, we seek the source of society's afflictions in what was done to it. We tend to pay less attention to those calamities brought about by what was *not* done, or something neglected at a critical place in the shaping of that culture, which has been the foundation upon which the recent generations' way of thinking about itself was premised during more recent times. Ignorance of the way in which the principal founders of our republic thought, such as the scientist and statesman Benjamin Franklin, is an example of the dangers of a widespread lack of relevant knowledge, as the hearings on the nomination of Judge John Roberts repeatedly illustrate the point, rather painfully. The case of Windelband fits within the latter classification.

As I shall show you here, Windelband's importance for many of you today, is that he was a fellow made all the more important for you today, by the fact that most of you simply did not know that he had once lived. It could be repeated here on that score, that what you don't know could hurt you badly. As I recently emphasized in my emphasis on the historic importance of Russia's Count Sergei Witte,[2] Windelband, although far less important than statesman Witte, is a figure

1. Written for, and dedicated in service to young adults who are being currently cheated of what had been, in earlier times, a reasonable financial access to an education which is both actually higher than globigerina ooze, and can be afforded by normal human beings.

2. "Russia's Dark Side of the Spoon," ***EIR,*** Sept. 16, 2005.



EIRNS/Stuart Lewis

LaRouche at a Youth Movement cadre school in Northern Virginia in September 2005. He writes that his intention in this article, is especially to share crucial insights gained from his 1930s and early 1940s wrestling with the works of Immanuel Kant and the neo-Kantian Wilhelm Windelband, with "the generation of young adults who are now in the relevant phase of preparing to take charge of the history of the remainder of this present, young century."

whose importance lies less in the way we might tend to view him if he is misapprehended as a kind of a fixed object from the past, than, in his real importance, as an essential, and active part of the process of transition from that which preceded him in his field, to the change in history which occurred, in part, because he had lived, or because of what he failed to do on the relevant occasion.

To repeat that point, for the sake of clarity. In the case of Windelband, you, the reader, might not have known his name until I brought it up, as I do here; but, his active role in the relevant part of history, exists within the reality defined for you by your past, whoever you might be, today. His role, in his time, is a part of the history embedded in your existence, a history which includes the effect of the transitional role which he played, for generations beyond his passing.

As I address this matter in later pages of this report, that notion of formal logic as Windelband, among others, have mistakenly defined it, is the science of empty space.[3] That judgment is not merely academic; errors in matters such as that, have been permitted to determine the way in which, not only certain university professors, but public opinion, have often contributed to leading a nation to an ugly outcome, sooner or later. So, in the relatively shorter term. we witness the Bush Administration's reckless disregard for truth in the matter of what had been a clearly foreseeable, immediate challenge of the Katrina catastrophe; so, on account of the relatively longer term, we are faced with Vice-President Dick Cheney's fanatical drive for a permanent global state of revolutions and war. Cheney expresses thus the present-day version of the same doctrine, of "Permanent Revolution," which a famous British intelligence asset of the last century, the Alexander Helphand also known as "Parvus," taught, in 1905, to a famous dupe, the later Bolshevik Revolution's Leon Trotsky. So, the past may live to menace, rather than grace the present.[4]

Windelband's errors in defining the meaning of logic are referenced here not only because he represents a specific, appropriate choice of example of the problem I am addressing. As experienced hunters caution us, when stalking a flock of ducks overhead, aim at one; to address a general case, focus on a particular, best leading example of that case. For this moment, the effect of Windelband's work, is our relevant "duck."

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3. Wilhelm Windelband (1858-1915) A leading representative of the late-19th-Century neo-Kantian school. Professor of Philosophy at Zürich, Freiburg, Strassburg, and Heidelberg. Otherwise noted for his treatment of ancient Greek philosophy from his neo-Kantian standpoint. My reference here is to his 1912 essay ***The Principles of Logic.***

4. Technically, British intelligence asset "Parvus" is strictly defined as an agent of the Synarchist International, from his meetings with Fabian Society circles, including Frederick Engels, in the early 1890s, through his death in 1920s Germany, where he was operating as an asset of the right-wing fanatic Coudenhove-Kalergi within the right-wing circles which prepared the way for the Adolf Hitler dictatorship.

Windelband is typical of what is by no means the only example of some, very-real-life, mass effects of miseducation, miseducation about some very practical facts and topics which might be met within the ineffably remote domains of recent programs of higher learning. My present selection of his case, rather than some others, is premised upon the relevance of his kind of special emphasis on the historically crucial fact, still today, that the roots of all modern European civilization are to be found within the philosophical history of ancient Greece.

Although, his interpretation of the philosophical issues posed by that past part of our present history is categorically flawed; unlike the relatively simple-minded positivists and post-modernists of today generally, he was focussed on the proper choice of field of contention respecting those ideas of European civilization in general, over nearly 3,000 years, which continue to be of crucial importance for global civilization today. He had the wrong answer to the most crucial questions, but, as I shall show in the body of this report, he focussed his attention on the right questions.

My treatment of the subject of logic here, includes consideration of important contributing causes of certain very practical, very important effects for society as a whole today. These are causes like those which have contributed, in principle, to the present, self-inflicted, deadly state of ruin of our U.S.A. as a whole, as the world as a whole has sampled these effects now, in the outcome of the current Bush Administration's awful negligence, in the coastal regions of Louisiana, Mississippi, and Alabama. In writing this report, I am considering, thus, the effects produced by the awful negligence of that rather empty-headed President, and also by the defective moral inclinations, the wild-eyed sophistries produced out of what malicious humorists might name as Bush's own, and his cronies' mental powers. However, I also emphasize Bush himself less, than I blame the corruption of the public mind which permitted a figure of such abysmal lack of fitness to come to occupy that office of the President today.

Windelband, although of a much nobler character than is shared among the clownish Bush cabal, typifies one kind of the most profoundly damaging of such widespread, relevant problems created by the influence on our institutions such as the Presidency, by modern academic disorders. In the matter of the failures of public opinion expressed by the selection of that President, I point here and now to the ancient roots of the

Heine on Immanuel Kant

Heinrich Heine (1797-1856) was one of Germany's most beloved poets and commentators, known for his biting criticism of Romanticism. The following is exerpted from "Concerning the History of Religion and Philosophy in Germany," Heinrich Heine, Selected Works*, trans. by Helen M. Mustard (New York: Random House, Inc., 1973).*

The history of Immanuel Kant's life is difficult to portray, for he had neither life nor history. He led a mechanically ordered, almost abstract bachelor existence in a quiet, remote little street in Koenigsberg, an old town on the northeastern border of Germany. I do not believe that the great clock of the cathedral there performed more dispassionately and methodically its outward routine of the day than did its fellow countryman Immanuel Kant. Getting up in the morning, drinking coffee, writing, giving lectures, eating, walking, everything had its appointed time, and the neighbors knew for certain that it was half-past three when Immanuel Kant, in his gray frock-coat, his Spanish cane in his hand, stepped out of his house and strolled to the little linden avenue called after him to this day the "Philosopher's Path." Eight times he walked up and down it, in every season of the year, and when the sky was overcast, or gray clouds announced a rain coming, old Lampe, his servant, was seen walking anxiously behind him with a big umbrella under his arm, like an image of providence.

What a strange contrast between the outward life of the man and his destructive, world-crushing thoughts! Truly, if the citizens of Koenigsberg had had any premonition of the full significance of his ideas, they would have felt a far more terrifying dread at the presence of this man than at the sight of an executioner, an executioner who merely executes people. But the good folk saw in him nothing but a professor of philosophy, and as he passed by at his customary hour, they gave him a friendly greeting and perhaps set their watches by him.

If, however, Immanuel Kant, the arch-destroyer in the realm of ideas, far surpassed Maximilian Robespierre in terrorism, yet he possessed many similarities with the latter which invite comparison of the two men. In the first place, we find in both the same stubborn, keen, unpoetic, sober integrity. We also find in both the same talent for suspicion, only that the one directs his suspicion toward ideas and calls it criticism, while the other applies it to people and entitles it republican virtue. But both represented in the highest degree the type of provincial bourgeois. Nature had destined them to weigh coffee and sugar, but Fate determined that they should weigh other things and placed on the scales of the one a king, on the scales of the other a god.

And they gave the correct weight!

present causes for our current national misfortunes.

We must always recognize the current situation which confronts us now, as something which had been implicitly permitted to happen, something which should have been recognized as a consequence of a general, long-standing failure to acknowledge the fact, that the space to which modern formal logic refers, is not the real space which actions and their consequences occupy. Admittedly, President Bush's failures are not the fruit of a logical mind, but his selection for that office was the fruit of what many influential and other people have regarded as a logical choice of behavior on their own part.

This failure of the reliance on what has been, chiefly, a merely popular definition of logical mental behavior, is a problem typified by the silliness of today's popular blind faith in the practice of substituting the use of so-called "statistics," the view from a kind of "ivory tower" outside reality, for study of the functionally ontological characteristics of the physical processes which need to be examined.

For example: Virtually no branch of combined official and popular practice today, is more lunatic, more corrupt, and ultimately more suicidal for national economies as wholes, than the currently prevalent chatter about the statistical behavior of "the market." Bush himself may be a complete stranger to reasonable mental behavior, but the popular support he has received, is, quite obviously, the consequence of a leading problem in the way many people have, twice, foolishly tolerated the selection of Bush as a President.

The Relevant Flaw of Logic

Contrary to what passes for today's allegedly conventional opinion on this subject, real space is neither empty, nor statistical, but physical.

Physically, real space is essentially spherical and dynamic *in its sensory apprehension.* The use of the term, "formal logic," on the other hand, usually refers, by today's popular U.S. traditions, to a dead, empty, merely Cartesian space, in which a physically efficient notion of something as elementary and important as actual "time," does not exist. What is needed, instead of that deadness of formal logic, is that notion of *physical time* implicit in Fermat's discovery of the universal principle of *physical least time.* Fermat's discovery of the principle of *physical least time,* is one, which, together with the preceding discoveries of Johannes Kepler, has been the launching-point for all leading achievements in the development of all competent notions of the principles of a modern physical science, those by Leibniz and his followers.

The problem is, that, for mere logicians, or mere Cartesians, time is simply measurement, by a simple mechanical clock, or a fool's measurement of the space which is marked out on a changeless map. It is a space marked out by a journey, by foot, or, perhaps, by a raft run amok in the foaming rapids, or by coach or couch.

The ultimate standard of measurement for such journeys,

Poor Immanuel Kant "has been assigned implicitly, since his death, to a permanent place in Hell. There he were to be seen today, justly tortured throughout timeless eternity, by his confrontation with the physical reality of the physical time *which he had denied in life."*

is reported by, among others, neo-Kantian Wilhelm Windelband's image of Kant's perfectly logical intuition of absolutely nothing which is real. Windelband presents us a portrait of Kant which lacks the image of Kant's most relevant philosophical feature. Compare the truer portrait of Kant, the image of the specter portrayed by Heinrich Heine's ***Religion and Philosophy in Germany.*** Heine's Kant, unlike Windelband's neo-Kant, was the real Kant, as he must be seen as a citizen of sworn fealty to the idea of changeless, Cartesian time: not as a solitary figure, but with the indispensable complement of any dutifully Kantian: the spectacle of a recurring nightmare of Kant and his trailing servant, the latter a virtual, truly Kantian, practical negation of the negation, one bearing a daily, clock-setting umbrella.[5] It is a true recurring nightmare, in which nothing important, even the horror of it all, ever changes. Heine's ironical image of that Kant, rather than Windelband's, was, and is the real Kant, as known to those of us who have made a thorough study of the arguments he presented in his later years.

What Windelband appeared not to have known, in overlooking an insight by Heine which was readily accessible to him, is that the actual poor Kant has been assigned implicitly,

5. The real-life image of Kant supplied by Heine, recalls the leading academics from the opening paragraphs of Chapter 2 of Jonathan Swift's "Voyage to Laputa." Heine's description of the relationship of Kant to his servant is a startling reminder of Swift's account: "I observed here and there many in the Habit of Servants with a blown Bladder fastened like a Flail to the end of a short Stick. In each Bladder was a small quantity of dried Pease, or little Pebbles. . . . This Flapper is likewise employed diligently to attend the Master in his Walks. . . ."

since his death, to a permanent place in Hell. There he were to be seen today, justly tortured throughout timeless eternity, by his confrontation with the physical reality of the *physical time* which he had denied in life. In that timeless repose, his cruelest torment is, without much doubt, the irony of the ridicule he suffers, as Heinrich Heine had foreseen, as having been the predecessor of the endless "end of history's" G. W. F. Hegel.[6]

I have made the choice of the name of Windelband as a benchmark here, to illustrate, from within the Classical European setting, as traced from ancient Greece, the specific kind of problem shown by those foolish, academically conditioned fellows who have paid no proper attention to the implications of Bernhard Riemann's revolution. I emphasize the way, since Riemann, that really intelligent kinds of educated people either think, or should think about the universe today.

The point of this selection is to illustrate the perils of travelling by couch, especially in the hellishly non-existent space of the contemporary "spoon bender's" so-called science fiction. During the 1970s, I had used Sigmund Freud as the scapegoat for this instruction; but, today, Freud's unkempt couch has become insufferably smellier than any sort of goat, with the decades which have passed upon it since that time.

Dramatis Personae

To understand the significance of Kant in a general, but nonetheless thoroughly valid way, several benchmarks from the Eighteenth Century would be sufficient. Windelband alludes obliquely to some of these points, but his intentions on that account, as in his 1912 essay, are nonetheless clear.[7]

The simplest way to do this, is to place Kant and his opponent Abraham Kästner side by side in the century which they shared. Kästner, born in in 1719, in Saxon Leipzig, the birthplace of Gottfried Leibniz, and deceased in 1800, versus Kant, born in Königsberg in 1724, and died in 1804. Notably, Kant died approximately a year before the death, in 1805, of Kant's most significant philosophical adversary of his later years, Friedrich Schiller.

Kästner devoted his adult life to defense of the work of fellow-Saxons Leibniz and J.S. Bach against their enemies of that century. Leibniz-hater Kant reflected his father's Scottish origins in the worst possible light, in his role as the intellectual lackey of the mentally unstable David Hume, until the concluding decades of Kant's own life. Then, Kant openly broke his official intellectual ties with Hume, and subsequently produced the series on the subject of so-called "Critical Philosophy" published during the 1780s and early 1790s.

The pivot of Kant's break with Hume had been the implications of the American Revolution's Leibnizian philosophical triumph over the Anglo-Dutch Liberalism represented by John Locke and, more immediately, Hume, and by the hater of the American Declaration of Independence, Lord Shelburne's lackey Adam Smith.[8] The implications of that are underlined by the fact that Smith's most celebrated writing, his so-called ***The Wealth of Nations,*** is a propaganda tract which was predominantly a ranting spew of hatred against the cause represented by the U.S. Declaration of Independence. The rallying of continental Europe, more and more, around the American cause, as the League of Armed Neutrality expressed this, had deep philosophical implications for all of Europe, especially continental Europe, Kant included.

The period of the late 1770s and the 1780s, preceding the French Revolution on the continent, had an impact on Europe in which Kant found an increasingly favorable reception for his *Critiques* through the close of the century, until the successive horrors of both the French Revolution and Napoleon's imperial rampages produced, after Jena-Auerstädt, a leftist-turned-reactionary—a virtual fascist—Hegel, to challenge, and replace the official literary place of Kant in the usages of the then contemporary German language.[9]

Later, long after Kant's death, in the last quarter of the Nineteenth Century, Windelband appeared as a leader among those now styled as neo-Kantians, who attempted to rehabilitate the reputation of a Kant whose influence had been discredited by the turbulent developments in physical science and politics during more than sixty years since his death.

The actual Kant had been largely discredited as irrelevant to current history, by the cumulative effect of the developments and institutions of the nation-state and its economy over the 1789-1876 interval. The Critical philosophy of Kant was superseded by the Hegel who considered himself more

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6. Heine, "Concerning the History of Religion and Philosophy in Germany," in *Heinrich Heine, Selected Works,* trans. by Helen M. Mustard (New York: Random House, Inc., 1973). Hegel's later works, during the period he was associated with the political operations in Germany of both Austria's Prince Metternich and the right-wing ideologue and predecessor of Carl Schmitt, Friedrich von Savigny, in doctrines of law were actually an ideological model for the national form of fascist state. This takes into account the role of Professor Leo Strauss's sponsor, Carl Schmitt, as "Crown Jurist," in founding the Nazi state of Adolf Hitler's post-February 1933 reign. Of the Quixotic figure of the personally loutish Hegel himself, it could be said, that he dwelt in a blackness in which all important cows were knights. Hegel's "end of history," like that of our notorious neo-conservative Francis Fukuyama's, is nothing but the delusion of all empires, the Roman Empire particularly, a domain where brutish legions roam, killing time itself with the permanently perpetual warfare of Synarchist Alexander Helphand's doctrine of "permanent revolution."

7. Windelband, ***The Principles of Logic.***

8. The event which defined the setting of that event was the Paris Treaty of February 1763 which established the British East India Company as an empire in fact. The effect of this should be seen from those implications of that treaty for Frederick the Great's Prussia, and the developments associated with British orchestration of the Seven Years' War which established British relative hegemony on the continent.

9. The intellectual kinship of Bonaparte-lover Hegel to Bonaparte-creator Count Joseph de Maistre, and the roots of Synarchist-created Hitler's regime in the creation of Bonaparte by Martinist de Maistre, is key to understanding the ugly implications of the largely congruent, rival influences of both Kant and Hegel on the history of Germany.



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Left to right: Abraham Kästner, Gottfried Leibniz, and Johann Sebastian Bach. Kästner was the most prolific teacher of mathematics during the middle to late years of the 18th Century, and the teacher of Carl F. Gauss. He devoted his life to defense of the work of fellow-Saxons Leibniz (1646-1716) and Bach (1685-1750) against their enemies in his own century—such as Kant.

critical than Kant, and, later, those who deemed themselves even more critically critical of Hegel.

Then came the time, through and immediately following the defeat of the British Empire's failed attempts to crush the U.S.A. virtually out of existence. During the middle of the Nineteenth Century, this attempt to eliminate the U.S.A. had been made as a package of onslaughts, including the launching of Lord Palmerston's Confederacy puppet and the installation of the failed, "Adolf Hitler"-like tyrant Maximilian in Mexico.[10] The triumph of the U.S, model of economy and statecraft, which was celebrated in the 1876 Philadelphia Centennial, unleashed sweeping changes in the progress of modern agro-industrial development in continental Europe, as in Bismarck's Germany, and Japan.

The world was then torn, by the global impact of the aftermath of the U.S. developments of 1863-1877, by a titanic struggle between British ideology and the spread of the ideas of the American System of political-economy throughout the Americas and much of Eurasia. On the one side, there was the imperial power of the Anglo-Dutch Liberalism represented by Great Britain, and, the principal alternative, the American System. Both alternatives were alien to the specific kind of German Romanticism associated with the name of Kant. Over the period through World War I, this pattern was to become increasingly complicated by strange things, such as the pathetic influence of Ernst Mach, and the rabid existentialism of Nietzsche and his like, which invaded Germany from the decadence of Habsburg Austria and sponsorship from the British side.

So, during the last decades of the Nineteenth Century, a revised view of Kant emerged as neo-Kantianism. Windelband was a notable author of this turn. This was not the actual Kant encountered during the interval defined by the period of the so-called "Enlightenment" marked by the American and French revolutions; Windelband's reconstructed, literary "Kant," was a reaction against, among other things, the impact of the U.S.-modelled Bismarck reforms, from 1877 on, and also against both the radical empiricism and positivism emerging in Britain and Habsburg Austria, and the "Americanization" expressed by the combined social-welfare reforms and industrialization launched under Bismarck.

The dividing issue in all of this, was the principle of human creativity, as typified by those discoveries of universal physical principles which had been banned, under threat of the harshest possible penalties, by the Olympian Zeus of Aeschylus' ***Prometheus Bound.*** Leibniz, like Kepler and Fermat before him, was the embodiment of that forbidden practice of creativity. Locke and Hume, and the Kant of his empiricist phase, like Adam Smith, were the embodiment of a neo-Olympian hatred of creativity. The American Revolution was creativity. France's Ecole Polytechnique and Lazare Carnot, were an epitome of creativity. The German scientists associated with Wilhelm von Humboldt were the typification of scientific creativity. Bismarck's adoption of the American model for industrial development, was an expression of creativity. Neo-Kantianism was a reaction, like both philosophical phases of Leibniz-hater Kant's own life, of virtually embittered, Olympian-like hatred of creativity.

Neo-Kantianism borrowed something essential from the old Kant, in a quality of hatred of creativity echoing that

10. The Anglo-French Austrian puppet, the Emperor Maximilian, became, not accidentally, a flagship figure of the spread of the Nazi organization there, during and after Adolf Hitler's reign, still to the present day.

hatred of actual human creativity radiated by the Delphic cult of Apollo. Kant, and neo-Kant, were essentially *Apollonians.* It was that Apollonian mood which defined the tradition of the German-speaking Kantian, in science, in inclination toward the Romantic in fields of art, and in political inclinations. Kant represented much that such German Romantics might find embarrassing in themselves. Kant's famous proposal for "universal peace," expresses that pathetic Romanticism inherent in Kant's world-outlook.

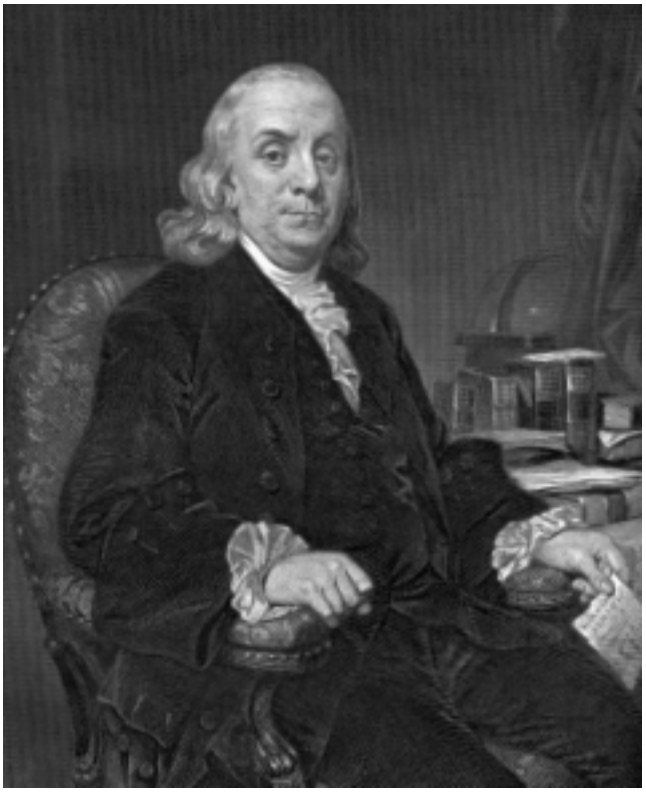
This is not to say that Kant lacked intellectual power. His expressed contempt, during his later "Critical" decades, for his former idol David Hume, was a succinct, brutal expression of truly deadly insight. His wit, which was not always original, is typified by his reference to one man milking a he-goat while the other held the sieve. His treatment of "repression"-driven reaction-formation, in his postulating the "negation of the negation" as "positive," in his ***Critique of Practical Reason,*** reflected a specific instance of the large margin of superiority of Kant's intellect over that of Sigmund Freud.

Kant's own essential shortcomings have a very specific basis, his fidelity to the tradition of that Apollo cult of Delphi as reflected in Aeschylus' ***Prometheus Bound:*** the prohibition of the kind of creative reason which both the Zeus of ***Prometheus Bound*** and the practice of the actual Apollo cult, banned from human social behavior. Within those boundaries, Kant could be clever, and sometimes was. It was those who lacked a sense of actual creativity, who were seduced by Kant, seduced because they found in Kant an apology, that of the constipated intellectual formalist, for the lack of creativity shown by their "hysterically blocked" mental life. It was this syndrome in his mental life, which had qualified Kant as an acceptable paragon of the creatively constipated victims of the "Enlightenment." Kant was, after all, a German Apollonian Romantic.

The same kind of paradox is echoed clearly in Windelband's treatment of the subject of logic. That was the intellectual disorder, the gap, the empty space which underlies belief in the existence of empty, Cartesian time.

In that strategic setting of the late Nineteenth Century, the intellectual impetus for Windelband's resurrection of Kantianism in the form of neo-Kantianism, was supplied by the counter-revolution against the science of such Alexander von Humboldt-associated Leibnizians as Lazare Carnot's and Gaspard Monge's Ecole Polytechnique, Carl Gauss, Wilhelm Weber, Lejeune Dirichlet, and Riemann.

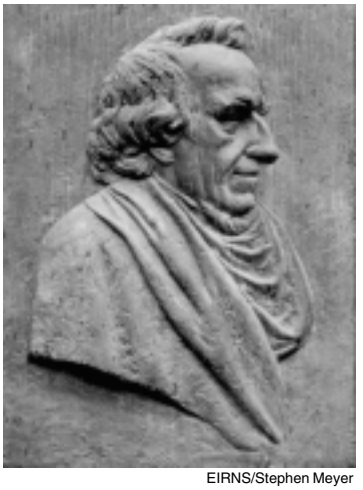
During the late Nineteenth Century, the radically reductionist counter-revolutionaries in French and German science, against the Leibniz, Gauss, Riemann legacy, are typified by Cauchy, Clausius, Grassmann, Helmholtz, Hermite, Lindemann, and the anti-Riemann "neo-Hegelianisms" of Felix Klein, and by the Englishmen Kelvin and Maxwell. In this late-Nineteenth-Century setting in Germany, Windelband's response to the environment of that putative *Zeitgeist,* was the attempted defense of the notion of defending the relics of Germany's Romantic past by presenting his own kind of modernist views of the late Nineteenth Century. The distinguishing feature of Windelband's approach, which makes him at least interesting today, is that he constructed his argument within the framework of his specific conception of a European culture rooted in the formative experiences of ancient Greece. Windelband employed the wrong key, but he was attempting to enter by the appropriate door.



Benjamin Franklin's scientific networks in Europe, centered around Kästner, were the core of those battling the Leibniz-hating circles that included Voltaire, D'Alembert, Maupertuis, and Euler.

The critical turn in Kant's own later career had come with the rise of that German Classical movement marked by the pair of collaborators, Moses (Dessau) Mendelssohn and the Gotthold Lessing, who reflected the influence of fellow-Saxon Kästner. While Lessing and Mendelssohn remained active intellectual figures in the Berlin setting, the launching of a Kant in his new, post-Hume, "critical" phase were not suited to the tenor of the times.

Kästner, for example, the figure standing behind Lessing, is best known as the most prolific teacher of mathematics during the middle to late years of his century, and one of the European co-sponsors of the political cause of the American scientist and political leader Benjamin Franklin. He was also at the center of the combat by Lessing and Mendelssohn against the corruption centered in the Leibniz-hating circles of Voltaire, D'Alembert, Maupertuis, Euler, and others,



EIRNS/Stephen Meyer

Adolf Kunike

As long as the intellectual giant Moses Mendelssohn (left) and Kästner's brilliant protégé Gotthold Lessing (right) were active in Berlin, Kant remained in the shadows. But with their passing, he ventured forth with renewed attacks on Leibniz, launching the kind of Romantic Gothic mysticism which has come to be known as German Critical Philosophy.

The Significance of This Study

The significance of Windelband's publications, as I studied these closely during the late 1940s, is their emphasis on debating the issues of those ancient roots of modern European philosophy which are located in ancient Greece. Wrestling with his works, from my standpoint as a Leibnizian on the way to becoming a promoter of the work of Riemann for the science of physical economy, was a pleasant and profitable intellectual wrestling match, especially against the background of my 1930s and early 1940s studies of the principal works of Immanuel Kant. It was by wrestling against such adversarial positions as Windelband's arguments, that my own deeper appreciation of the work of the Pythagoreans and Plato jelled into the form and degree of development which I realized, more and more, over subsequent decades.

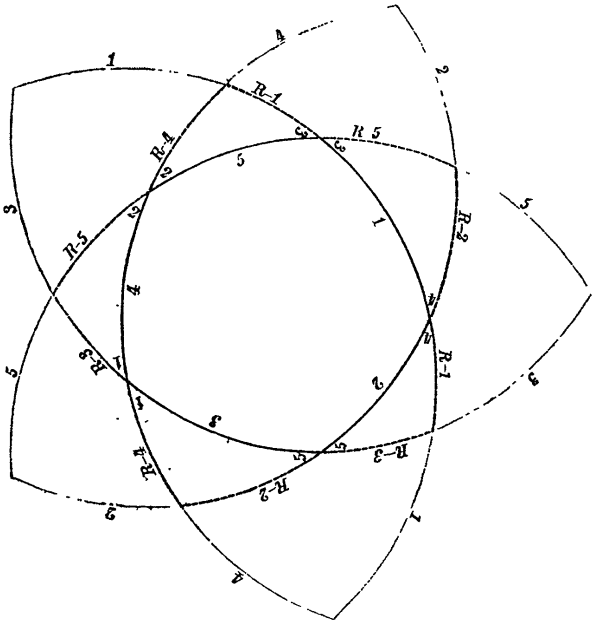
In choosing to write this present report, I thought that a rising, new adult generation might gain from sampling some aspects of my own ex-

including Lagrange, then at the Berlin branch of a network of academies which had been organized on behalf of the pagan religious worship of black magic specialist Isaac Newton by the Paris-based Venetian Abbé Antonio Conti and the notorious Voltaire. The latter circle at Berlin, was the same circle of figures whose fraud against science was exposed by a famous student of Kästner and Zimmerman, Carl F. Gauss, in Gauss's celebrated 1799 doctoral dissertation on the subject of what was later named as the Fundamental Theorem of Algebra.[11]

However, the most effectively devastating of the public attacks on the Newtonian hoaxsters of Berlin at that time, were the intellectual giant Moses Mendelssohn, and Kästner's brilliantly creative, and courageous protégé Gotthold Lessing. It was only as illness and death removed that pair, Mendelssohn and Lessing, from their earlier active collaboration on that Berlin scene, that Kant, a dedicated Romantic and ally of the Voltaireans of Berlin, dared to venture forth from a decade of cautious relative silence. His reappearance came, with his revised, neo-Aristotelean approach to attacks on the work of Leibniz, his famous series of *Critiques* which set the pace in his times for the specific kind of Romantic Gothic mysticism which had been known, since Kant's *Critiques,* as German Critical Philosophy.[12]

FIGURE 1

Gauss's Sketch of Napier's 'Pentagramma Mirificum'



11. Carl F. Gauss, ***Werke*** III (Hildesheim: Georg Olms, 1981), pp. 1-31. The appended figure, on page 31, like the figures associated with the treatment of the subject of the *Pentagramma Mirificum* in III, pp. 481-490, and ***Werke*** VIII, pp. 101-117, is among the remarkable graphic type of events in the history of mathematical physics. [See **Figure 1,** and the Figures in the accompanying article by Bruce Director.] The latter selection bears directly upon Riemann's later development of the notion of hypergeometric functions.

12. The essential difference between the empiricism of Hume et al. and the "Critical" version of Cartesian empiricism by Kant and Hegel, is the Kantian resurrection of the Aristotelean "categories." The radical empiricists and their positivist cousins are still Aristotelean at heart, but their reproductive parts have been removed by "Occam's Razor," creating thus the passion for "end of history" doctrines such as those set forth in the later writings of Hegel.

Wilhelm Windelband: He had the wrong answer to the most crucial questions, but he focussed his attention on the right questions.

perience on that account. What are still the most important philosophical and related historical issues of the Eighteenth Century, are efficiently brought into the foreground by a view of the interaction of the opposing forces represented by the opposing roles of Kästner and Kant over the course of the Eighteenth Century, that with the symptomatic case of the later Windelband in view.

It became clear to me, then and ever since, from those and related studies of the 1940s and early 1950s, that no part of known European history can be competently assessed without taking approximately three thousand years of that history to date, into account, a history which must be considered as a unified, dynamic form of ongoing process. My intention here is to share an aspect of that experience: to share this, especially, with the generation of young adults who are now in the relevant phase of preparing to take charge of the history of the remainder of this present, young century.

1. The Background for the Issue of Logic

To wit: for the mass of those among today's victims sometimes called students, the customary approach to education in most relevant institutions today, is *from the bottom, up,* as from the indoctrination in the purely arbitrary assumption of a set of definitions, axioms, and postulates, whose adoption excludes, from that point of initial indoctrination on, all of the most crucial of the higher conceptions of physical geometry from the student's intellectual capabilities.

That *bottom, up* approach predetermines taught assumptions, as "from Euclid through Legendre," of the type which were crafted with the aim of eliminating the victim's attention to the most important issues of knowledge of the physical universe from the credulous believer's mind.[13] It is important to recognize, that before the first known instance of a Euclidean geometry was put on record, the foundations of a competent geometry had already been developed by the Pythagoreans and others, without resort to what are regarded today as the standard classroom and related textbook assumptions of the subject.

To wit: In happier nooks and crannies of the history of known human cultures, the approach was from the top, down.

The working assumption must be, when taking into account the way physical science was introduced to ancient Greece from Egypt, that the crafting of the contrary, now customary, reductionist's definitions, axioms, and postulates,[14] was done in the effort to destroy the student's knowledge of the anti-reductionist way in which the most significant features of ancient Greek physical geometry had been previously accomplished.

The fact that the most crucial of the known discoveries in physical science, of the Pythagoreans and Plato, among others of that time, were generated, from the *ante-Euclidean,* and implicitly *anti*-Euclidean vantage-point of the astrophysical conception of *Sphaerics,* points quickly to the fraudulent origins of the elementary notions underlying the usual classroom teaching of Euclidean geometry, and, therefore the related origins of the fraudulent, mechanistic view of physical-science matters, as now traditional among the followers of Descartes.[15]

The best of the ancient standpoints known to us from relevant surviving relics today, is what some loosely term astronomy, by which I mean that top-down approach known as the standpoint of *astrogation: the practice of transoceanic navigation by the stars.* To the best of present information available in public sources, knowledge of the latter, top, down approach was, like the prophet Moses, introduced to future history from Egypt, as introduced to the chosen best among the Mediterranean's relevant children of the Peoples of the Sea, the ancient Classical Greeks.[16]

13. Bernhard Riemann, "Über die Hypothesen, welche der Geometrie zu Grunde liegen" ("On the Hypotheses Which Lie at the Foundations of Geometry"), ***Werke,*** pp. 272-273 and following.

14. I.e., bottom-up.

15. This also points to what is either the implicitly fraudulent, or merely bungling use of the term "pre-Socratic" Greek philosophy, when what should have been intended was "pre-Aristotelean" Greek knowledge. Most of the travesties passed down on the subject of Classical Greek philosophy have been tolerated solely with the fraudulent terms defined by the work of Plato-hater Aristotle. This kind of what is either simply foolish or intended falsification of even the reading of key technical terms of ancient Greek texts, has been assisted by imposing dictionary meanings of Classical Greek terms which could not be supported by re-enacting the actual process of argument employed by the texts to which those modern grammarians' hoaxes actually referred. Languages are used as the media for argument, but the ideas which notions of principle are intended to be conveyed by language, rather than some reductionist's choice of literal meanings imposed upon that text as such, represent the ideas which study must adduce. Take, for example, Plato's use of the crucial term *dynamis* in his ***Theaetetus.***

16. Who, according to the Roman chronicler Diodoros Siculus, had acquired this knowledge from an Atlantic trans-oceanic culture, which had colonized a Berber region of Africa near the Atlas Mountains, and had spread its influence throughout the Mediterranean littoral, including ancient Egypt. This colonial view of the principal origins of ancient Greek culture, is the plausible conclu-

It was from the latter, from the top, down approach, that the best among the ancient Classical Greeks, such as Thales, the Pythagoreans, Heraclitus, and Plato, defined what stands out, still today, as the foundations for the only durably proven method of physical science. It was from this standpoint, implicitly, that of the stars of astrogation, that the only rigorous use of the term *universal* actually known to man, was developed, as by the relevant Egyptian and Greek founders of the preconditions for the later, modern European revival of the foundations of competent strains in modern science.

Competent scientific method always proceeds, in first approximation, downward, from universals, such as the principles of the universe adduced by means of the exemplary practice of astronomy by the Egyptian method known to the Classical Greeks as *Sphaerics.* Once we have assimilated that notion of universals, for which only a view from the conceptual vantage-point of ancient transoceanic astrogation affords us an intelligible set of imageries, we are prepared to continue that approach to the domain of the ever smaller, that, thus, beyond our powers of sensory perception. *We proceed, thus, from the universals of what appears to be the infinite, to the exploration of the domain of the universals of what appears to be the infinitesimal.*

Here, to the present day, precisely here, lies the pivotal issue of modern physical science, and science in general. The formal expression of that issue is the question: *Are infinitesimals of sense-perception the expression of an efficient form of existence, or, as the modern radical reductionists Euler, Lagrange, Cauchy, et al., argued, merely fictions? Do those apparent infinitesimals betray the existence of efficiently universal physical laws, in the sense that the universals of astrophysics are presumed to act, as efficient physical principles in their own right?* The Classical implications of that issue, as known to relevant ancient Greeks, and to the Renaissance's Nicholas of Cusa, were posed afresh for modern science by such avowed followers of Cusa as Luca Pacioli, Leonardo da Vinci, and Johannes Kepler.

The positive affirmation of the conception of the role of the infinitesimal, corresponds to that presented by Gottfried Leibniz's refined elaboration of the basis for the infinitesimal calculus, as the catenary-cued principle of universal physical least-action, the conception which provided the basis, in turn, for Gauss's physical conception of the complex domain, and for the higher physical hypergeometries of Bernhard Riemann.[17]

Indeed, Cusa's central position in the founding of modern experimental physical science, was, in a very significant part, a reflection of the Classical Greek sources made available to the circles which prepared and conducted the Fifteenth-Century great ecumenical Council of Florence.[18] The methods of the Pythagoreans, Plato, and the continuation of that tradition by the influence of the Platonic Academy, typified by Eratosthenes, are the precedent for the founding of modern European science on those Platonic principles by that Fifteenth-Century, "Golden" Renaissance which produced

Unfortunately for the mass of those among today's victims sometimes called students, the customary approach to education in most relevant institutions today, is from the bottom, up. . . . In happier nooks and crannies of the history of known human cultures, the approach was from the top, down.

the first modern sovereign form of nation-state republics committed to the superior natural law of the promotion of the general welfare.

The concept of the general welfare, traced implicitly from Solon of Athens and the concept of *agapē* defined in Plato's ***Republic,*** is otherwise known as the same principle of *agapē* defined explicitly for Christianity by the Epistles of the Apostle Paul. It is otherwise known as *the principle of the common good,* in universal natural law, and is the pivotal principle of law set forth, as the "promote the general welfare," of the U.S. Federal Constitution.[19] It is a law superior to the will of all governments, and their judges and other officials, as an out-

sion from study of the way in which fortified Mediterranean sea-coast sites were developed during the age of Mycenae and earlier. Herodotus indicates, from indicated Egyptian sources, that the Phoenician maritime tradition has a different, but parallel origin: the colonization, like the founding of Sumer, spread by a colonizing branch of the maritime culture from within the Dravidian language-group.

17. Students should trace this from Kepler's prescription of needed development of a physical calculus of the type produced by Leibniz. The crucial added point is the principle of "quickest time" provided by Fermat's famous experimental demonstration. The Leibniz calculus, which always took his collaborator Huyghens' "quickest time" into account, progressed beyond the mistaken adoption of the cycloid as primary, to Leibniz's concluding definition of the principle of the infinitesimal calculus as a catenary-, rather than cycloid-referenced notion of universal physical least action, least action "in the best of all possible worlds," the world of Leibniz's, and the U.S. Declaration of Independence's universal principle of natural law, "the pursuit of happiness," which is otherwise known to be the fundamental law of the U.S.A. as the absolute obligation to promote the general welfare.

18. Typical is the fact that, although it was Nicholas of Cusa who presented the proof, that that mythical "Donation of Constantine" used to buttress the feudal system of medieval society under the tyranny of the Venetian financier-oligarchy and the Norman chivalry, had been a hoax, it was by Cusa's working through the relevant Byzantine Greek records that he developed the legal proof that the "Donation" doctrine had been a fraud from the inception, as Charlemagne had contended earlier.

19. Those of a less than patriotic conscience in the United States today, prefer the Preamble of the slaveholders' tyranny, as set forth in the Preamble of the Lord Palmerston's notable asset, the Confederate States of America. Notable, those who defend the Confederacy's argument on this point can not be members of the human race in good standing, since they reject Christianity, Judaism, and Islam, in favor of the dogmas systemically cohering with the "Darwinian" "theory of evolution."

growth of the founding of modern European civilization by that Council, and of the continuing effort, still today: *to free humanity from the satanic grip of usurious debt-slavery to the contemporary successors and political heirs of ultramontane, medieval Venice's imperial financier-oligarchy.*[20]

The most crucial fact to be emphasized in treating the empiricists and their derivatives, including Kantianism and neo-Kantianism, is that, for them, as for the Newtonian followers of Descartes, D'Alembert, Euler, Lagrange, Cauchy, et al., even the existence of the infinitesimal must be forbidden, beyond what is assumed to be the hypothetical, *merely finite* limit which had been set for the calculus by Cauchy. That lunatic denial of reality, as by Cauchy, is the essence of what Kant and Kantianism share with the so-called Newtonians.[21] The frauds, such as those of Descartes, D'Alembert, Euler, Lagrange, Cauchy, et al.,[22] on the subject of the calculus, are maintained to the present day by all of the devotees of the Newtonians, most notably by those such followers of D'Alembert, Euler, Lagrange, et al., and Laplace, and Cauchy, as Clausius, Grassmann, Kelvin, Helmholtz, and Maxwell later. These frauds, invariably, take the form of the degree of outrageous silliness which I portrayed in some detail, a decade-and-a-half ago, in my attention to the subject of Euler's relevant argument on this issue.[23]

This controversy of modern times was not wholly original. It was a reflection of the same controversy which divided the Pythagoreans and their co-thinkers from the reductionists of ancient Greece, such as the Eleatics, materialists, Sophists, and Aristotle. However, in this case, as otherwise, it is a truly universal law of nature, on which the greatest ancients, like Heraclitus and Plato, would agree, that history could never repeat itself, as I shall clarify that point of principle at appropriate points, as we proceed here.

"Silly" would be a fair description of the faulty behavior of the reductionists like Euler, which might be accepted among the otherwise literate as "physical science." The fact that the argument against the efficient existence of the ontologically infinitesimal, is silly, has not lessened the passion with which that silliness is aggressively defended by the modern Apollonians and Dionysians alike, as in the contemporary classroom and textbook, even today.

Leonhard Euler. " 'Silly' would be a fair description of the faulty behavior of the reductionists like Euler, which might be accepted among the otherwise literate as 'physical science.' "

However, even agreement with the notion of the ontological actuality of both the infinite and infinitesimal, confronts us with a crucial kind of difficulty. Today's customary definition of physical science, as "physical," is usually understood badly, even among skilled physicists, and especially mere mathematicians. Strictly speaking, that definition is false. A competent form of a *purely physical* science, in today's conventional academic sense of the term, does not exist, neither in our universe, nor in imaginary universes other than our own.

As I shall point out now, that distinction is not merely "academic," not a mere academic sort of formality, but substantial.

Bridging 'Two Cultures'

The fraud of the ancient and modern reductionists which I have already referenced here, is the product of a combination of factors: e.g., political, philosophical, and religious. Since we are looking presently at that evidence from the vantage-point of the case referenced here, that of neo-Kantian Windelband, we can limit our attention to the role of what has been called a "two cultures" paradox, as a common symptom of the type of modern problem we are addressing under the heading of pathologies which are typi-

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20. I.e., through the superseding of Dante Alighieri's intention in his ***De Monarchia*** by Nicholas of Cusa's *dynamic* conception, as in ***Concordantia Catholica.***

21. And also that crucial, radically reductionist feature of official Soviet *diamat* ideology which ultimately doomed the Soviet Union.

22. In some of these cases, we can not entirely exclude the possibility that the fanaticism of these hoaxsters is a reflection of arbitrary, religious- like belief, rather than reason. In the case of Cauchy, the discovery of proof, from his own personal archives, of his fraudulent suppression and plagiarism of crucial work by Abel, identifies Cauchy as a fully witting liar and thief.

23. 1990, as printed in Lyndon H. LaRouche, Jr., ***The Science of Christian Economy*** (Washington, D.C.: The Schiller Institute, 1991), Appendix XI: "Euler's Fallacies on the Subjects of Infinite Divisibility and Leibniz's Monad," pp. 407-425. The argument I supplied, against Euler, on that occasion, was prompted by an effort to rescue an associate who I recognized to be already in the process of slipping into fathomless intellectual darkness. My diagnosis proved clinically correct, but, so to speak, the patient was already as good as intellectually deceased. So, as it were said, cowards die a thousand times before their death; in such cases, it is the diagnosis which proves to have far greater importance for mankind than the subject who refuses to live.

cal of modern logical systems.

This problematic feature of what I have identified so far as a conventional set of modern academic belief-systems, was usefully identified by the late C.P. Snow as a "two cultures" paradox: the mutual antipathy of physical and social science today. The true remedy for that destructive paradox still rampant in present-day academia, is to recognize what should be read as not merely the falseness of the assumption on which that corrosive dichotomy depends; but, rather, the hysteria which that false, and silly assumption bestirs, as a premise, within both of the respective, current, warring academic cultural traditions, still today.

For convenience, let us refer to this from the standpoint of an apparent paradox presented by Nicholas of Cusa, a paradox respecting the existence of discoverable universal physical principles, as posed by his founding work of modern physical science, his ***De Docta Ignorantia:*** *does a physical principle exist ontologically before mankind has discovered it?*

With closer, and more careful consideration of the principles of physical science than is customary today: science is the subject of our knowledge of the consequences of changes in *the effects of human social activity* prompted by the discoveries made by sovereign individual intellects. This knowledge is a subsidiary feature of what might be loosely identified as the empirically broader subject, the *social psychology* of the sovereign individual human mind. I mean the intentional efforts to change society's functional relationship to the physical universe we inhabit, our willful awareness of the implications of our intention which prompts us to take that selected course of action.

The ability to predict, or, better said, forecast the physical outcome of man's behavior, is a subject of a higher, more rigorous form of psychology, and of the *social psychology* of the sovereign individual mind. This idea of "predicting," as is the presently customary intention expressed by the use of the word, implies a profoundly incompetent view of man's role and capabilities within organization of the universe. At best, we can foresee certain important consequences of our decisions, or lack of decision. At best, we can foresee the nature of our obligation to warn our fellows, and to act ourselves in ways which correspond to the problem which we can foresee as probable, even almost certain. This point is illustrated by the awful moral and other failures of President George W. Bush, Jr. and his administration in the case of the almost inevitable effects of the threatening "Katrina." The most essential function of forecasting, is to foresee the nature of our responsibility to change the outcome of the present for the better.

What morally defective, but commonplace belief today implies, is that the assumed outcome, the intention of the present action, is predetermined in the way the crystal-ball and tea-leaf hoaxsters propose, the way of Bernhard Mandeville, Adam Smith, and their ilk. Contrary to that commonplace misbelief, what is always certain, is our personal responsibility to act to the effect of shaping the future in the manner stated by the relevant verses of ***Genesis 1*** on the subject of man's nature and duties.

All attempted prediction, or forecast, of social phenomena, such as economic developments, is essentially, as I shall explain this within this report, a subject of what might be termed *the science of physical psychology: mankind's relative power of mind within, and over, what is regarded as the physical universe.* Therefore, we must think of physical psychology as the kernel of *the social psychology* of the truly sane individual mind.

This term "social psychology," depends for its competent practical definition upon insight into the kind of relations between nature and mankind which Leibniz, for example, defines as *dynamic,* that in opposition to the popular, modern philosophical liberal's misconception of the universe as mechanical, as in the method of Descartes and his Anglo-Dutch Liberal and other "Enlightenment" followers. This is the same sense of "dynamic" expressed by Russian scientist V.I. Vernadsky in his, already referenced, 1935-1936 definition of the work on the branch of physical science which he named biogeochemistry.

The corollary point, is that the prevalent ideas about economy today, especially among the members of a "Baby Boomer" generation, is that there is a categorical, mechanistic separation of merely "arranging things," from the dynamical view of the determining function of those physical changes in economic practice which are the act of actually "doing things." The more popular ideas about political-economy, especially among those duped into belief in a "service economy," are those imageries in which what passes for economic policy is a focus on arranging people, their sexual and other social relations, and their opinions about almost everything. This is simply carrying to an extreme what C.P. Snow named a "two cultures" syndrome.

In the teaching of professional and popular opinion about the workings of political-economy today, this pathetic dichotomy between "social" and "physical," takes the form of the variously stated, or implied doctrine, that management of the political-economy is a matter of social processes which must be defined in a way which is independent of the physical-scientific implications of productivity of the economy considered as an integrated whole process. This denies the essential fact, the fact which distinguishes man from mere ape, that it is the application of an ongoing process of employing discoveries of universal physical principles, which is the only possible source of sustained profit, without which any society is plunged, sooner or later, into a "dynastic collapse" of the system, such as a "new dark age."

That is, implicitly, another way of saying, now once again, that the action of the human mind on the universe, to the degree it is efficient, is not a *mechanistic* form of action; it is essentially, ontologically, *dynamic.* It is dynamic in that specific sense that Leibniz demonstrates the absurdity of Descartes's systemically mechanistic view of momentum.

If we define the sovereign identity of the individual mind,


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"To understand the human mind, we must know that we must despise, with extreme prejudice, the existentialist notion of 'thrownness' in the doctrine of Hannah Arendt's sometimes beloved, Nazi co-thinker and active anti-Semite Martin Heidegger."

that which distinguish man from the apes, as the function of the cognitive creative powers, the efficient function of those cognitive powers is what is expressed as the ongoing, *dynamic* interaction among members of society, and in respect to society's relationship to the Biosphere.

To understand the human mind, we must know that we must despise, with extreme prejudice, the existentialist notion of "thrownness" in the doctrine of Hannah Arendt's sometimes beloved, Nazi co-thinker and active anti-Semite Martin Heidegger.[24] The essential relationship among the minds of the members of society, is regarded by the existentialists as axiomatically mechanistic, rather than dynamic. The denial of the existence of truth, even her hatred of the idea of truth, is her explicit contribution to the existentialism which she shared, to the apparent end of her life, with her sometime intimate, Heidegger.

The creative processes of the individual mind are sovereignly independent, that in a sense cohering with Riemann's argument for Dirichlet's Principle, a conception coherent with the special meaning which Riemann had earlier assigned to Herbart's *Geistesmasse.*[25] The "boundary" which sets the creative powers of the personality apart from the Romantics' customary ideological "night in which all cows are black," is a boundary of the form associated with Riemann's notion of the application of Dirichlet's Principle to the physical character of social processes which are functionally dynamic systems.

To wit:

Take the example of ideological systems. In the latter cases, the internal functioning of the individual mind of the inhabitant of that ideological custom, is bounded, as if externally, by a set of virtual walls, with the affect of a marine creature swimming within an aquarium which is sitting, itself, within a larger body of water. Yet, the arms, legs, and sensory organs, so to speak, of the captive creature, are interacting within the universe outside those walls. The resulting interaction between the real laws of the universe and the mind of the creature trapped within the aquarium, can be understood scientifically only in terms of treating the social relationship of the captive's mind, as organized in this way, to the implied "mind" corresponding to the principles of the universe outside.

Thus, the relationship between the mind inside, and the social processes operating in the world outside that sovereign individual mind, is *dynamic* in character, yet once again, as I have emphasized this notion of "dynamic" in my "Vernadsky and Dirichlet's Principle."[26]

True physical science, once freed from the popular lunacies among today's academic life, is not based on the study of nature apart from mankind, or social behavior apart from the adducible physical laws of nature. It is the study of the principled characteristics of mankind's discovery and proof of those universal principles of practice, by means of which man increases his mastery of nature. It is this functional relationship between the socialized cognitive powers of the individual, within his or her culture, and the effort of not only the individual, but of society, that increases mankind's power in and over nature through the application of discovered principles of universalizing qualities of human activity.

For example, consider the qualitative upshift in European demographics launched by the great reforms of the Fifteenth-Century Renaissance. Focus also, on the way in which these benefits are shown following the close of the 1492-1648 wave of religious warfare. Focus on the more recent, not unproblematic shifts in demographics of the planet as a whole, with the waning of the depressive effects of colonialism under conditions of technological progress in large regions of Asia.

A Typical Impact of the U.S.A.

It was the change in organization of society, through the introduction of that principle of the sovereign state which was based on submission to the principle of the general welfare, which defined a change in the principled features of social organization, a change which was essential for the unleashing of the potential for improvement of the condition

24. A pair whose intellectual union was separated, in the end, by little more than the thin, slightly penetrated sheet of her official birth certificate, as "Jewish." Her hatred of truth was infamously codified, in cooperation with her culturally degenerated accomplice Adorno, in that pair's echo of fascist dogma, set forth on the subject of the alleged "authoritarian personality," on behalf of that synarchistic, implicitly satanical collation of scoundrels known as the Congress for Cultural Freedom. The essential, underlying quality of that doctrine, is traced most efficiently to the Thomas Hobbes recognized widely in and following his time as the incarnation of "Old Hob."

25. Riemann, "Zur Psychologie und Metaphysik," ***Werke,*** pp. 509-523.

26. Lyndon H. LaRouche, Jr. "Vernadsky and Dirichlet's Principle," ***EIR,*** June 3, 2005.

of mankind, otherwise a potential effect of scientific and technological progress.

The rapid transformation of the U.S.A., according to the plan for national borders and objectives crystallized under Secretary of State John Quincy Adams, toward becoming the leading nation on this planet, was made possible by the victory of the republic, led by President Abraham Lincoln, over the virtually feudal depravity of the London-directed Confederate conspiracy. We took large margins of the poor of Europe, en masse, into the U.S.A., where they accomplished miracles of progress which would have been impossible to achieve had those immigrants remained in Europe.

For example, the very existence of the Biosphere and Noösphere, as experimental science has proven this existence, is sufficient, conclusive proof of the absurdity of Kant and all of the general class of his fellow reductionists. The fact that man has discovered such principles, as powers lurking within the domain of the truly infinitesimal, which the empiricists and their Kantian and other illegitimate offspring foolishly, but hysterically deny as actually existing, is sufficient, crucial experimental proof of the absurdity of the lot of such reductionist ideologues. As I have said earlier here, and in other locations, V.I. Vernadsky summed up the evidence, in his 1935-1936 directive on the subject of biogeochemistry, that the universe is intrinsically dynamic in its organization (e.g., Keplerian, Leibnizian, Riemannian), not the falsely assumed mechanical universe of Descartes et al.[27]

The problem posed, typically, by both Kant and neo-Kantianism, is the exclusion of the existence of actual universal physical principles, as that exclusion is prescribed under Kant's lunatic dictum respecting "synthetic knowledge *a priori*." Thus, by declaring, as a true psychotic might, the non-existence of discoverable universal principles, the Kantian in particular, and the reductionists in general, prohibit the very subject-matter upon which the competent practice of science, *as naturally lawful social practice,* depends, as all Apollonians and their Dionysian foster-children perpetrate this specific error.

The essential subject of a required science of physical psychology, is *irreversible changes in the historically defined physical domain.* These effects are not absolutely irreversible in the simpler sense of the matter; in a certain manner of speaking, *we can reverse what has been done before; but, contrary to the Romantics' views on the subject of Classical tragedy, we can not reverse the social process, even by the relevant brutal methods of indoctrination used on victims in places such as the Guantanamo prison, or, as the triumph of the cause of martyred Jeanne d'Arc over the Norman inquisition in France shows, or the similar imitations of the methods of the rabidly anti-Semitic Grand Inquisitor Tomás de Torquemada, the reality of the fact that what has occurred in history, or individual experience, has occurred.*[28]

The primary type of such change which must be at the center of our attention, is a change in the physical principles operating in the domain of experienced practice: such as the spread of knowledge of, and socialized use of an experimentally validatable, discovered universal physical principle. *It is this conception of change as ontologically primary,* as echoing the intention of Heraclitus, as Plato supported that intention in his ***Parmenides*** dialogue, which is the central issue before us now. It is the central issue illustrated by my references to the historical existence of the changes in history expressed by the personalities of Witte and Windelband, on the one hand, or, Leibniz, Kästner, Kant, and Schiller, on the other.

It is all a matter of the concept of *universals,* as the best principles of European science are implicitly found in mankind's experience of the challenge of transoceanic experience with astrogation, as that experience is embedded in the characteristics of the Egyptian principles of *Sphaerics,* adopted by the best among the ancient Classical Greeks.

Some Illustrations of the Point

For purposes of classroom illustration, one of the most efficient choices of starting-point for illustrations of the point about universals which I am presenting in this report, is the example of the measurement, about 200 B.C., to a relatively high degree of accuracy, of the circumference of the Earth (along a South-North longitude) by a member of the Platonic Academy, Eratosthenes. This was done by what we might describe simply, for pedagogical purposes here, by measuring the difference in the angle of the shadows cast by a pair of upright (as, by plumb bob) poles at two points along a South-North direction: one at a place in the vicinity of Egypt's Aswan Dam today (Syene), and another in Alexandria. The difference in angles cast by the shadows at noontime, during the Summer solstice, defined the rate of change by curvature along the longitudinal distance between the two points. [See **Figure 2.**]

Since the curvature of the Earth was known to the more ancient Greeks (for example) through the study of eclipses of the Sun and Moon,[29] and Aristarchus' measures of the Summer solstice and related matters, Eratosthenes, a product of Cyrenaic ancestry, trained in Athens, who was the leading scientist based in Egypt, and a correspondent of Archimedes of Syracuse of that time, was rather fully informed on these

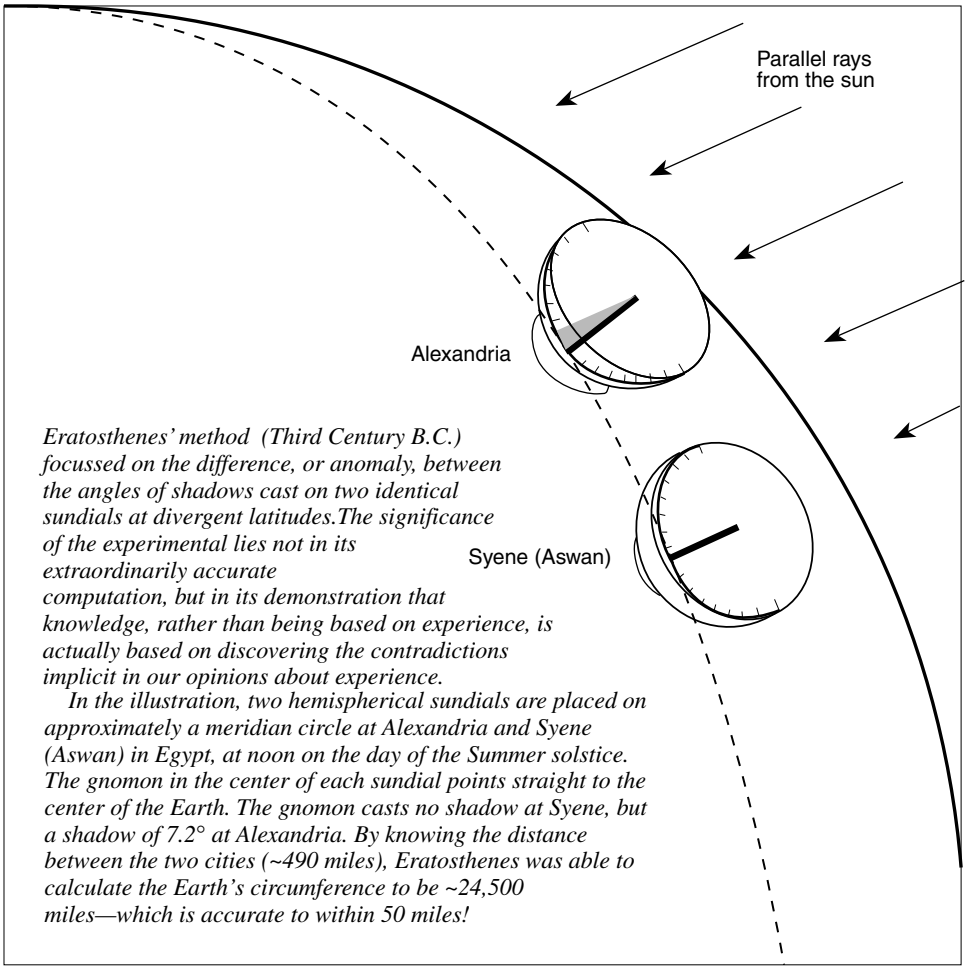
27. *Ibid.*

28. For example, when we draw down the resources we extract, as by mining, from the Biosphere, we are undoing what was done by the Biosphere before, but we have retained, *dynamically,* in newly developed form, that which we have thus undone.

29. For example, the proof of the Earth's orbitting of the Sun as supplied by the astronomer Aristarchus circa 280 B.C. Cf. Sir Thomas Heath, ***Aristarchus of Samos: The Ancient Copernicus*** (New York: Dover Publications, Inc., 1981). The Roman Claudius Ptolemy was a willful hoaxster.

FIGURE 2

Eratosthenes' Method of Measuring the Size of the Earth



Eratosthenes' method (Third Century B.C.) focussed on the difference, or anomaly, between the angles of shadows cast on two identical sundials at divergent latitudes.The significance of the experimental lies not in its extraordinarily accurate computation, but in its demonstration that knowledge, rather than being based on experience, is actually based on discovering the contradictions implicit in our opinions about experience.

In the illustration, two hemispherical sundials are placed on approximately a meridian circle at Alexandria and Syene (Aswan) in Egypt, at noon on the day of the Summer solstice. The gnomon in the center of each sundial points straight to the center of the Earth. The gnomon casts no shadow at Syene, but a shadow of 7.2° at Alexandria. By knowing the distance between the two cities (~490 miles), Eratosthenes was able to calculate the Earth's circumference to be ~24,500 miles—which is accurate to within 50 miles!

preliminary matters bearing on his investigations; the approximately spherical curvature of the Earth was well established. The measurement of the rate of curvature of the arc along the length of the distance between the two points, therefore supplied the estimate of the size of the Earth later used by Nicholas of Cusa's friend Toscanelli in crafting the estimated map of the Earth which he supplied to his correspondent Christopher Columbus [**Figure 3**].[30]

The most important discoveries made next, following those by Leonardo da Vinci, were by Johannes Kepler, whose work defined the context within which Fermat's crucial experimental discovery of the principle of quickest time occurred. The work of Huyghens, and the first, mid-Seventeenth-Century astronomical measurement of the speed of light to a fair degree of accuracy, by a student of Huyghens, and the plethora of fundamental and related discoveries in many fields of physical science, and others, have, as Albert Einstein came to recognize, typified the actual progress of science, as by Gottfried Leibniz and Bernhard Riemann, from the time of Kepler's death through the present day.

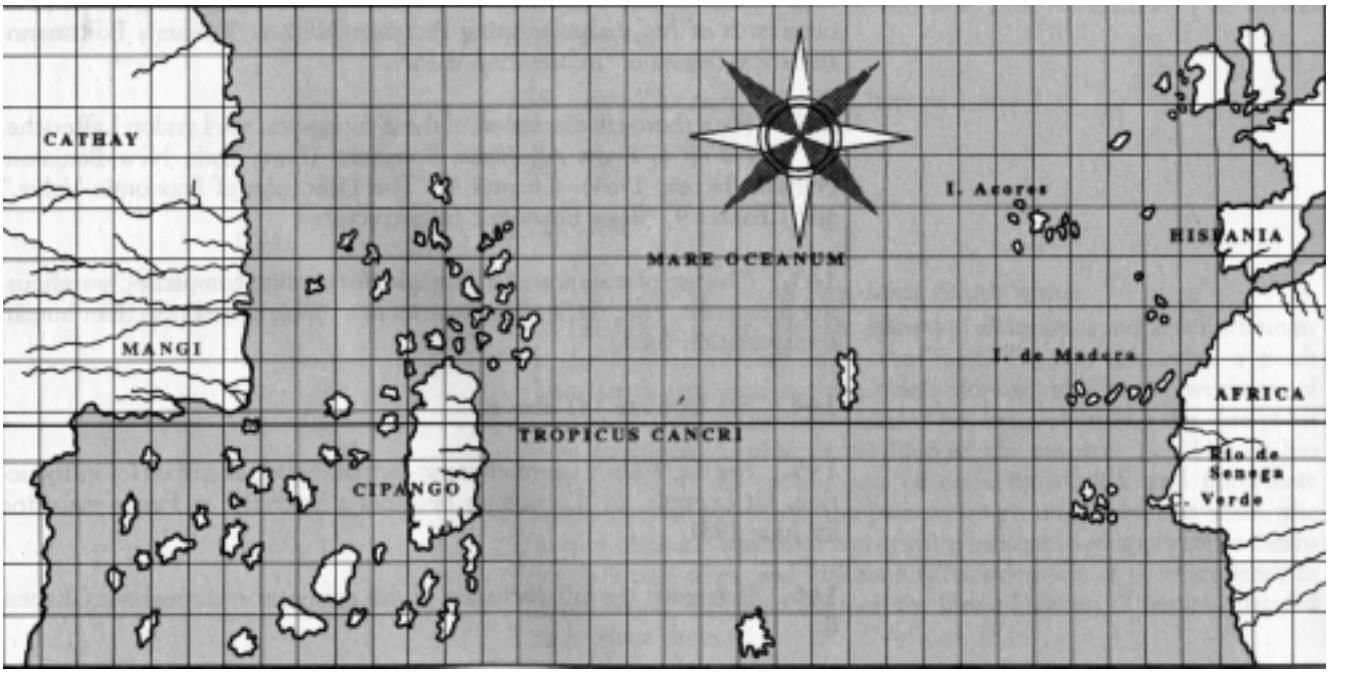
A crucial modern discovery by Leibniz involved his attack on the fallacy perpetrated by René Descartes's incompetent description of momentum. Leibniz's meticulously crafted argument, exposing Descartes's fallacy, is valuable not only because of this contribution by Leibniz in defining an essential principle of any competent mathematical physics. This proof by Leibniz includes the even more essential demonstration of Descartes's blundering incompetence, on this and related subject-matters; it brings to light a much deeper principle, that the physical universe, including economic processes, is governed by dynamical, rather than mechanistic principles. Leibniz's adoption of the term *dynamics* for this occasion, as this is central to his definition of a science of physical economy, was a direct, intentionally translucent borrowing of the concept of *dynamis* from the Classical Greek of the Pythagoreans, as by Plato.

This affirmation, by Leibniz, of the Classical notion of dynamics, became the principal dividing-line within the ranks of nominal physical and related science from that time to the present. Notable is the role of the Venetian, Abbé Antonio Conti, operating from Paris, who was the leader until his death in the middle of the Eighteenth Century (1749), in apotheosizing the synthetic, anti-Leibniz cult of black-magic specialist Isaac Newton. Conti was the key organizer from Paris, together with Voltaire, of the network of so-called "Newton-

30. For example, Cusa knew of and reported the Earth's orbiting the Sun before the work of Copernicus, Brahe, and Cusa's avowed follower Johannes Kepler. The error in Toscanelli's map, in placing the coast of China at what was actually the coast of North America, was the result of typically Venetian lies, as by Marco Polo et al., in greatly exaggerating the distance and perils of the journey from Venice to China. Columbus's confidence in the first voyage almost certainly reflected his knowledge of the North Atlantic oceanic currents, even before the Portuguese recognized the kindred ironies of the South Atlantic.

FIGURE 3

Paolo dal Pozzo Toscanelli's Map, Sent to Columbus



ian," anti-Leibniz cult-centers throughout Europe. All of the essential dividing-lines within what is called European physical science since that time, have been based on the division of the ranks between the adherents of the *mechanistic* dogma of Descartes and the *dynamic* comprehension of reality by the followers of Cusa, Leonardo, Kepler, Fermat, Leibniz, Kästner, Gauss, Carnot, Gauss, Dirichlet, Riemann, et al.

This division in the ranks of what is usually identified as modern science, is an echo of the division between the *dynamic* current associated, on the one side, with Thales, Heraclitus, the Pythagoreans, Solon, Plato, and his followers, and the various, *pro-mechanistic* brands in known European cultures spawned, chiefly, by the Delphi cult of Apollo, including the Apollo cult's burial and subsequent adoption of the alleged orphan on its doorstep, the nasty, Python-like Dionysos.

The Idea of Global Sea-Change

To begin the pivotal core of the argument assigned to this chapter of this report, take the observations presented by Bal Gangadhar Tilak, in his ***Arctic Home in the Vedas,*** who pointed to evidence akin to that he had presented earlier in his ***Orion,*** which, in fact, showed a knowledge of a magnetic-polar cycle in the relevant ancient culture. Such information, and the conclusions which relevant European scientists and scholars had drawn from it, had been used, sometimes, to support some cultish constructs; but, among sounder minds, this led to thoroughly sensible conclusions, once the relevant, shifting geographic patterns under prolonged glaciation were taken into account [**Figure 4**]. How, when, and where could mankind have prospered, relatively speaking, under such conditions?

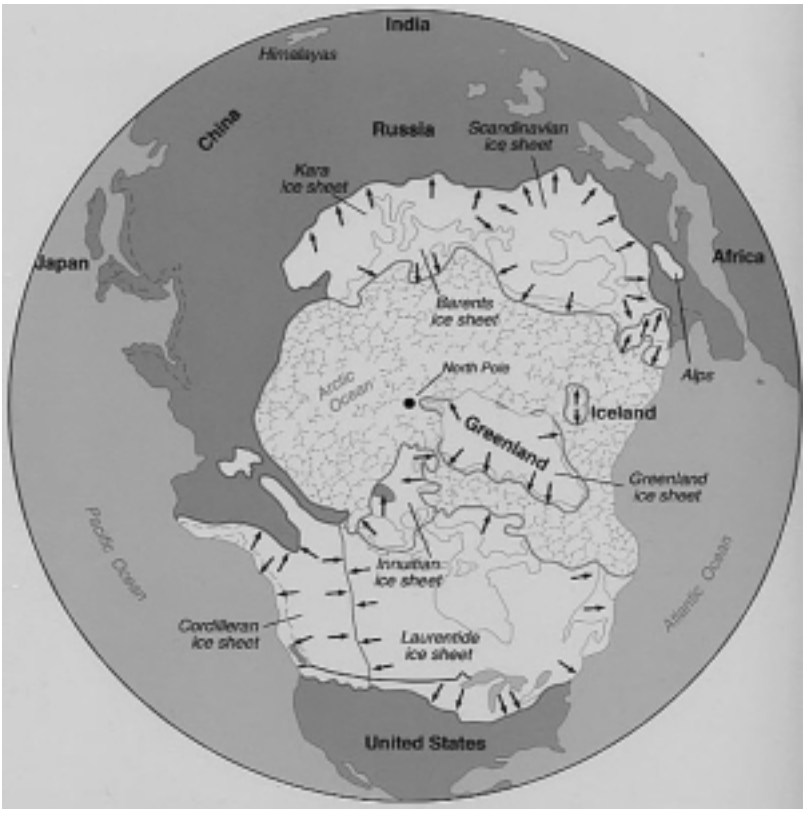
When we think clearly, we can not accept the wildly conjectural, arbitrary assumption, that the main currents of development of human culture had flowed downstream, from deep inland, along riparian pathways, into the lakes, seas, and oceans. The simple mode of potential food-supply implies the reverse: that the superior quality of sustainable lines of development of cultures, had run in directions contrary to the British Biblical archeologist's "history began in Mesopotamia" model.

Take as a matter of illustration, the importance of the orientation of the function of major river-systems as links between the deep inland headwaters and transoceanic and related commerce. Does economy flow from the headwaters, or, as in a truthful understanding of this imagery, is it global maritime traffic which spreads the influence of its existence upstream? When we pinpoint the factor of marginal physical gain whose existence depends upon the existence of functioning maritime commerce, sane people are impelled to recognize the truth. *Development is an effect which is spread upstream!*

To similar effect, look at this subject-matter from the vantage-point of the truth buried within the cultish fantasies of a British geography teacher, Halford Mackinder, the cult

FIGURE 4

Extent of Glaciation During the Most Recent Ice Age



Source: http://shiro.wustl.edu.

of *geopolitics.* Despite the deadly lunacies embedded within the elaboration of Mackinder's work by Karl Haushofer, et al., these fellows were describing something whose actual scientific roots went much deeper than their shallow minds could plumb. The better view of what became known as "geopolitics," was rooted in biological images, rather than simple, commercial thinking about geography.

The fact which must be rightly reassessed, in studying the implications of the concept of geopolitics, is that the history of known political and quasi-political expressions of civilization demonstrates, that, *until the global impact, during and after the U.S. Civil War, of the change of direction which has been set into motion by the impact of the U.S. development of the transcontinental railway system,* the most durable currents of social-political-economic development of known civilization, from the known most ancient, into modern times, had been "genetic"-like expressions, or reflections of maritime, rather than land-based processes of leading cultural development. The way in which European civilizations developed under the leading impact of maritime (e.g., "Peoples of the Sea") cultures, reflects the way in which economic development flows upstream—against the stream—along downstream routes. In ancient into modern terms, this was literally upstream. Since the cumulative effects of what was set into motion by the Fifteenth-Century Golden Renaissance, technological development has superseded, but not eliminated upstream riparian development as the leading force in shaping the flow of history. So, often, the future determines the present, especially in matters whose flow, along channels of the Noösphere, is energized by the creative mental powers unique to man.

This is the underlying implication, the underlying reality, expressed by the psychosis-tending obsessions of the modern term "geopolitics."

The terrible failure for future generations, of the essentially destructive, plague-like explosion which the predator Genghis Khan set into motion, as his contribution to what was otherwise expressed by Europe's Fourteenth-Century "New Dark Age," illustrates the point. The significance of the long wave of domination of Europe by medieval Venice and its Anglo-Dutch Liberal offshoots, is a phenomenon of similar relevance. The key is not merely that the intersection of water-borne maritime and riparian commerce has created, until recently, what was, unquestionably, the most effective, most efficient catalyst of the role of maritime power since times prior to the historical "Peoples of the Sea," into modern times. The key is a category of ideas which exists outside the bounds of the intellects of Kant and the neo-Kantians.

As I have emphasized above, the first significant break in a pattern which has prevailed since deep into the last Ice Age, came with the development of the railroad during the Nineteenth Century. It was not the development of railway systems as such, which defined the qualitative change in world history this unleashed. *It was the orientation toward transcontinental railway systems, as typified by the work of then U.S. citizen Frederick List inside the U.S.A.* The impetus for this role of rail came from within earlier developments within the U.S.A. itself, as the case was defined by professional historian H. Graham Lowry, in his 1988 ***How the Nation Was Won.***[31] That impetus behind that commitment to the development of transcontinental rail systems, was copied in Germany, D.I. Mendeleyev's Russia, and elsewhere, is a story of great relevance for the setting which the case of neo-Kantian Windelband expresses.

It was understood from early during the Seventeenth-Century beginnings of the colonization of North America, that the security of these colonies depended upon a continental

31. H. Graham Lowry, ***How the Nation Was Won: America's Untold Story, Vol. I 1630-1754*** (Washington, D.C.: EIR, 1988).

development-process. This was the basis for constant efforts at cooperation with an extremely thin population of relatively indigenous peoples of the continent, an attempt at cooperation which was aborted repeatedly through the fostering of so-called "Indian wars" against the colonists by sundry Jesuit, other French, and also English adversaries of the development of the English-speaking colonies. The outcome of this was the policy consolidated in U.S. diplomacy under then Secretary of State John Quincy Adams, which defined the natural borders of the United States to be Canada on the North and Mexico on the South, and the Atlantic and Pacific oceans, east to west. The settlement of this relatively vast territory, therefore required efficient mass-transportation systems for people and freight. The Great Lakes and Mississippi River systems, were the area of initial emphasis; the development of the transcontinental railway system was decisive.

This development of transcontinental railway systems, such as the pre-1898 French, trans-Africa line from Dakar to Djibouti, and Kitchener's ending that French project at Fashoda, illustrates the point, as do the German project for a Berlin-Baghdad railway, and the actuality of the development of Russia's Trans-Siberian railway through, in part, cooperation with China.

It was this emergence of transcontinental and related railway systems, which challenged the absolute monopoly of hegemonic strategic power which maritime culture had enjoyed since times of the Peoples of the Sea, a maritime culture which was thus enabled to outflank, strategically, the military and economic power represented by the sheer mass of forces represented within the land mass.

It was the victory, led by U.S. President Abraham Lincoln, over the Confederate pawns of imperial Britain's Lord Palmerston and his puppet Napoleon III of France, which changed the world, by shifting strategic power away from imperialistic systems based upon so-called sea-power, to the unleashing of the internal economic potential of the interior of the landmass. That was the effect of the development of transcontinental railway systems and their regional and local extensions. That will be magnified enormously by the development of magnetic-levitation systems as superseding friction rail.

This were strongly implied to any thinking physical economist, when we take into account not only density of potential, harvestable food-supplies, but the development of agriculture through circulation of seeds and the like. All in all, the potential for a durable form of proto-urban-centered cultural development under the relevant adverse conditions associated with prolonged glaciation, points to the maritime culture as the more durable choice of those times: from the standpoint of consideration of successful modalities for multi-generational development. The known pre-history and history of the region of the Mediterranean, and the relevant, dominant role of maritime culture, is a case in point.

If we can accept the existence of mid-glacial cultures with the included attribution of magnetic-pole cycles, that represents the discovery of a crucial fact which would disprove fundamentally certain contrary, popular assumptions which must be discounted, in any case, for reason of their specifically cultish lack of regard for scientifically credible evidence.

It is the increase of potential relative population-density through scientific and related cultural development, which generates those marginal increments in expressed physical power of the individual human mind, from which human progress always flows upstream in one sense or another.

Change As Universal

However, more significant than even such evidence of ancient knowledge of cycles corresponding to those of the magnetic North Pole would be, we are on far more certain ground when we reflect on the implications of principles of Sphaerics.

On this account, competent physical science is more than a two-way street.

Physical science is, on the one hand, the pathway *in mental life* through which mankind's power over nature is accomplished. On the other hand, it defines the way in which the individual human mind must operate, and be developed, if mankind were to have survived, as mankind, in the circumstances of the Earth during the opportunities presented by the recent two millions years or so. It also points out those principles of social relations among sovereign individual intellects, on which a culture, composed of such individuals, must be organized, to produce the viable forms, and development of cultures, on which the potential for survival and progressive development of the quality of the individual member depends.

It is the dynamic, as opposed to mechanistic method for assessing this set of physically efficient forms of development of social relations, which provides us an insight into the universal implications of the relationship among Greeks and Egyptians as defined by the evidence inherently lodged within the practice of *Sphaerics.* That is the point of reference on which the generating principle of this present report hangs. That point of reference is fairly summed up under the title of "the principle of change," as Plato emphasizes this in such included locations as his ***Parmenides*** dialogue.

Start the relevant systematic argument as follows.

Consider the implications of the adoption of the Pythagorean method, the method named, not as "geometry," but *Sphaerics,* a name for what was, in fact, the navigational science of astrophysics. To summarize certain principled conclusions, respecting scientific method, which were adduced from the experience of Sphaerics, they did not employ anything like the so-called "Euclidean" assumptions of a mistaken, virtually Babylonian, notion of geometry, as plane and solid. There were no "self-evident" definitions, with attached strings of attended axioms and postulates. *Sphaerics was not a non-Euclidean geometry, but, on the functional scale of progress in scientific development from superstition to knowledge, an anti-Euclidean geometry in the direction of Riemannian hypergeometries.* The principles employed for the

pupils' introduction to physical science were, essentially, that no line can be generated by a point, no surface by a line, and no solid by a surface. Nothing important exists, or can be created, without the *power, dynamis,* of principled physical action.[32]

I repeat a crucial point: The latter point is known by them as the concept of *dynamis,* as referenced by Plato, which Leibniz translated as *dynamics.* That term is translated into English as the principle of *power,* which is the English translation of Leibniz's use of the German term *Kraft.* The ability to generate higher orders was defined as a *power,* and thus implicitly *a function of physical action of change of state,* defining, thus, a physical geometry rather than a nominal one.

To double a square by construction, rather than algebra, expressed a power. To double a cube, as the Pythagorean Archytas did, expressed a power. The construction of the dodecahedron expressed a power. Carl Gauss's construction for the *Pentagramma mirificum,* is another such instance of the same case.[33] These powers, illustrated by constructive geometry, implicitly define an action between or among the states represented as end-points, fore and aft. This is the significance of Plato's view on the subject of Heraclitus' "nothing is constant but change."

These several bare principles were not a primary foundation on which science was to be constructed, but a warning against the errors which would ruin attempts to understand the lessons which the universe, as represented by astrophysics, is attempting to teach us. The concept of change *per se,* is primary. Thus, for those such as the Pythagoreans, mathematics existed only as a hod-carrier of the experimental physics—Gauss's "queen of the sciences," the essential companion of physical science—of crucial universal anomalies in a *physically* efficient universality subsumed by experimental astrophysics. The mathematics determined by physical science, rather than *a priori* ideologies, was *a principle of physically efficient change of state.* This is the view of the Pythagoreans, as presented to us by Plato.

This power, uniquely specific to the human social individual, among all living species, is the most crucial proof of the special nature of mankind, in contrast to all other living species. This is the basis in fact for the concept of the Noösphere.

What we have, therefore, is the precautionary requirement of measuring what we observe as within a continuous universal spherical organization of observed charges in the observed universe "above." That informs us, only, of the way in which we agree to be sociable, which is to correlate our observations and measurements according to this common way of referring to what we have observed, and are observing. That principle is demonstrated, with a vengeance, by the approach to astronomy taken by Kepler and Gauss, most emphatically.

One does not need to be a professional astronomer to know this; it is sufficient to be able to think, although, as serious students might protest, such thinking for such purposes may, admittedly, take a bit of work.

The conceptions which conform to that standard derived from such views of astrophysics are called *universals.* That is the restricted significance we must employ for use of the terms *universe* and *universals,* such as *universal physical principles.* That should be what we mean to say when we say *universal principles.* It is only conceptions which meet the standard of proof for universal physical principles which competent people identify as principles of physics, law, or anything else. Anything less than that, are to be regarded merely as yet-to-be-proven mere generalizations.

This brings us, again, to the matter of Heraclitus.

We know, painfully, little about Heraclitus beyond the implications which can be adduced with certainty from Plato's treatment of the notion of a universal principle of change, as the primary real mode of existence in our universe; but, by implication, as I shall now explain, that little is a lot.

2. The Mind of Heraclitus Views the Stars

To acknowledge the relevant formalities of the matter, Russia's Academician Vladimir Ivanovich Vernadsky (1863-1945), Academician of both Russia's Imperial Academy, and, later, also, the Soviet Academy, is a world-historical figure, who is to be viewed, from what is known today, as of approximately the historical rank of his sometime teacher and predecessor Dmitri Ivanovich Mendeleyev (1834-1907).[34]

32. The way in which the science of Egypt was crafted to correspond to the relationship between two crucial stars, is an example of this principle. From the standpoint of the history of a validatable mode of universal physical science, the idea of "geometry" itself is false to science, when we recognize the implications of the practical difference between "top, down" (Sphaerics) and the "bottom feeders" emphasized by the devotees of the "it began in Mesopotamia" cult, which is represented by standard elementary classroom and textbook instruction in geometry today; even up to the nominally highest-ranking levels in the science community today!

33. See note 11.

34. "Vernadsky and Dirichlet's Principle" (see note 26). Today, we have better insight into the intellectual relationship between these two Titans of modern science. As an offshoot of a presentation which I delivered, now about two decades ago, under the auspices of our Fusion Energy Foundation, our collaborator Professor Robert Moon was prompted to revive work on an important revision of Mendeleyev's Periodic Table which Moon had taken up, provisionally, years earlier—on the issue of the essential, irrational arbitrariness of the doctrine of the "magic numbers." This work was interrupted and halted by Professor's Moon's death in 1989, but finding those qualified to continue that promising line of investigation, has remained on my agenda to the present instant of writing. Mendeleyev was, therefore, clearly on the trail of the cosmic implications of the study of the physical history of isotopes, as Moon had recognized. Therefore, the 1935 views of Vernadsky on this subject of physical chemistry, as expressed in that referenced location, show the essential continuity of that line of work of the two historical figures of modern science. The need to continue this line of the work of Professor

Vernadsky's successive achievements in defining, first, the Biosphere, and, then, applying the same method to define the Noösphere, have given us, not one, but two ways of defining science's indispensable notion of universality. First, there were the starry heavens as known, in principle, to relevant ancient transoceanic navigators, whoever these ancients might have been. Now, as a benefit of the work of Vernadsky, we have a more Earthly basis, in the universality shown on our planet itself, in the evidence of what Vernadsky defined as the Noösphere.

Later in this chapter, I shall restate that specific case, as I have in earlier published locations, such as "Vernadsky and Dirichlet's Principle." First, I shall now proceed to situate the issue historically.

The significance of that fact which I have just cited here, is twofold. First, on the surface of the matter before us, we have the existence of two primary empirical sources, astrophysics and the Noösphere, rather than one, for a rigorous concept of scientific universality. This strengthens our insight into each of these reciprocal ways of defining the essential meaning of science as such. Second, it supplies the basis for empirical proofs which demonstrate the efficiency of the creative individual human intellect, and its social expression, and demonstrates that more forcibly than were otherwise accessible to scientific inquiry today.

However, in choosing between the two cases as the starting-point for our argument here, the following, compelling consideration of scientific principle, the Heraclitus principle, must be taken into account.

I emphasize what I have already stated here earlier. This present report of mine on the Kantian paradoxes, is dedicated, in my original capacity as a leading physical economist today, to a matter of the scientific conception of the underlying processes unique to the human individual mind, rather than the basis which would have been preferred, otherwise, in the department of physics, as that department is customarily defined today. Therefore, the issue of the principle which defines the Noösphere, should be preferred as our primary point of departure here, after which we shall examine the astrophysical implications of that view, this time from the standpoint of the action of the human mind on the physical universe in which we dwell.

We must prefer this sequence, rather than beginning as the indicated ancients had proceeded, with the study of the human mind as it might be viewed from the starting-point of the stellar cosmos.

In other words, not only are we are viewing the cosmos as the work of the Creator; we are viewing man as he has been intended to become, to develop: *man as acting in the efficient image of that Creator.* This is the standpoint which I employed in my earlier "Vernadsky and Dirichlet's Principle." The crucial point for the scientist is, that the concept at issue here, is, *primarily, what the individual human mind does to change the cosmos, rather than the different question, for a different occasion: what the cosmos does to man.*

Before proceeding to that principal topic of this chapter of our report, there is one dirty little matter to be put to one side.

The view of man I present, thus, here, is in specific opposition to the more popular, but frankly Satanic views prescribed by the Delphi cult of Apollo and its pro-Satanic disciples of such modern parodies of the Olympian Zeus cult as empiricism and Kantianism. The view of the creative powers of the individual human mind which I represent here, is in opposition to the views held by reductionists, such as both the empiricists and their existentialist offspring of the frankly satanic, Dionysian cult of Friedrich Nietzsche.

Those hypotheses, when combined with the proofs corresponding to a unique experiment, define the existence of the performing, unseen object, whose shadowy presence is reflected in a cognitive view of the experience of our sense-perceptions. What is defined, thus, is the existence of the object which is so pervasive, everywhere, that it is expressed even beyond the limits of the greatest conceivable smallness of calculations. It is not the mere mathematical infinitesimal in itself which is the power; it is the universality of the principle of our universe whose efficiency reaches, to express itself, into the tiniest nooks and crannies of that universe.

Those latter are, in their extreme expression, the views of such among Nietzsche's followers as Adolf Hitler, Martin Heidegger, and, in turn, their existentialist associates and followers. However, with closer examination, all existentialists are no less Satanic—one might say, "Satan wearing a figleaf," than the howling Friedrich Nietzsche.

It is to be said, similarly, that the empiricists in general are no less Satanic on this account than all others among those who uphold that Lockean empiricist tradition of what is termed either "property" or "shareholder value," a tradition which places property above, and in opposition to the rights of the person. The latter is the policy deployed under the Preamble of the pro-slavery constitution of the Confederate States of America (CSA). The Confederacy's notion of "property right" (e.g., "shareholder value") was the same devilish

Moon is of high-ranking importance today, in the increasingly urgent task of managing the natural resources of our planet during the course of this new, present century.

dogma of what were, hereditarily, specifically, both the Iberian-Venetian (Habsburg, et al.) and Lockean (Anglo-Dutch Liberal) apologies for the institution of modern chattel slavery.[35]

Vernadsky Through the Eyes of Riemann

In my endorsement of Vernadsky's statement, that the physical space of his universal domain of the Biosphere and Noösphere, is Riemannian, I was careful to stipulate that Vernadsky's understanding of Riemannian geometry itself was poorly informed.[36] Nonetheless, despite that shortcoming in his limited direct knowledge of this matter of Riemann's work, his own objections to the advice he had been given on the subject of Minkowski and others, are valid objections to certain elements of the point of view of those who might have misadvised him on some points of the subject of geometry. He had been told by "N.N. Luzin and S.P. Finikov," that his, Vernadsky's dynamic portrait of the Biosphere and Noösphere were Riemannian, and on that specific, narrow point of fact, they were right. Such were the pitfalls of the intellectual life of science under the sway of the reductionism permeating the Soviet system's Marxist ideology.

On this account, it should be readily understood, that the impact of characteristically, heavily reductionist, often hysterical, and sometimes savagely intrusive institutions of Soviet ideology on Russia's science, would tend, strongly, to prevent the circulation of competent insight into even the merely non-Euclidean geometries such as those of Lobachevsky and John Bolyai, let alone an explicitly *anti*-Euclidean physical geometry such as Riemann's. Soviet ideology's intrinsic hostility to both Riemann and, in fact, to Vernadsky's work as well, had two complementary premises in the religion-like, ideological kernel of the Marx-Engels legacy. This parallels the contrasting, often brilliant accomplishments of Soviet science in the military domain, where scientific competence was at a premium, in contrast to the often dismal management outlook prevalent in the effects seen in the civilian sector, where brutishly reductionist Marxist-Leninist ideology tended to reign.

First, therefore, in studying the core of the fundamental contributions to modern science by Vernadsky, we must take into account the characteristic scientific incompetence, and aggressive intrusiveness of the radical reductionism inherent in the predominantly British characteristics of the ideology and method of Engels, most emphatically, but also in the thinking of Marx.

On the first issue, that of Soviet reductionist ideology, the qualification to be stated, is that Vernadsky, first, does understand clearly what he means by a geometry of the *physical space* of both the Biosphere and Noösphere, respectively, and identifies this physical space as ordered in a dynamic, rather than mechanistic way. He does recognize that *physical space* as he defines it, requires a geometry which, as a matter of fact, meets the requirements of a *characteristically dynamic* quality of geometry, a geometry consistent with the actual characteristics of nothing other than the sense of Riemann's implicit exclusion, in the fact of his practice, of sundry Cartesian geometries, and also non-Euclidean varieties such as those of Lobachevsky and John Bolyai.[37]

On the second issue, Vernadsky's lack of clear understanding of Riemann's work, the problems become somewhat complicated. These complications have important relevance to the treatment of the problems which neo-Kantianism typifies still today.

Vernadsky was clearly a practicing Christian in his way of thinking, a practice probably influenced, from where I sit, by awareness of the legacy of Cyril and Methodius. That probability of this influence on his scientific outlook is distinct from, but not in conflict with a second aspect of this issue. For this occasion, I would put the distinctions involved under the heading of religious issues, in the following way.

There are two general classes of what could be fairly received as authentically Christian belief, among most of our U.S. varieties of so-called "fundamentalists," the latter which should be excluded from being seriously considered to be actually Christians, but, rather, recognized as representing the belief of dupes of essentially pagan cults decorated with inappropriately borrowed names of a few Christian predicates.[38] That is to distinguish such cults from a traditional

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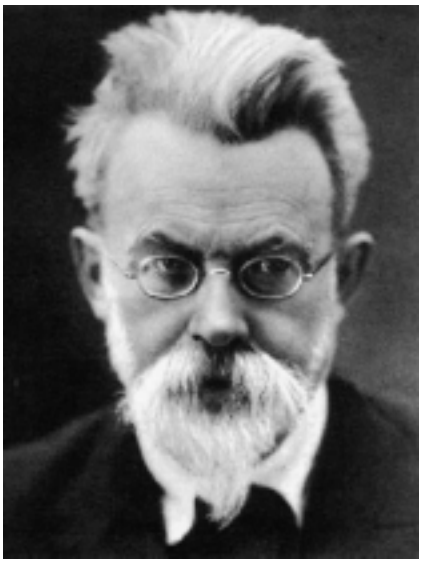
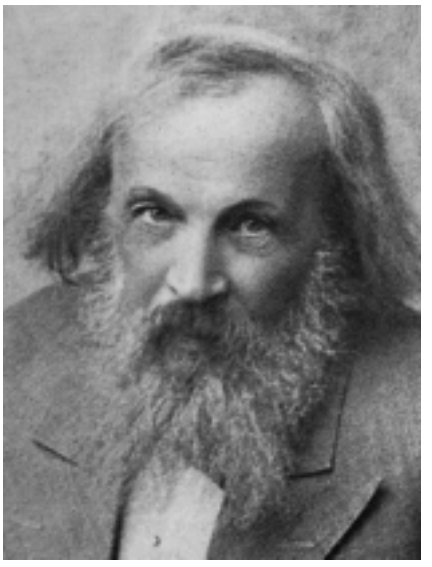
35. As I have already emphasized in various fashions, up to this point in the report, the systematic denial of the existence of the common, identical principle of both human scientific and Classical artistic creativity is, as Aeschylus' ***Prometheus Bound*** emphasizes, the characteristic of the Delphi Apollo cult and its appendage the Dionysos cult. Hence, reductionism, which seeks to crush the noëtic principle out of existence, can not be regarded as other than implicitly Satanic. It is the principle of evil in the existence of the human species, as Plato and his Socrates understood.

36. Cf. Lyndon H. LaRouche, Jr., ***The Economics of the Noösphere*** (Washington, D.C.: EIR News Service, 2001) [appended excerpts from Vernadsky, Problems of Biochemistry II, Sec. 20), pp. 315-318].

37. See Riemann on Gaussian physical geometry, in Riemann's 1854 habilitation dissertation (note 13), and in Gauss's references to the subjects of Bolyai and Lobachevsky in both Gauss's ***Werke*** (including the appended volumes of correspondence) and as documented in ***Carl Friedrich Gauss: Der 'Fürst der Mathematiker' in Briefen und Gesprächen,*** Kurt-R. Biermann, editor (München: Verlag C.H. Beck, 1990). From his 1799 dissertation on, Gauss's geometry was, like Fermat's, a physical geometry, echoing what I have underlined above as the famous distinction underlined by Fermat, as first attested in Gauss's own 1799 attacks on the hoaxes of D'Alembert, et al. Under the personal attacks on him launched, after the 1799 dissertation, from Napoleon Bonaparte's France, Gauss avoided any explicit public reference to his own views on physical geometry until the famous responses to Gerling, and to Jonas and Farkas (Wolfgang) Bolyai on this subject, beginning 1832.

38. I employ "Christian" here in the ecumenical sense of Cardinal Nicholas of Cusa's ecumenical ***De Pace Fidei.*** For example, the standard Gnostic belief is typified by the example of Aristotle's theology, as that was denounced explicitly by Philo of Alexandria, as being implicitly a "God Is Dead" doctrine. The real world, according to that Aristotelean argument, is not run by the Creator, but by mysterious forces, as described by the Gnostic





The Russian-Ukrainian scientist Vladimir I. Vernadsky (left) is of approximately the same historical rank as his teacher Dmitri I. Mendeleyev (right). The 1935 views of Vernadsky on physical chemistry show the essential continuity of the work of these two great figures of modern science—a line of work which continues to be of great urgency today, in the increasingly urgent task of managing the planet's natural resources.

Christianity, which is opposite to that counterfeit currency circulated by the Protestant "fundamentalists" and their nominally Catholic equivalent. The "anti-fundamentalist," truthful tradition, expresses the sense of a systematic belief in accord with an acceptance of a sane, but not always perfectly sound, traditional, honestly intended reading of one's *breviary*'s ***New Testament*** predicates.

The second class of actually Christian belief is based on a specifically scientific quality of confidence in what may concur with the faith of the first class of believer; however, this time, belief is enriched and maintained, as the modern tradition of Cardinal Nicholas of Cusa's ***De Docta Ignorantia*** does, from the standpoint of faith coinciding with the scientific authority of knowledgeable, ecumenical reason.[39]

In the case of Vernadsky, it is the second aspect of Christian belief which is clearly outstanding as an integral implication of his work as a scientist. The latter is the quality which implicitly permeates the work of Vernadsky on the subjects of the Biosphere and Noösphere. No other conclusion, but the latter one, could be competently adduced from what I have referenced as the work of Vernadsky as a scientist; this implication of Vernadsky's work for modern science in general, can not be avoided by competent scientists. It is otherwise fairly identified as the quality which also permeates, similarly, the work of Bernhard Riemann.

In this respect, as I shall clarify this point later in this chapter, competent science can not be separated from a competent kind of theology, a theology which has nothing to do with those pagan superstitions which are often passed, like counterfeit money, in the form of the kind of "religious fundamentalism" to which the intellectually and spiritually impoverished President George W. Bush, Jr., pretends. Bush's opinion is, ostensibly, more or less the kind of politically cosmetic, fraudulent religious cloak, which Bush claims to have adopted, by inexplicable instant persuasion, at the implied snap of the grubby fingers of George Shultz.

The very existence of a competent physical science depends on the act of discovery of what are called "universal physical principles," which can be accomplished only through a quality of an individual's sovereign act of creative intellectual discovery, an event utterly alien to what is manifestly the deeply troubled mind of this overtly sadistic President. Human knowledge of the experience of such valid acts of discovery of such principles, is the notion of creation from which knowledge, as distinct from mere blind faith in the existence of a Creator, flowed, as this knowledge flowed, with certainty, from the celestial heavens of ancient astrophysical practice, into human knowledge.

The problem encountered in much of the practice of science today, is the impassioned rejection, as by the empiricists, of that notion which I have just identified, the rejection of the experience of the creative act of discovering an empirically demonstrable universal physical principle, by the sovereign individual. This is a rejection which is also the characteristic of such heathen devotions to reductionism as empiricism and of the popular varieties of so-called "religious fundamentalism." It a rejection of the practice of creative reason, a prohibition which can be dated in ancient European mythology to the Olympian Zeus's banning of mankind's access to knowledge of fire. It is that sophist's rejection of reason, which was characteristic of the cult of the Delphi Apollo and the Roman imperial Pantheon.

One should ask oneself: Since these latter, poor unfortu-

Claudius Ptolemy, which operate within the bounds of that from which the Creator implicitly excluded His own Will, by creating a perfect, permanent system. Most of the wild-eyed Protestant cults in the U.S.A. since traitor Aaron Burr's grandfather Jonathan Edwards, passionately enjoy that prosatanic, "fundamentalist" taint.

39. Essentially, Nicholas of Cusa's ***De Docta Ignorantia*** is the forerunner of Riemann's 1854 habilitation dissertation and Riemann's development of his hypergeometry on the basis elaborated in his ***The Theory of Abelian Functions.*** Since all competent modern physical science was developed on the basis identified by Cusa and his professed followers Leonardo da Vinci, et al., the intellectual convergence of Cusa, Kepler, Leibniz, Riemann, and Vernadsky, is of more than a small degree of significance for science today.

nates reject the creative principle, ontologically, what is it that these poor, populist gnostics, such as what President Bush claims to be, actually worship in their churches, instead of the Creator?[40] If they reject this principle, as the empiricists and kindred materialist ideologues do, how could such poor wretches understand, what Cusa, Kepler, Fermat, Leibniz, and Riemann understood, and as Vernadsky understood, the principles of human creative reason on which the progress of society depends absolutely?

Hence, as I shall show some deeper implications of this later in this report, a certain belief in the Creator is the indispensable foundation of consistent competence in methods of physical science.

It is also, as Bruce Director points to that connection in the piece accompanying this report, on the subject of the significance of the life of Theaetetus, the basis for what is rightly recognized as natural law. If we recognize that man is made in the image of the Creator, by virtue of those creative intellectual powers of the individual which set the human individual apart from the beasts, then the human individual is sacred under law, as the clear intention of our own U.S. Federal Constitution stipulates the authority over all other aspects of the U.S. Constitution, and of all law otherwise. Hence, the *agapē* of the Socrates of Plato's ***Republic,*** the Apostle Paul's ***I Corinthians*** 13, and the Preamble of ***The U.S. Federal Constitution.***

On those relevant accounts, such as Vernadsky's weak knowledge of some essential features of Riemann's work, I am saying, for the reason I have just given, that the geometry of Vernadsky's Biosphere and Noösphere is, in fact, Riemannian: not because Vernadsky says so, but because I say so—a burden of responsibility which I assumed for that and its implications, in the manner I presented the case in my "Vernadsky and Dirichlet's Principle." I limit my attention in this immediate section of this chapter, to the core of the proof of that argument.

I have made much of the following argument in earlier locations, as also, in part, in preceding parts of this present writing. Nevertheless, I include such essential elements of information and knowledge here, for the sake of relative completeness of the argument I present now on the matter of the point immediately at hand.

The functional distinction between man and beast, is expressed as what the devoutly reductionist anthropomorphist might describe as the beast's blind faith in the self-evident reality of sense-perception; whereas, the fully conscious human individual knows that the images of sense-perception are only shadows of the impact of the real world on the individual's "biological" sense-perceptual apparatus. That is the essential point of material difference from which the distinction flows, in the practice of science, between the reductionists, such as the followers of Descartes and Newton, and those operating, from the contrary standpoint, from the advantage of an actively healthy sense of human identity, as Bruce Director's companion-piece underlines this view by Plato et al.

We should know, more or less as the Apostle Paul puts the point within his celebrated ***I Corinthians*** 13, and as Carl F. Gauss, in 1799, lambasted the empiricists D'Alembert, Euler, Lagrange, et al., on this point of fact, that *our senses show us only the shadow of reality, as reflected in the images seen in a darkened mirror.*

These considerations, referenced to the benchmarks represented by the connections between the work of Riemann and Vernadsky, are of exemplary importance for understanding the way in which a healthy human mind works.

Kepler, Fermat, and Leibniz

Typical of the point which I have just made, is the case which I have referenced earlier here, the case of Pierre de Fermat's physical proof that light is transmitted according to what became known as *a universal physical principle of quickest time.* As Christiaan Huyghens described, and also applied the radiating impact of Fermat's discovery: *Whose clock is properly constructed to tell the natural time of physical space?* Fermat accomplished his fundamental contribution to the discovery of the existence of physical space-time, as opposed to empty space, through insightfully reconciling what was, in fact, the only superficially contradictory phenomena of reflection and refraction. The work of Fermat on numerous topics, was the foundation of some of the work of his relevant contemporary Pascal,[41] and included Huyghens' attempted approximation of the functional notion of "least time," by the cycloid [**Figure 5**]. The impact of Fermat's conception is to be traced through the later work of Leibniz and Jean Bernouilli, where it leads into Leibniz's refined definition of his limitlessly infinitesimal calculus, as determined by an underlying catenary-linked (rather than cycloid-cued), universal physical principle of least action [**Figure 6**].[42]

For us, as for the Pythagoreans and Plato generally,

40. What is the wrong number which that President had reached, when he claims to have been instructed by the Creator? Was it, perhaps, the kitchen extension of the Enron-connected former Senator Phil Gramm?

41. Fermat (1608-1665), and Pascal (1623-1662). Although present-day conventions emphasize the religious issues in which Blaise Pascal was prominently engaged, his importance for science lies largely in mathematical works. Some of the most crucial among these works, were unpublished during his lifetime, but Leibniz was afforded access to them during the interval 1672-1676, through his connections with the Pascal family through Christiaan Huyghens, and through the great science project of Jean-Baptiste Colbert. These Pascal archives were significant in sharpening Leibniz's approach to his own 1676 presentation of his calculus. I had relevant access to some of this surviving material of Pascal during the early 1980s. The case of Leibniz's mechanical calculator, which superseded Pascal's device, is especially notable, since Pascal's device was based on his knowledge of the calculating machine which had been designed and used by Johannes Kepler to assist the latter's calculations.

42. It was Leibniz's discovery of this principle of universal physical least action, which drove the otherwise seemingly sober Leonhard Euler into the lunatic frenzy of his 1761 ***Letters to a German Princess,*** to which I made notable reference in my 1990 response to Laurence Hecht, ***The Science of***

FIGURE 5
Properties of the Cycloid

A brachistochrone model built by Francesco Spighi in the 17th Century. A ball that rolls down the cycloidal track reaches the bottom faster than one rolling down the straight track.

Fermat's and Leibniz's method expresses the viewpoint of competent modern physical science still today. The specific talent of the human mind, which distinguishes us from the beasts, is the conceptual powers by means of which we are enabled to infer, and to validate discoveries of universal physical principles, *hypotheses,* that by what Riemann defines, still, for today, as a certain, unique quality of experimental test of principle.

Those hypotheses, when combined with the proofs corresponding to a unique experiment, define the existence of the performing, unseen object, whose shadowy presence is reflected in a cognitive view of the experience of our sense-perceptions. *What is defined, thus, is the existence of the object which is so pervasive, everywhere, that it is expressed even beyond the limits of the greatest conceivable smallness of calculations. It is not the mere mathematical infinitesimal in itself which is the power; it is the universality of the principle of our universe whose efficiency reaches, to express itself, into the tiniest nooks and crannies of that universe.* This is the method of Kepler and Leibniz in modern science.

The relevant common blunder in the teaching of mathematical science, such as that of D'Alembert, Euler, Lagrange, Cauchy, and their duped followers in secondary schools and universities, still today, is the teaching of the assumption that the existence of the mathematical infinitesimal is a simple extension, ontologically, of mechanical schemes, such as those of Euler's foolish attack on Leibniz, premised upon Cartesian (e.g., Euclidean, linear) notions of *empty space-time.*

Christian Economy. (See note 23.) It was obviously, for related reasons, that Euler seems not to have acknowledged the fact of Leibniz's original discovery of natural logarithms, which Leibniz had derived from the role of the catenary principle in defining the mathematical implications of physical least action in the infinitesimal calculus.

Hence, we must recognize the virtually criminal absurdity inhering in the plainly evil role of Augustin Cauchy, the "mortal" intellectual enemy of Monge, Lazare Carnot, Arago, Fresnel, Ampère, et al. I point to the evil in the famous "limit" doctrine inhering in calculus of the hoaxster (and the relevant plagiarist of a crucially important work of Niels Henrik Abel).[43] The examination of that issue, as posed by Cauchy's hoax in that form, leads to the following crucially relevant point of the discussion of Kant and neo-Kantianism.

The conception of the infinitesimal calculus was developed, chiefly, by Leibniz. This calculus was derived from the instructions of Johannes Kepler, as was the later, Nineteenth-Century work on elliptical functions, from Gauss through Riemann. Kepler had bequeathed two tasks to future mathematicians. The first of these had been the challenge of what became, through Leibniz, the infinitesimal calculus. The second, the challenge of elliptical, and also hypergeometric functions, was mastered through the accumulated work of many Nineteenth-Century contributors, including Gauss, Abel, Riemann, and their contemporaries.

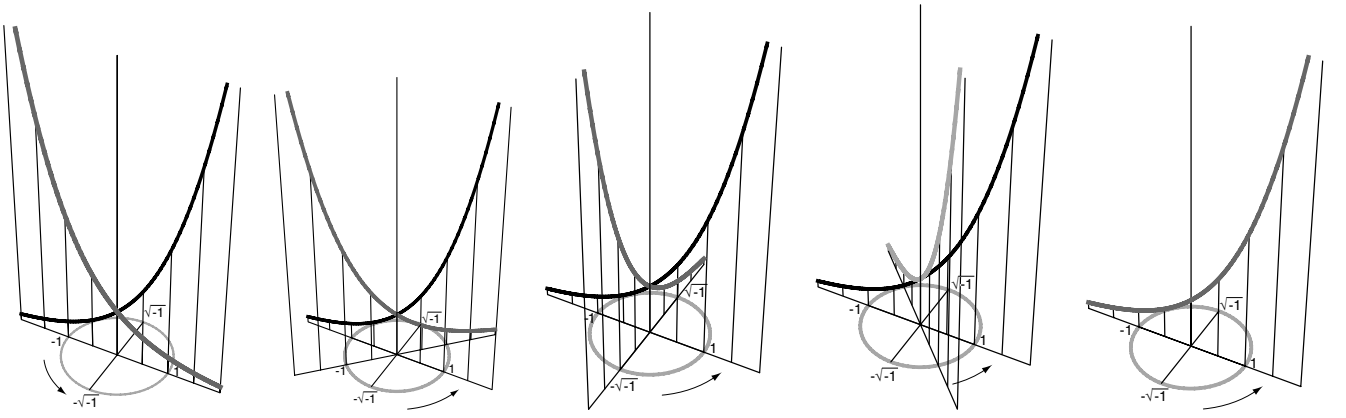
To account for the essential features of both of these developments, take the example of Johannes Kepler's uniquely original discovery of the universal principle of gravitation, where the same principle of Fermat's discovery of quickest pathway, had, implicitly, already underlain Kepler's discovery. This distinction was also made clear in the way in which Fermat's characteristic way of thinking was expressed as explicit rejection of an arithmetic (e.g., reductionist, Euclidean) approach to the subject of Diophantine functions, in favor of the geometrical basis consistent with physical science. Fermat's method, like that of Kepler, and Riemann later, was also the earlier, *dynamic* method of the Pythagoreans and Plato.

The principle of gravitation is a principle of change, which is always a "non-linear" *change,* even to the smallest conceivable instant of the orbital pathway. The related most valuable, if imperfect, work of the follower of Fermat and Pascal, Huyghens, in optics, follows that same route, an approach in which the future appears, anomalously, as a matter of principle, to act efficiently to shape the present. In other words, for all such cases, as for the ancient Heraclitus who haunts the premises of Plato's ***Parmenides*** dialogue: *nothing is permanent, nothing is a universal physical principle, but the intention expressed by an underlying principle of universal change.*

To illustrate this approach, visualize a sphere. Let this be initially, functionally, the sphere of reference from Plato's

43. The lack of personal character of Cauchy is implicit in the way in which he and his senior Laplace, were enabled to take over the ruin the foundations of the work of France's Ecole Polytechnique, through the way they secured their appointment, courtesy of the Duke of Wellington, to the position in which they wrecked the work of the Ecole Polytechnique, in favor of the ideology of the British victor. The case of Cauchy's plagiarism of the work of Abel came to light when Abel's missing document was found in the deceased Cauchy's personal effects.

FIGURE 6
The Complex Domain and the Catenary



The formation of the catenary as the arithmetic mean between two oppositely directed exponential curves, is situated implicitly within the complex domain. The action that generates these two oppositely directed exponentials, is a rotation perpendicular to the plane of the catenary. Gauss recognized this as the geometric mean between 1 and −1; or, the square root of −1.

Timaeus dialogue. Let this sphere be the space of our physical universe as the observed universe surrounding our personal point of observation, as this is normalized to the effect of simulating a fixed position of the hypothetical observer within the Solar System, as might be imagined to correspond mathematically to a central point within the Sun. In the observer's imagination, this sphere represents a "finite but unbounded" universe of perceived, Riemannian physical space-time.[44] This presents an obvious, elementary step toward freeing the mind of the student from the cult of what is presented as a Euclidean manifold.

Now, plot actually observed motion within that ostensibly three-dimensional, spherical universe so constructed by the human mind from its sensory experience. Now, study two geometrical classes of motion marked out in this fashion.

The first choice from among these two classes of motion, is that they are "regular" in some meaningful, and defensible sense of simply recurring. The instant we consider elliptical orbital pathways of actually physical action, such as Solar orbits—as absolutely distinct from the mere ellipse as such—we are confronted by the conceptual problem of seemingly regular motion which is not simply recurring. *The infinitesimal enters whenever we depart the illusory belief in simple, Euclidean or kindred notions of space-time, for the experimental realities of physical space-time!*

This latter, paradoxical fact, led Kepler to discover the universal principle of gravitation as a universal, regular principle of constant change; this echo of Heraclitus and Plato, was in direct contrast to, and opposition to the simplistic, erroneous schemes of Claudius Ptolemy, Copernicus, and Tycho Brahe. Although the ellipse is a regular figure, at first impression, *the orbit is not determined by the mathematical ellipse, but the elliptical trajectory is determined by the orbit, by an efficiently physical principle of what is mathematically a constantly infinitesimal change, known as gravitation.* Hence, Kepler's foresight into the need for a calculus of the type actually launched, uniquely, by Leibniz.

With that, the fun only begins. Try defining spherical functions, not only on the surface of a sphere, but within spherical physical space-time. For example: locate the actual, constantly changing vector of motion of the planet Mars along its orbital pathway, relative to Earth. Then, try the asteroids, whose orbital characteristics were identified by Kepler as the product of an exploded former planet lying in an orbit between those of Mars and Jupiter, *before* the first asteroid was discovered, by Gauss, as being such an object.

The fact that the motion along its orbital pathway, is constantly changing in an interval always smaller than the smallest one chosen, defines gravitation as a universal principle, as expressed in the small as an infinitesimal. All functions subsuming such valid infinitesimals express a universal principle, implicitly one as large as the finite universe. The smallness of an infinitesimal, when so expressed, is a reflection of a universal. To chop off the infinitesimal of that sort, as Cauchy's conception demands, at any arbitrary point (except for legitimate cases of rough approximations which involve no test of principle), is to perpetrate a scientific hoax in any instance in which the matter of a test of a physical principle is in question. The existence of such infinitesimals tells us something of crucial significance about the calculations which generate, mathematically, a true infinitesimal of the number domain.

Unless this numerical phenomenon has been generated

44. The choice could be, instead, the estimated center of our galaxy, or some system of galaxies. As said by A. Einstein, "finite but unbounded" is the characteristic organization of a Riemannian universe defined in these terms by Riemann's conception of Dirichlet's Principle.

EIRNS/Sylvia Spaniolo

A pedagogical study of the catenary—the shape formed by a hanging chain—at the LaRouche movement's Chicago office.

by a mistake in the relevant actual, or imagined physics, that fact should warn us that there is some universal, such as a universal principle, existing in our universe which we may have overlooked. The wrong assumption would be, that this principle exists only in the small; on the contrary, it exists pervasively in the universe at large. It may be, and often has been discovered through anomalies in the very small; but, like the discovery of universal gravitation by Kepler, it is a universal principle of the universe in the large. The failure to recognize the point which I am stressing here and now, is a typical consequence of the use of the fallacious, mechanistic, method of Descartes's empty space-time, which excludes consideration of the reality that real processes of our universe (and there is no other) are dynamical, not mechanical in mode.[45]

This is the same difference, in the very small, emphasized by Vernadsky, which underlies the universal difference between the chemistries of living and non-living processes.[46]

That is what is practically at issue in the exposure of the fraud perpetrated by D'Alembert, Euler, Lagrange, et al., by Gauss's referenced 1799 dissertation. When the issue is not "rough approximation," but a matter of principle, what Gauss had shown D'Alembert, Euler, Lagrange, et al., to have perpetrated, was fraud in the fullest sense of a hoax willfully perpetrated by going backward against the stream of civilized progress, a backwardness which expresses the kind of pagan religious hostility against already established science, which must be expected of the followers of such Venetian hoaxsters as Paolo Sarpi and the followers of the Paris-based Cartesian Antonio Conti.

Therefore, be forewarned, that the association of what is defined by modes of unique experimentation as a universal physical principle, is a *universal,* not what the mathematician, as Leonhard Euler did, mistakenly equates to the notion of an *ontologically* infinitesimal existence as such. *It is infinitesimal because you can not get rid of its reflection of the existence of a universal physical principle, no matter how small the realm of physical space-time explored; it is probably a universal principle which, nevertheless, is never ontologically infinitesimal in principle.*[47]

Today's commonplace ontological fallacies of the "infinitesimal domain" arise, in a logically "hereditary" mode, from interpreting even valid experimental evidence as demonstrations of a form of existence specific to a Cartesian-like, mechanistic ordering within an illusory, empty space-time manifold, such as a Kantian, or neo-Kantian manifold. The infinitesimal as seen with a microscope from the parapet of an ivory tower. Such matters belong, therefore, not to the department of experimental physical science, but the psychoanalyst's couch.

There lies the root of the hysteria of Leonhard Euler and J.L. Lagrange against Leibniz, and Lagrange's hysteria against the 1779, first form of presentation of Gauss's 1799 version of his "Fundamental Theorem of Algebra."[48] They were hysterical, because "they could not get rid of" the implication of the ancient Delian paradox which had been solved by Plato's friend, the Pythagorean Archytas of Syracuse. The cubic roots which tormented Cardan et al.,[49] and continued to torment D'Alembert, Euler, and others, were recognized as symptomatic of a problem which pointed to the importance of Leibniz's emphasis on the catenary-cued character of the principle of the infinitesimal calculus. In the hysterical efforts to deny such implications, D'Alembert, Euler, et al. sought to rid themselves of their embarrassing posture, by denounc-

45. There is a populous class of elementary blunders in what is mistaken for physical science which follows the method of Descartes. By assuming, falsely, that the mechanistic methods of Descartes are scientific, a class of falsely assumed proofs of principle is generated.

46. LaRouche, "Vernadsky and Dirichlet's Principle." (See note 29.)

47. Cf. Felix Klein in his 1895 ***Famous Problems of Elementary Geometry,*** as republished in English translation by W.W. Beman and D.E. Smith (New York: Chelsea Publishing Co., 1962). The extremely talented and influential Felix Klein was not always on the side of the angels, as that point is illustrated by his part in handling the history of transcendental functions from (actually) Archytas and Plato through the questionable claims of scientific originality of Hermite and Lindemann. The modern expression of this problem can be located from the starting-point of Fermat on the importance of geometric, rather than Euclidean method for treating Diophantine functions, through the actual discovery of natural logarithms by Leibniz. Klein's account in this referenced location identifies the modern points of reference for this continuing controversy.

48. Gauss, whose higher education had been chiefly under Abraham Kästner and Eberhard v. Zimmermann, was prompted to publish a 1797 paper which was used by his sponsors as the 1799 publication as his doctoral dissertation.

49. Girolamo Cardano (1501-1576).

ing the offending footprints of actual existences as "imaginary numbers."

The root of the issue brought into view by the referenced work of Cardan et al., is shown by Archytas' construction of the doubling of the cube [see Figure 4 in accompanying article by Bruce Director]. Viewing Cardan's problem from the standpoint of Archytas' construction, the nature of the problem in hypergeometric functions, evaded by Euler et al., is immediately clear. What the empiricists fraudulently termed "imaginary" magnitudes, were an expression of the powers which Leibniz associated with modern echoes of the Classical Pythagorean-Plato concept of *dynamis.*

That concept of dynamics is what Gauss defended, in his 1799 dissertation, against D'Alembert et al. In fact, all of Gauss's leading work points toward progress in that same direction implicit in that dissertation, as this is realized explicitly, more fully, in the work of Riemann.

Gravitation, so defined by Kepler, is of the quality which the Pythagoreans defined by the term *dynamis,* the term and concept which Leibniz adopted, as *dynamics,* in pointing out the absurdity of Descartes's *mechanistic* conception of motion of physical objects in space and time. It is the same quality of conception expressed by Fermat's concept of quickest time, the same concept refined as the catenary-cued concept of universal physical least action, as this is expressed by Leibniz's anti-Cartesian (e.g., anti-Newtonian) method of infinitesimal calculus. It is also an expression of the same root-conception of *dynamis* which the Pythagoreans and Plato associated with the mode of geometric, non-algebraic action, as that by which the square and cube may be doubled by construction.

It is also the issue raised by Gauss in his 1799 doctoral dissertation, in which he exposed the frauds perpetrated in the name of geometry by D'Alembert, Euler, Lagrange, et al., and, implicitly, Cauchy, Clausius, Grassmann, et al. later. This returns our attention here, to the subject of the way in which the minds of Kant and Windelband were crippled by the influence of the dogma of reductionism. For this purpose, consider the physical implications of Gauss's 1799 dissertation in light of today's prevalent state of mental health in high places.

The 'Complex Domain' and the 'BoBos'

As the development of the practical notion of hypergeometry, by, most emphatically, Gauss and Riemann attests,[50] what the fanatics, such as the empiricist Euler, defined as "imaginary numbers," are actually a reflection of the fact that our sense-perceptions are not the objects of reality, but are the shadows which reality casts upon our biological organs and related mental processes of sense-perception.

The name of the conception which this fact poses, is "the complex domain." *The issue is: not only how might we pierce the veil of shadows, to discover that real object which has cast the shadow of sense-perception, but, once we have identified such an object existing beyond the direct reach of our senses, how do we determine, with certainty, that that object has the efficient actual existence we might attribute to it? That is the meaning behind the issues with which Gauss's 1799 doctoral dissertation confronted D'Alembert, Gauss, et al. In other words: What is actually in progress, "out there," in real physical space-time, beyond the direct reach of mere sense-perception?*

Here, we touch the core of the issue of reductionism which underlies the fallacies of both Kantian and neo-Kantian disorders.

Herr Kant: "Were you a monkey, rather than actually human, we would not blame you personally, if you were to describe these magnitudes, as Euler, de Moivre, et al. did,[51] as merely 'imaginary.' Immediately, for a monkey, they are only imaginary; if you are not a monkey, then you should be able to recognize that human beings think differently than cases of the referenced behavior of Kant, Euler, and Lagrange imply. If you think like a monkey about such matters as these, you do as Euler et al. did; you would seek, as Thomas Huxley and the horny thumb of Frederick Engels' mind would do, a century later, to attempt, in the name of socialism, communism, or whatever, to make a virtual monkey of mankind. You, Kant, did as Britain's Huxley and Engels would do. You, like that Delphic Satan, the Olympian Zeus of Aeschylus' ***Prometheus Bound,*** demanded that 'fire' be treated as only 'imaginary,' or, untouchable, by the mind of mortal man."

Foolish people, like Kant, defend the empiricists' Delphic, Apollonian hysteria on this point; they defend their obsessive, and perhaps hopeful belief that they, like their neighbors, are only sex-crazed, or similar varieties of monkeys needing instruction in table manners. Often, they then enjoy the misfortune of getting the kind of neighbors, and mates, which they desire, and which they deserve.

The issue of the complex domain, is, thus, at least as much a clinical question of sociopathology as mathematical physics.

The issue, of course, is the question, whether or not discoverable universal physical principles actually exist. Look at the kind of contemporary mental pathologies which tend to lead their victims to the assumption, as that of Kant, and Leonhard Euler, that discoverable universal physical principles do not exist, are either "merely imaginary," or are fruits of either deduction, or deduction turned inside-out, with the tripe hanging outside, so to speak, as entrails of the "inductive

50. Gauss (see note 11).

51. Abraham de Moivre was a crucial senior figure, associated with Paris-based Venetian Abott Antonio Conti and René Descartes, who exported the neo-Cartesian cult to the London of Isaac Newton controller Dr. Samuel Clarke. Moivre's featured role in the fraud against Leibniz was complemented by his supplementary role in Leonhard Euler's adoption of the rejection of the complex domain as relating only to "imaginary" magnitudes arising as virtual accidents of mathematical calculations.

Herr Kant: "If you think like a monkey about such matters as these, you do as Euler et al. did; you would seek, as Thomas Huxley and the horny thumb of Frederick Engels' mind would do, a century later, to attempt, in the name of socialism, communism, or whatever, to make a virtual monkey of mankind."

sciences." Gauss's attack on the hoax of Euler et al., makes the issue of Kantianism formally simpler; Riemann's work, from his habilitation dissertation on, gets to the virtual essence of the hoaxes of Euler, Lagrange, and Kant.

However, we must not overlook the fact, that time has passed since the work of the Seventeenth, Eighteenth, and early Nineteenth centuries, when, despite the empiricists, most of the progressive development of the foundations of modern European civilization's popular life occurred. These are different times, especially the recent four decades. Different times; different customs in the official and general ways of thinking, alike.

People in the Americas and Europe today, do not think as they did as recently as forty years ago. With the rise of the so-called "Sixty-Eighters," the "Baby Boomers," the change in culture, in values, and in practical response to reality has turned, mostly, very much for the worse. Prevailing trends in opinion-shaping have moved away from physical reality, to seeking what today's worst fools have considered to be a more comfortable, imaginary world. As the contrast between zooming corporate financial gains and plunging physical conditions of life of nations shows, the prevalent trend of culture has been away from a functional connection of the "Boomer's" mind to physical reality, and, consequently, has plunged the customary thinking of an entire stratum of humanity into a radically different, worse way of reacting to topics of physical scientific progress and decay.[52]

Thus, today, like the virtual Yahoos of Jonathan Swift's ***Gulliver's Travels,*** our contemporary fugitives from the trends in the present real state of humanity insist, more or less implicitly, that there are no universal physical principles, but only popularized conventions, habitual ways of thinking, ways of thinking rooted ultimately in mere reductionists' brands of statistics. They mean approximately the kind of statistics typified by that Nobel Prize-winning mathematical formula which led the fattest cats of Wall Street and the Cayman Islands into the hedge-fund crisis of August-September 1998, and set the mathematical precedents for what has lured many of the leading banks of the world into the far greater, Germany 1923-like hedge-fund crisis of today.

Today, our sophists seek to change the subject, away from the clear evidence of a collapsing economy, as by jabbering, "But, how is the market doing today?" That credulous lunatic attempts, hysterically, to fool himself most of all. He seeks, thus, to escape from the real world, whenever the evidence of a physical collapse of the economy around him threatens the devoutly sought elation of his fantasy-life.

His reaction to developments which threaten his delusory elation is, perhaps, to change his mistress, his life-style, his employer, or, perhaps, his sex. "I need a new life," is what the typical, emotionally distressed, ideologically middle-class "Baby Boomer"[53] of today thinks, when the credibility of his or her fantasy-life is threatened by reality. Anything, but face the reality of the present human condition!

For him, or her—sophists that they are—principles do not exist, but only conventions, only what is called "spin." It is necessary to see the way that contemporary sophist's mind works, to understand how and why he behaves as he does.

This currently widespread psycho-social pathological pattern of crisis-cued behavior is, predominantly, a reflection of the mid-1960s shift of the "Baby Boomer" generation, from earlier, conventional acceptance of the reality of physical economy, into a fantasy-life existence in a "services economy." The hard realities of progress in producing physical wealth, which were the preceding generations' mooring in reality, have been replaced, among the relevant social brackets of Baby Boomers, by a Purgatory-like "end of history, post-industrial, Golden Generation's withdrawal from the real world, into fantasy life.

This change has brought to the surface, as present-day expressions of existentialism, a kind of modernist's parody of the long-standing, prevalent social psychopathology which

52. It is useful, in several ways, to compare this view of the distribution of potential within social processes, with Gauss's touching upon the subject of what Riemann defines as Dirichlet's Principle, in Gauss's 1840 "*Allgemeine Lehrsätze. . .*," as W.K. Bühler cross-references Riemann's notion to Gauss's, in his ***Gauss: A Biographical Study*** (Berlin: Springer Verlag, 1981). The characteristics of generations are not statistical averages of opinions expressed by individuals, but that characteristic distribution of tendencies which, as a *dynamic* expression of potential, defines a distinct functional "set" within the population. This is defined, primarily, not by expressed views, but by reaction of all parts of the population to the expressed tendencies of some core grouping within that population.

53. I have been informed by my Paris associates, that the French term, *Bourgeois Bohème,* or "Bo-Bos," is closer to the natural truth of the matter than the English "Baby Boomer."

was expressed by intellectuals such as the former circles of Locke, Conti, Hume, Euler, Kant, et al., of the Descartes-Newton cult of Eighteenth-Century empiricism and its late Nineteenth- and Twentieth-Century followers.

The typical dupe of the cultural downshift erupting in the "68ers," and the resulting habitual hysteria of fleeing from physical reality into the fantasy-life of statistics, is a social-political phenomenon of an emergent quality of virtual mass-insanity, a quality specifically characteristic of a rather specific part of a certain generation, of which the hard core, "Beatle-brained '68ers" were the relatively extreme case. It was, again, the result of the shift from a producer economy, to a "post-industrial," "services" economy, which brought the long-standing psychopathological tendency of the preceding decades, into the nearly full bloom it has now achieved, during a period of approximately a decade and a half to date: during a time of middle-class life in which the prospects of advancement in social status and general well-being were perceived to be tapering away.

Now, if the stratum afflicted with that "service economy" mentality does not change, if it does not abandon that failed ideology, that generation would not survive, and it would, perhaps, take the world's civilization down with it in sharing the prospect of doom which those folk have now wrought for themselves. All influential ideas have power, especially the destructive power of very bad ideas. Thus, finally, perhaps, the odd poor lunatic of the past will, perhaps, soon be joined by a growing ration of veteran '68ers, now sullenly bearing the sandwich-signs, "The End is Nigh," as they move along their dismal line of march through the ruins of today's yesterdays. Hopefully, the shock of reality will change their minds before that state of dismay is achieved, at least in the minds of most of them.

Today's world is dominated, especially from Europe, Japan, and North America, by a powerful financier oligarchy which is presently determined to uproot and eradicate forever the kind of society which the modern nation-state republic, such as that of President Franklin Roosevelt, represents. They are determined to establish now, more or less immediately, and with finality, a system in which governments, if they are permitted to exist, never rise above that state of relative powerlessness in which globs of financier-oligarchy cannibals eat governments and large portions of the population, too. They intend, in fact, to recreate a post-modernist caricature of the medieval system, the *ultramontane* system, when mankind was a victim of a concert of Venetian financier-oligarchy and brutish Norman chivalry.

Unfortunately, for both themselves and their intended victims, this financier-oligarchy class is worse than merely clinically insane. They are also consummately incompetent, as the recent forty years of physical decline of Europe and the Americas attest. A world under their reign would not long exist, as they, too, were eaten by the cannibals they have become. They are a form of power which has lost its former relative potency of even mere fitness to survive.

Therefore, it is neither courtesy nor kindness, to refuse to tell the victim of the mental sickness which the all-too typical example of BoBo culture represents: his desires are the root of his discomforts, and those rising floods of discomforts are not the evidence of a curable disease.

Therefore, to the degree that the typical "BoBo" has entered into the fantasy-life which belief in "a services economy" represents, it were almost impossible for him, or her, until now, to recognize the practical significance of the technical term "complex domain." One who attempts to raise such topics for discussion, often experiences the sensation of a metallurgist's attempt to conduct a dialog with a typical representation of "an Old Stone Age" culture. Culturally, in economics, if we of the older generation attempt to discuss economics with a victim of the past four decades of cultural-evolutionary downshift which the "services economy" generation has adopted, we are reminded, quickly, of our sense that our society has fallen back culturally, in a mere four decades, perhaps hundreds of years, to the period of the 1492-1648 religious warfare in Europe, or even the Fourteenth Century. That is certainly not a prospect which the BoBos have given us, and themselves, for a bright future for the coming generations of mankind.

Therefore, the concept of the complex domain must be faced, not only mathematically, but clinically, as we do here, whether the discussion makes the BoBos comfortable, or not.

Archytas, Plato, and Vernadsky

Use the medium of water, together with relevant, three-dimensional objects as containers, to help to illustrate the conceptual implications of the Pythagorean Archytas' construction of the doubling of the cube, and the correlated matter of the specifically principled nature of cube roots. Compare this with what Bruce Director writes, in a companion piece, on the significance of the all-too-brief life of Theaetetus, as that life and its work were viewed by Socrates, Archytas, and Plato. As he shows, from the mouths of those who are still today, among the greatest, most significant minds of known civilized mankind's history so far: *there are two distinct, but inseparable issues exemplified in a crucial way by that insight into the purely geometric, non-arithmetic nature of the Delian paradox. One is the physical nature of the universe in, and on which man acts willfully; the second, is the nature of man.* His report shows the way in which some among the greatest minds from the known history of science have understood the distinction and connection of those two conceptions.

Since no later than those ancient times when Socrates, Archytas, and Plato left their record of the connection between the physical universe and the nature of mankind, that connection has been the central issue, of the entire history of European civilization and its culture to the present day. In that tradition, and in that sense, modern European art and science today, have been divided into two great warring camps, two

camps typified by the opposition between the methods of the respective followers of the real-life Gottfried Leibniz, the humanists, and the synthetic identity of the figure of real-life black-magic worshipper Isaac Newton, the reductionists. This division typifies the modern expression of a millennial conflict between the legacy of Plato and oligarchical legacy of the Delphi Apollo cult.

The Delian paradox is, for a certain reason, the pivot of that great division in European history to date. For just this same reason, there is no other principled division *in the history of* European culture, from its beginnings in the rise of what we know today as Classical Greece, to the present date. However, *the division between the two principled factions,* proceeds under the long waves of development which produced the increase, or decrease of the longevity, and per-capita power over nature of that essentially unified, great stream of a civilizational process. The resulting conception of man, as Bruce Director shows the connections implicit in the development of that person of Theaetetus, as Archytas, Socrates, and Plato understood him, is the essence of that long skein of history.

These characteristics of that stream have been made more clearly accessible to modern knowledge through those global implications of the work of V.I. Vernadsky which I have emphasized again here, as in earlier published locations. The concept of the Noösphere, as I have qualified the implications of Vernadsky's greatest discovery in this and those earlier locations, has shifted the center of the known conception of scientific knowledge and practice, away from a science descended from the astrophysics of the ancients, to the process of willful self-development of man as in the image of ***Genesis*** 1: 26-30. The shift from a concept of man as if our species had been merely deposited to exist within a self-developing universe, to man shaping the universe, more and more, can now be seen more clearly, in a retrospective view of these recent several thousand years: as man in the image defined by the principle of *agapē,* man in the process of developing the creation which we inhabit.

I now explain, summarily, as follows, why I solicited Bruce Director's written representation of his earlier, oral presentation, as a complement to this present report.

Since its beginnings, to the present time, that European history is a continuous process, an indivisible unity, such that any attempt to define any great part of it apart from the rest, during any part of these several thousands of years, would be a hoax, whether intentionally or not. That entire sweep of history is a veritable ocean, like the oceans from which this culture sprang. It is not a fixed ocean, despite the ebbs and flows within its development as a unified process. The unifying conception, which renders this historical sweep of ebbs and flows in development comprehensible as a whole, integral process, is the notion of *power* which we have inherited, by courtesy of Leibniz, as a crucial feature, *dynamis*—the modern, Leibnizian conception of a *dynamic,* rather than *mechanistic* universality—of an Egyptian legacy which had been delivered to the ancient, seafaring Greeks, a legacy known as *Sphaerics.*

As I have shown here earlier, that specific, elementary exercise in anti-Euclidean geometry, known as the Delian paradox, has a crucial feature which has divided European culture into two great factions of scientific thinking, from that time to the present day. This fact erupted to the surface of modern European civilization as the characteristic issue dividing the ranks of professional mathematicians and physical scientists into the two great, warring camps, camps represented, respectively, by the contending figures of Leibniz and, in opposition to Leibniz, those followers of the Cartesian reductionism of Paolo Sarpi et al., the form of reductionism which was later named "Newtonian" by devotees of the cult of the synthetic, neo-Cartesian personality of real-life black magic specialist Sir Isaac Newton.[54]

The work attributed to the youthful Theaetetus, by Socrates, Archytas, and Plato, on such crucial subjects as the duplication of the cube and the generation of the dodecahedron, typify those elementary topics in systemic mathematical-physics thinking which separate modern European culture into the two great warring camps of those associated, respectively, with the typical names of Leibniz (dynamics) and Descartes (mechanics).

So, my associates and I have used these elements of background discussion, with those implications which I have just now summarized, to clarify the far more general concept of power (Greek: *dynamis;* Leibniz, in English: *dynamics, power;* in German: *Kraft*).

After exploring those and related matters which we have addressed here, on that level, thus, prepare now to expand the exploration of ideas to the higher level represented by that work of Vernadsky, which has been often referenced by me in this location, in defining the three multiply-connected physical geometries of the abiotic, Biosphere, and Noösphere.

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54. See Georg Cantor, ***Contribution to the Founding of the Theory of Transfinite Numbers,*** Philip E.G. Jourdain, trans. (New York: Dover Publications, 1953, 1955), p. 85, where the dedication, "Hypotheses non fingo," headlines the body of Cantor's own text. The same appears in the original German edition ***Werke,*** p. 282. On this matter of a then already mentally disturbed Cantor's effort to induce Pope Leo XIII to adopt Newtonianism as the foundation of the church's doctrine, take note of the way in which Cardinal J. Baptiste Franzelin, S.J., ended his exchange of correspondence with Cantor. See ***Georg Cantor Briefe,*** Herbert Meschkowski, ed. (Berlin, New York: Springer, 1991), pp. 254-258. Notably Bertrand Russell network associate Jourdain reflects the links of the waning Cantor to the influence of sometime associate of the pro-Satanic Lucifer cult of Russell confederate and Lucifer cultist Aleister Crowley, and founder of the Anthroposoph spin-off from Theosophy, Rudolf Steiner. The onset of Cantor's mental illness is to be chiefly attributed to his brutish persecution earlier, by a pack of rats led by Leopold Kronecker, a persecution which led the despairing Cantor into the embrace of the network of the Bertrand Russell who hated the mid-1880s George Cantor of the ***Grundlagen*** with the same passion Russell later hated the devastating exposure of the hoax of Russell's ***Principia Mathematica*** by Kurt Gödel.

Treat this work of Vernadsky as defining a revolution in the branch of studies termed "economics," or "political-economy."

Recognize the silliness of most doctrines of political-economy until now, both the Anglo-Dutch Liberal variety, and that offshoot of Anglo-Dutch Liberalism popularly known as Marxist political-economy. With the adoption of the idea of an economy based on the notions of simple exchange, monetary or other, economics is not, and could never become a subject of scientific deliberation, except in the sense of the troubled, self-destructive patient complaining against that primeval synonym for money, the mother, on the psychoanalyst's couch.

All leading features of global civilization today have now been absorbed into the emergence of a global culture which is implicitly, potentially, on the way to superseding the quasi-regional character of European civilization, by what should, if permitted, emerge as an ever-more clearly defined Eurasian global culture. The fate of today's Russia within Eurasia is, already, about to become, and would become, as Mackinder, Haushofer, and Ludendorff and his Hitlerite followers, commonly feared, the potential expressed in the image of the pivotal geographic determinant of the coming long wave of development of this planet.

The fate of the Germany, Russia, China, India cooperation in long-wave, Eurasia-centered world development, and of the Americas, especially the U.S.A.'s cooperation with that global development of all parts of the planet, will now decide whether or not mankind emerges to prosper out of this global economic breakdown-crisis of the present, neo-Venetian form of world monetary-financial system. In other words, whether the republican, or oligarchical currents traced within continuing European culture since ancient Greece, shall prevail during the weeks and months now immediately ahead.

This deeper exploration of this history has been made possible by my grasp of certain of the deeper implications of Vernadsky's recognition of the character of the Biosphere and Noösphere, as dynamic, rather than mechanistic systems. This advantage takes us out of, and up from what had been the best prevalent notion of science heretofore, into the higher realm of investigations, a realm which I have identified as a "Fourth Domain," where the fulsome secrets of physical space-time are no longer lost in empty space.

3. Heraclitus, Vernadsky, and the Fourth Domain

In "Vernadsky and Dirichlet's Principle," I emphasized the implied existence of a "Fourth Domain," above and beyond the Noösphere as such. I clarified the essential features of the argument in terms consistent with the development of the notions of Biosphere and Noösphere as represented by the published work of Vernadsky on those subjects. Although I defined the existence of that "Fourth Domain" adequately, as the subject itself would define "adequately," I was nonetheless wittingly, playfully teasing my audience, provoking them to formulate the questions for which they would demand my answers in times not far ahead. Some have already done so.

To a significant degree, that has worked out as I had expected. Now, the time has come to respond to the questions I knew must necessarily arise in the minds of seriously thinking readers of that piece. As the great Classical poets and playwrights would warn you, unless you are, perhaps, a devout disciple of Zen, do not attempt to answer a question which does not yet exist in the mind of one's audience. First, you must, as in all serious science, provoke the question in a manner which invokes the hearer's angered encounter with an accessible, valid, knowledgeable experience of the real universe, rather than some arbitrary recipe such as the arbitrary and fraudulent monetary-financial doctrines of political-economy which dominate the world today.

On the subject of this matter, most textbooks tell lies to their readers in the fashion of Laputan sages, about the subject-matter they claim to teach. They give putative answers to unasked questions, feeding such trash, like dry, defaced crackers, to their Laputan novices. They instruct, thus, in the spirit of the inanely babbling Pythia of the Delphic cult of Apollo. Whether wittingly or not, the intention expressed by such textbooks and kindred instruction, is like the mission assigned to Pythia by the priests of Apollo sitting on the other side of the pit. The purpose of those priests, or, their like today, is not to uplift the mind of the student, but to control it. So, Baby Boomers often seek to control the future minds of the younger generation, as the old men of the tribe shackling the minds of the young in the manner of a truly Delphic tradition: "Read my lips! Fire does not exist for you to know how to use it!"

For this reason, I must therefore dread the day, when my insistence that the daytime sky is not polka-dotted, would provoke a chorus of graduates to rise in frenzied protest from their chairs, standing, seized by a wild-eyed, chorus of protest, shouting wildly, again, and again, and again, "That is not what we learned in *our* school!" You think I am mistaken in expecting some, even of that sort; you must be unfamiliar with rather typical meetings of scientific bodies!

The duty of education is not to fetter minds, but to free them of the doctrinal shackles of the mind which have recently ruined the society of today. To free them, as Frederick Douglass understood, means to imbue the habits by means of which they acquire the power to free themselves. Such is the necessary intent of my introduction of the subject of what I have designated as "The Fourth Domain."

We might begin with the subjects of the fermenting of wine and beer, as Louis Pasteur did so famously.

Living processes produced an effect, distinguishing right- and left-handedness, which was, broadly, unknown except as

a phenomenon associated with the active presence of living processes. This line of investigation was continued by Pasteur and his follower Pierre Curie in ways which came to the surface as the concept of the Biosphere in the work of Vernadsky. For example, Vernadsky's conclusions are notably in irreconcilably systemic opposition to the blundering approach of Professor Erwin Schrödinger's "What Is Life?" essay: an essentially ideological and mechanistic treatise, whose clear intent is essentially the same defense of the Machian reductionism of Ludwig Boltzmann made by the fraudulent concoctions of the radically mechanistic, cultish follies of Bertrand Russell devotees John von Neumann on "artificial intelligence" and Norbert Wiener on "information theory."

To understand all of the kinds of matters which are principal topics of this present writing, it should be emphasized, once again, that the fundamental division within what is classified as physical science today, is between the standpoint in physical geometry typified, on the one side, by Thales, Heraclitus, the Pythagoreans, and Plato, and, on the categorically opposing side, that reductionist standpoint which pivots, throughout the history of ancient through modern European culture, around the Gods of Olympus, around Apollo's Delphi cult. The essential issue in all of this, is that the Delphic method, in all its varieties, excludes, systemically, the acknowledgment of the existence of human knowledge of the positive principles which drive the universe, just as the Satan-Zeus of Aeschylus' ***Prometheus Bound*** prohibited man from acquiring the use of fire.

The standard best, brief illustration of this general fact, is the outrageously scandalous case of the fraudulent astronomy crafted by the Roman Empire's neo-Aristotelean Claudius Ptolemy, for which plagiarist and hoaxster Ptolemy, among other offenses, gave a fraudulent representation of what has been lately exposed as the fraudulent character of his unacknowledged debt to that original work of Aristarchus of Samos, whose work Ptolemy desperately attempted to pervert and discredit.[55] The tyrannical condemnation, imprisonment, and torture of the Prometheus of Aeschylus' ***Prometheus Bound,*** is a typical model of the commonly used precedent for Claudius Ptolemy's hoax. Suppress knowledge of provable universal principles, against honest and capable discoverers no longer living, or, perhaps imprisoned like the Prometheus of Aeschylus' drama, for the purpose of shackling the mind of mankind, as the Aristotelean doctrine adopted by Ptolemy merely illustrates such widespread, Delphic models of tyrannical practices in the known portions of the history of mankind.

So, what can be fairly described as the passionately honest Pasteur, posed the question with which he challenged science in general. He understood clearly that he was defending a distinct universal principle of life; but, he was also forcing himself, his collaborators, and their followers to address the relevant questions by the relevant standards of those experimental methods introduced to modern European civilization's thinking about science, by Nicholas of Cusa's ***De Docta Ignorantia.*** His work echoes the methods expressed by Leibniz and the Leibnizians of the Monge-Carnot Ecole Polytechnique, among others.

For clarification of this fact, look, once more, at the nature of cubic roots from the vantage-point of Archytas' doubling of the cube. Ask: What are the roots of the doubled cube which generate what are defined as "imaginary" magnitudes in the work of de Moivre, as also in the earlier efforts of Cardano et al.? When we consider this and related, relatively modern questions from the ancient standpoint of the Archytas' treatment of the Delian paradox, how do we explain the physical meaning of the modern notion of mathematical complex domain from the standpoint of the constructive geometric methods of Archytas and Plato? What does the obvious solution for this paradox tell us about the nature of the human mind—and of the universe in which, and upon which it acts?

He is a leading example of the point, that, the fact that we have in hand the evidence pointing to the existence of a previously unknown principle, is not in itself proof of that principle; rather, the question so posed, should drive us into seeking the evidence needed to test and explore the suspected principle. We can not deny the principle because it is not yet proven conclusively; but, neither can we assert that it has been proven, if merely on the premise of apparently strong evidence in support of that line of inquiry.

In my relatively long life of such explorations, I have often waited long, like a lurking hunter by the trail, for the unexpected evidence's expected eventual arrival. I have often done this, sometimes with the expected arrival of success; nearly always with some degree of a valuable lesson learned from the experience. For me personally, an understanding of

55. In a truly proven case of scientific plagiaristic fraud, such as the work of Claudius Ptolemy, the conclusive proof lies in the comparison of the methods employed by the respective parties. How was the relevant conclusion of each side of the dispute reached, and on the basis of which assumptions made, and provable principles excluded? Ptolemy commits two relevant, cardinal errors of method. Taking Aristotle's theological dogma as a premise for suppressing evidence contrary to that dogma, and suppressing the clearly reproducible evidence underlying Aristarchus' original work.

this need for energized, goal-oriented patience, began with the first day of a secondary school class in plane geometry, when I rejected, then, once and for all, to the present day, any set of definitions, axioms, and postulates which presumed the existence of any principles of geometry which were not coherent with *an elementarily physical geometry.*

This was a conclusion I had reached simply by observing the manner in which structural beams at a nearby Charlestown, Massachusetts U.S. naval yard were crafted for their mission, and studying, with fascination, those concoctions of seemingly fabric and wooden sticks known as typical aircraft in use in my neighborhood, during the 1920s and somewhat later. I observed, more importantly, that among those who did not reject the prescribed arbitrary notions of geometry, something in them seemed to go dead as a consequence of their induced intellectual habits on that account: there was a certain discontinuity introduced, thus, between the practical real world and the different vision of a largely illusory world of their educated habits of forming opinions.

Such is the matter I now lay before you, here.

Four Domains of Human Experience

Start the following discussion at the beginning. Some of the important, much-debated facts to be considered, are elementary in principle. Therefore, we must lay corresponding emphasis on elementary considerations.

The work of V.I. Vernadsky known to me thus far, apportioned the known totality of physical space-time among three distinct, but multiply-connected domains, which are each and all organized, internally, and as a whole, as *dynamic* (Leibnizian), rather than *mechanical* (e.g., Cartesian, Newtonian) processes: the *abiotic,* the *Biosphere,* and the *Noösphere.* On this subject, Vernadsky's known treatment of the distinctions among these three domains, is sufficiently clear respecting the first two; and his definition of the third, *the Noösphere,* is conclusive, when his definitions of relevant evidence are read in light of the method by which he clearly distinguished living from non-living processes in defining the Biosphere.

As I have stated earlier in this present location, the most notable shortfall, as expressed in the work of those sources, lies within the bounds of his correct, but inadequate definition of the universe as characteristically Riemannian. *This indicated shortfall in his known work as a whole, would implicitly prevent him from recognizing that his declared evidence requires the subsuming, determining existence of a yet higher, fourth domain.* The solution for that shortcoming in his known work becomes obvious when the dynamic organization of the Noösphere itself is viewed with the advantage of my own work in the field of a science of physical economy.

Formally, the remedy for that indicated shortfall, can be described fairly as the relevant application of what Riemann defined as his adoption of Dirichlet's Principle. This use of Dirichlet's Principle takes our attention back to Riemann's posthumously published draft *"I. Zur Psychologie und Metaphysik"* and a crucial passage from his companion draft, *"II. Erkenntnisstheoretisches."*[56] These posthumously published notes reflect young Riemann's attendance at Göttingen University lectures by Johann F. Herbart, the latter a long-standing, highly distinguished protégé of Alexander von Humboldt, during his adult lifetime a leading adversary of the doctrines of Immanuel Kant and G.W.F. Hegel, and the most important of the influential philosophers of the practice of education in Germany and also the U.S.A. during virtually the entirety of the Nineteenth Century.

Herbart is particularly notable for his use of a concept which he termed *Geistesmasse,* which is implicitly a precursor of Riemann's later adoption of Dirichlet's Principle of physical science. The set of three posthumously published notebook writings from that period of his life, of which I have referenced two here, are significant, still today, for reasons with which Herbart would have heartily agreed. They are important still today, for the insight they contribute into the internal characteristics of the subsequent flourishing of Riemann's potential for genius under the later influence of the work of, most notably, Gauss, Wilhelm Weber, and under Dirichlet at Berlin and at Göttingen.

Herbart would have consented to my argument on this point respecting these historical, conceptual implications of the term *Geistesmasse,* notably as they bear on the related topics of Riemann's use of the related terms *Geistesmasse* and *Dirichlet's Principle,* and also on the subject of the Riemannian implications of Vernadsky's work on the subjects of Biosphere and Noösphere.

The common implication of Herbart's notion of *Geistesmasse* and Riemann's notion of Dirichlet's Principle, is that, in any well-defined domain, there is a functional distinction between an aggregate of components specific to that domain and the indivisible unity of that which unites the domain itself. This involves no essential deviation from the principle which underlies Carl F. Gauss's 1799 exposure of the hoax intrinsic to the common, reductionist arguments of the empiricists D'Alembert, Euler, Lagrange, et al.

In Vernadsky's configuration of the respective abiotic, Biosphere, and Noösphere domains, there is an essential discontinuity which separates the abiotic from the superior domain of the Biosphere, and, similarly, the Biosphere from the relatively superior domain of the Noösphere. Relative to the inferior, the action which distinguishes that inferior domain from the superior, is viewed ontologically from the standpoint of the inferior as simply a discontinuity of the type of an infinitesimal, but also as a functionally significant discontinuity when effects are taken adequately into account. From the physical standpoint of the higher domain, that relevant discontinuity is manifest as a universal physical principle: e.g., a principle of life, or, in the instance of the

56. ***Werke,*** pp. 509-525. N.B. his notes on Isaac Newton, p. 525.

Noösphere, of cognition.

Hence, if we could assume that Euler would cling to his argument against Leibniz, when he might have turned to the domain of biology, he would have insisted that a principle of life does not exist to distinguish the state of death, or, like Frederick Engels, would deny the existence of a discontinuity separating man from the ape.

Thus, in Vernadsky's account of the organization of the Biosphere,[57] the materials of which the parts encountered in the Biosphere are composed, differ essentially only in their mutual organization as compound processes within the domain of living action, and so forth, from the elements on which the organization of the abiotic domain is ostensibly premised. To restate that point: It is the dynamic organization of the process of the Biosphere which differs from the organization of the process of the abiotic domain into which, and from which the components of the Biosphere-process flow.

This is the issue on which the speculations on the subject of life by Schrödinger, depart the domain of reality presented by Vernadsky.

The difference between the Biosphere and Noösphere, as viewed from the vantage-point of the Biosphere as such, is of the same principled character, except that the principle itself is different.

Vernadsky adds to that the crucial additional matter of physical evidence, that there is a characteristic increase of the accumulated product of the Biosphere relative to the total abiotic domain of the planet, and that, similarly, there is an increase of the accumulated product of the Noösphere relative to both the Biosphere and, hence, of course, the mass of the planet Earth as a whole. Hence, the qualitative specifics not only exist; each has a characteristic specific outcome, as expressed in the form of changes in the composition of processes in the relative universe as a whole.

In face of this and kindred general evidence, it has never been possible to define the universal physical principle of life in terms of the abiotic domain, and never possible to define, in terms of biology as such, the source of the increase of the potential relative population-density of the human species relative to the aggregate historical accumulation of other living processes. Yet, the same evidence shows that the principles of life and of cognition are, nonetheless, efficient universal physical principles in our universe, that in spite of the obvious requirement of appropriate preconditions for their localized expression.

On the latter account, the same principle of cognition whose existence is systemically denied by reductionists, as typified by the empiricists, is not a principle confined within the processes of the Noösphere; it is the principle which subsumes the Noösphere, as the principle of life subsumes the discontinuity distinguishing the Biosphere from the bare abiotic domain. This distinguishing superior principle of the Noösphere's processes, is of a character belonging to the same general form of universal principle as what Riemann defines as Dirichlet's Principle.

In certain relevant circles, this superior principle, which distinguishes the Fourth Domain, is known as an expression of the personality of the Creator, or the principle which defines the ontological quality of the Creator as a self-subsisting positive principle, *a principle of creation which underlies the universe as a whole.* Apart from the significance of this point within the province of theology as such, this defines that sovereign nature of the human individual which sets the human individual above the beasts. In other words, the individual person made in the essential ontological image of the efficiently willful Creator.

As the expression of life occurs in its organization of the subsumed processes which the living organism shares with, exchanges with, the abiotic domain, so the expressed existence of the human mind is met in the integral organization of the subsumed living and abiotic processes. However, as the living organism is distinct from the processes which its existence as an identity subsumes, so the presence of the human mind is expressed as the organizing principle corresponding to the implications of Riemann's identification of Dirichlet's Principle.

The subject does not end within those bounds. *This nature of the individual person can not be set apart from the role of that individual as an integral part of an* historical-social *process of cognitive interaction within society.*

The Power of the Higher Complex Domain

The discontinuity which separates each of those domains from one another, the Biosphere from the abiotic, and the Noösphere from the Biosphere, and the Fourth Domain from the Noösphere which it subsumes, is of a quality which parallels the ontological implications of the *complex domain* of standard mathematical-physics in a certain distinct, but meaningful sense.

For clarification of this fact, look, once more, at the nature of cubic roots from the vantage-point of Archytas' doubling of the cube. Ask: What are the roots of the doubled cube which generate what are defined as "imaginary" magnitudes in the work of de Moivre, as also in the earlier efforts of Cardan et al.? When we consider this and related, relatively modern questions from the ancient standpoint of the Archytas' treatment of the Delian paradox, how do we explain the physical meaning of the modern notion of mathematical complex domain from the standpoint of the constructive geometric methods of Archytas and Plato? What does the obvious solution for this paradox tell us about the nature of the human mind—*and of the universe in which, and upon which it acts?*

Now, from that standpoint, what does all this have to do with that famous aphorism of Heraclitus to which we have been making repeated reference in this presentation thus far?

57. LaRouche (see note 36).

To those ends, proceed as follows.

Physical functions whose mathematical-physical representation deserves expressions in the form of the complex domain, as Gauss clarified this in 1799 and later, tell us something essential about the relationship between that which sense-perception reports concerning the experienced universe "outside our skins," as compared with what our mental-perceptual apparatus tells us about that experience. *In short, that which followers of Paolo Sarpi such as Sarpi's house-lackey Galileo Galilei, Sir Francis Bacon, Descartes, John Locke, the Physiocrats, Euler, Kant, the positivists, the neo-Kantians, and the existentialists, et al., would wish to defame as "imaginary," is the most real aspect of that experience, the only part of the experience which is qualitatively human!*

The duplication of the cube by Archytas' construction, is *a physical action* of the quality which the Classical Greek Sphaerics of Thales, Heraclitus, Pythagoras, Archytas, Socrates, and Plato recognize as the principle of *dynamis,* the ancient expression of what Leibniz defines as dynamics, in opposition to that mechanistic method of Descartes, on which the Eighteenth Century's professed empiricists premised their attempted defense against Leibniz's exposure of their sundry blunders and frauds. The answer lies in closer scrutiny of a quality of *action,* which Leibniz and his followers identified as that quality of *power* which is to be associated with the performed action which expresses a universal physical principle.

Human sense-perception does not "see" the principle as a sensory object of the ordinary types. Human sense-perception sees *an apparent ontological discontinuity.* This type of discontinuity has the apparent form of a true infinitesimal, as Georg Cantor, in his better moments, such as in his production of his ***Grundlagen,*** understood the ontological form and formal implications of such discontinuities.

There is an "object" there; but we do not see it. We see a place, a place where the object's existence is expressed. We "see" an object which corresponds to Heraclitus' notion of change as an object. Mere sense-perception does not recognize any universal physical principle; only the higher cognitive powers of the human mind could do so. Thus, wherever such a true discontinuity might be expressed by such a true infinitesimal, there is a function to be represented, a process to be represented. The students' experience in replicating Archytas' doubling of the cube. is an outstanding experimental demonstration of the existence of the relevant connections.

To restate that pivotal point of the presentation at this point: *That pedagogical experience, the replication of Archytas' solution for the Delian paradox, is an example of a direct experience of the conception to be associated with the famous formulation by Heraclitus.*

As I have emphasized repeatedly in the course of this report until now, the real universe is a universe composed of forms of action corresponding to *powers,* powers which are not expressed as fixed objects of naive sense-perception, but as a process of change. By "change," we should recognize a process of transformation according to a principle which has the quality of being a power. It is a power of ontological change, such as, for example, the constructed doubling of the cube.

That is what the universe does. That is what human beings do willfully, as other living species can not. The science of physical economy, my specialty, affords us the best, most general, and also most relevant demonstration of that principle.

The Science of Physical Economy

In physical economy, we experience two contrasted classes of productive change in the environment.

In the one case, we have changes which are of the form of actions which apply an already established principle of human practice. In the other, contrasted case, we introduce a new universal principle to practice. In that latter case, we are experiencing the quality of effect which is typified by the role of scientific and technological progress.

Both qualities of changes are characteristic of the Noösphere; the second represents qualitative, or *anti-entropic* changes in the rate of self-development of the Noösphere. The science of physical economy, which is the science underlying any competent analysis or practice of political economy, is based on consideration of the effect of the occurrence either of these actions, or of the lack of such actions.

In physical reality, there is no inherent physical-economic profitability in a society which practices "zero technological growth"; any such society, any such economy is inherently entropic, and ultimately doomed by its policy of practice. *Any method of accounting which professes to perceive actual, or potential profitability in a zero-technological-growth economy is either ignorant, or fraudulent. Any society which adheres to the intention of zero technological growth, is dying and rotting, as we have seen in the North America and the United Kingdom during the recent thirty-five years, and in continental Western Europe for more than a quarter-century.*

On this account. Albert Einstein's remark, that the universe is "finite, but unbounded," should be corrected to read, "finite, and self-bounded." My proposed correction is, most probably, completely in accord with his own intention; however, we must consider the way in which his statement would probably be read by others.

There are four gross strata of a national (or, world) economy which are of indispensable, if relatively superficial, crucial importance for understanding even the bare rudiments of a national economy. The first is the Biosphere, including its fossil elements, in respect to its relative state of depletion and development, relative to a prior condition. The second is the fossil elements of the Noösphere, including their relative state of depletion and development. The third is the development

of the state of the non-fossil elements of the Noösphere, including the development of the human mind. The fourth is the rate of progress of those combined phases, as chiefly determined by the practiced state of cognitive development of the human mind of all strata of society. *The combined progress in discovery of principles and the realization of improvements based on continued discovery of such principles, are fairly described as a statement, of first approximation, of the self-bounding state of an economy.*

The relations among those typical categories of components are never mechanistic, but are *dynamic* in Leibniz's sense of that term.

The underlying, functional characteristic of the indicated set of relations defining a self-bounded and anti-entropic economic process is expressed as the combined rate of accumulated progress of society in discovery, and realized application of accumulated knowledge of fundamental physical and related principles. That essential quality of effect is defined essentially by the cumulative discovery and realization of universal physical principles affecting all of the general categories indicated immediately above.

In broad terms, that means that the health of the economy is a function of its rate of upshift in directions determined by fundamental progress in discovered and applied knowledge of universal physical principles. This can be restated as the relative anti-entropy of the process as a dynamic whole.

As the examination of the history of progress and decline of the recent, approximately three thousand years of the evolution of European culture, illustrates the crucial point to be emphasized here, it is those ideas which are congruent with that notion of powers associated with Pythagorean and Platonic Sphaerics, which is the essential accumulation of human capital, as measured in replicatable re-enactment and additions to the discovery of principled ideas (powers), which is the driving force of human progress. It is the process of transmission and addition of the stock of such ideas which is the determining feature of the history of culture, and of what may be termed descriptively as economy. Here lies the tangible demonstration of the specific quality of immortality which is embodied in the mortal human individual.

It is the discovery, transmission, and application of ideas of the quality of powers, which are the essence of the continuing history of the human species and its cultures.

Existence and Ideas

The characteristic of the Fourth Domain, as a domain, is limited essentially to the function of those powers which we associate with the principle of dynamics as associated with Sphaerics. In other words, actions are essentially subsumed expressions of efficient universal physical and congruent principles, principles of the ontological quality of *powers.* In other words, the Fourth Domain is essentially a domain of ideas, as the notion of powers typifies efficient ideas.

These ideas occur as objects of perception only in their guise as discontinuities within the sense-perceptual domain. They are the discontinuity corresponding to the action associated with universal principles, which bridges the gap—the apparently infinitesimal space—between the two points of before and after the relevant apparent discontinuity.

On this account, the human individual has two forms of existence: On the one hand, as the mortal, animal-like living form. On the other hand, the efficient role of that individuality as a permanent (e.g., immortal) *link of action* within the process of unfolding ideas on which the progress of humanity depends.

This connection is expressed in its poignant form by such mortal cases as that of Jeanne d'Arc, whose action, for which she was burned alive, defined a crucial consequence in the European existence. The connection is made to kindred effect, on account of principle, by the generation and transmission of discoveries of universal physical principles. Such actions define the individual, who were otherwise seen as like a mortal animal, as immortal, by virtue of a personal identity which was expressed by the mortal human individual's relevant action, but an identity not limited by the mortal biological existence.

Morally matured individual persons recognize that distinction in practice, and acquire thus a sense of personal immortality which inhabits the mortal individual as both a motive and a sense of personal interest in immortality.

However, this sense of immortality is not only social, but depends upon a sense of participation in the principle of action which governs the universe, and a corresponding loyalty to the Creator, which governs the universe through the expressions of the Fourth Domain.

The sense of personal accountability which such a notion of immortality demands, is inseparable from the notion of truth, as scientific truth illustrates the point. This means truth as defined by loyalty to the principles of Life and Cognition. Life and Cognition, truthfully sought out and served, are the hallmarks of the social individual's immortality. These are notions of an individual's sense of a participation in the Creator which is uniquely human, and inevitably social. It is that which underlies, and which is expressed by the principle of *agapē.*

Without such devotion, the human individual approximates, more or less, the Yahoo of Jonathan Swift's Parable, or, the same thing, a creature in the mold of the Sophists of self-doomed ancient Athens, and the financially predatory strata of our society today. Without such devotion, there is no true morality, and, indeed, no truth at all.

The Fourth Domain is no fantasy; it is the only real place in our universe which is a fit place in which a morally and intellectually matured human individual would wish to live. It is the place in time, where, as if in Raphael Sanzio's famous ***The School of Athens,*** immortal human beings, such as Raphael himself, would choose to conduct the struggle in whose history he actually lives.

From Plato's *Theaetetus* to Gauss's *Pentagramma Mirificum:* A Fight for Truth

by Bruce Director

In 399 B.C., as Athens reeled from the economic and political turmoil associated with the Peloponnesian Wars, an aged Socrates had a remarkable conversation about the cause of that crisis, with an extraordinary young man. More than 30 years later, facing the continuation of that same crisis, Plato immortalized that discussion in an historical drama that has since become known by the name of Socrates' interlocutor, ***Theaetetus.*** By that time, Socrates had long since been tried and executed, and Theaetetus had died from mortal wounds sustained in a military battle near Corinth.

Plato, as a protagonist in that history, insisted that the central question of that colloquy—"What is knowledge?"—was of momentous importance for the immediate survival of Greek culture. Thus, he set this drama in the historical context in which it occurred, intending to provoke his contemporaries, and all subsequent generations such as ours, to face this question as it should be faced—as the defining issue of life and death for civilization.

As in all classical dramas, the opening scene of the ***Theaetetus*** sets the stage for what follows by providing the audience with the historical context from which to see the unfolding events. In this case, those events are heard through the ears of Eucleides of Megara, and Terpsion, who recreate the celebrated conversation some 30 years after it occurred. This retrospective is prompted when Eucleides reports to Terpsion that he has just been to the harbor and has seen Theaetetus, being carried to Athens, having been badly wounded in a battle near Corinth, and suffering from the dysentery that has infected the army.

Upon hearing this news, Terpsion exclaims, "Oh! What a loss he will be!" which prompts Eucleides to recall:

> I remembered what Socrates had said of him, and thought how remarkably this, like all his predictions, had been fulfilled. I believe that he had seen him a little before his own death, when Theaetetus was a youth, and he had a memorable conversation with him, which he repeated to me when I came to Athens; he was full of admiration of his genius, and said that he would most certainly be a great man, if he lived.

Like John Keats's "Ode on a Grecian Urn," Plato's introduction prompts from us a flurry of questions: "Who was this Theaetetus? What was his life? Why did he die? What was this battle? Why did it come about? What hope had Socrates found in him? What had the Greeks now lost?"

In introducing Theaetetus at the moment of his death, Plato sought to provoke his contemporaries to reflect on such questions, hoping they would understand that what Socrates had recognized in the youthful Theaetetus, was the key to reversing their continuing misfortune. But, as the history of Greek civilization attests, Plato's contemporaries were not so roused, and Greek civilization continued its decline, ultimately yielding to the power of imperial Rome.

Today, our contemporaries should likewise be stirred by Plato's account. But they are, for the most part, blind to this history. Such dullness indicates not a mere lack of refinement: it certifies that our modern culture suffers from the same affliction as Plato's. Although we cannot change the response of Plato's contemporaries to his drama, we can determine ours. Their history is written; ours is yet to be.

The Life and Times of Theaetetus

The battle in which Theaetetus was mortally wounded, occurred near Corinth in 369 B.C., and was part of a continuing series of internecine wars that had ravaged Greece for much of the previous century. In the early part of the 5th Century B.C., the Greeks had united in a defense against a series of military assaults from the Persian Empire. That defense succeeded because of the relatively higher moral and intellectual development of Greek society over imperial Persia. This higher quality of development was a reflection of the concept of the nature of Man that had been developing in the Greek-speaking world, as typified by the reforms of Solon and the scientific discoveries of Thales and the Pythagoreans.

In reaction to their defeat, the imperialists recognized that to subdue the relatively higher culture of Greece, they had to undermine the commitment of Greek culture to the development of the creative powers of the mind. By 450 B.C., the Greeks began to succumb to this more subtle and ultimately more successful attack from the imperial quarters. Working through their confederates in the cult of Apollo at Delphi, the imperial powers cultivated a "coalition of the willing" from among the most backward and corrupt elements of Greek society, typified by the alliance centered around the city-state of Böotia.

These ancient populists were corrupted and recruited by money, power, and cult religious beliefs, which paid homage to the irrational mystery powers of mythical gods, who considered human beings as beasts. The imperial faction had a common hatred for the concept of Man expressed through the ideas of Solon, Heraclitus, Thales, and the Pythagoreans: that the creative powers of the mind distinguished man from all other creatures. Unlike animals, which are slaves of sense-perception, human beings can grasp, through their minds, the unsensed principles of change that govern the behavior of the objects of sense. The Pythagoreans called such principles by the Greek word "dynamis," whose English translation is "power." When this cognitive power, not the objects of sense, guides Man's actions, Man gains an increasing mastery over the physical universe itself. Thus, as Solon set forth in his laws, and Socrates affirmed through his life's work, the only way to improve the human condition is to improve the powers of the mind.

The imperial powers were aided in their corruption of Greek culture by the Sophists, who began to swarm into Athens during the middle of the 5th Century, charging large fees to teach the children of wealthy Athenians how to use the skills of oratory to persuade others to part with their money, morality, and sense. Like ancient Elmer Gantrys, or the antecedents of today's financial or political consultants, the success of the Sophists depended on the population's growing willingness to pursue the delusion of sensual power and money—just as today's Baby Boomers fall for every hallucinatory sex and money scheme that oozes out of the internet.

The Sophists, accepting the denial of the existence of human creativity as an axiom, insisted, therefore, that nothing could be known except that which is perceived through the senses. Everything else is simply a matter of "opinion," whose truth is determined solely by its popularity of the moment. For the Sophists, and those who believed in them, truth did not exist, because it would interfere with the illusory power that sophistry had apparently produced.

As the popularity of the Sophists grew, the conditions in Greece declined, leading to the disastrous Peloponnesian Wars from 431 to 404 B.C., which left most of Greece decimated, and Athens in a state of extreme economic, cultural, and political decay. But the wars did not end in 404 B.C. They continued as shifting alliances that pitted each against all, in a permanent war that devoured the Greek-speaking world. In 369 B.C., an army of Sparta and Athens, which had been allies against the Persians, but turned into enemies in the Peloponnesian Wars, combined anew in a battle against the remnants of the morally corrupt, Persian-controlled, Böotian league. It was in this battle that Theaetetus received the wounds that took his life.

But, thirty years earlier, Theaetetus was still a youth growing up in an Athens riddled with the corruption of sophistry. This was the circumstance of his memorable discussion with Socrates.

Theaetetus and Socrates in Dialogue

That conversation is reported in Plato's drama through the reading of the transcript that Eucleides made of Socrates' account of that day. As that transcript reports, the conversation opened with a discussion between Socrates and Theodorus of Cyrene, a Pythagorean known for his investigations into incommensurable magnitudes. Socrates, expressing his concern for the future of Athens, asks, "Who among these young Athenians shows promise as a philosopher?" Theodorus points out one, the aforementioned Theaetetus, who, he says:

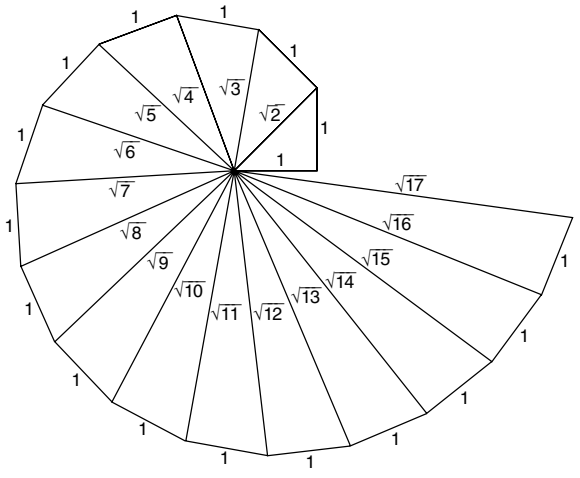
> . . . is no beauty, and you must not be offended if I say that he is very like you; for he has a snub nose and projecting eyes, although these features are less marked in him than in you. Seeing then, that he has no personal attractions, I may freely say, that in all my acquaintance, which is very large, I never knew any one who was his equal in natural gifts: for he has a quickness of apprehension which is almost unrivaled, and he is exceedingly gentle, and also the most courageous of men; there is a union of qualities in him such as I have never seen in any other, and should scarcely have thought possible; for those who, like him, have quick and ready and retentive wits; have generally also quick tempers; they are ships without ballast, and go darting about, and are mad rather than courageous; and the steadier sort, when they have to face study, prove stupid and cannot remember. Whereas he moves surely and smoothly and successfully in the path of knowledge and enquiry; and he is full of gentleness, flowing on silently like a river of oil; at his age, it is wonderful.

With this glowing introduction, Socrates invites Theaetetus to explore a question, which the Sophists insisted could not be answered, and should not be asked: "What does it mean to know something?" With Theodorus' urging, Theaetetus joins in. Socrates initiates the discussion with a series of questions designed to establish that he is not referring to knowledge of a specific thing, but to the general principle of knowledge itself.

In response, Theaetetus says, confidently:

> Yes, Socrates, there is no difficulty as you put the question. You mean, if I am not mistaken, something like what occurred to me and to my friend, your namesake Socrates, in a recent discussion.
>
> Theodorus here was drawing some figures for us in illustration of powers [*dynamis*], showing that squares containing 3 square feet and 5 square feet are not commensurable in length with the unit of the foot, and so, selecting each one in its turn up to the square containing 17 square feet and at that he stopped. Now it occurred to us, since the number of powers appeared to be infi-

FIGURE 1
Theodorus' Construction



Theodorus' construction of incommensurable magnitudes. He stopped at 17, but Theaetetus conceived of the entire unlimited class of such "square" powers and found their true boundary.

nite, to try to collect them under one name by which we could henceforth call all the powers.

Theaetetus then demonstrates to Socrates how he had surpassed his teacher and discovered a general principle of incommensurables. (See **Figure 1.**) Not a specific principle for this or that incommensurable magnitude, he says, but the general principle—power (*dynamis*) from which these incommensurables are generated.

The Idea of Powers

This idea of powers is at the heart of all science from that time to this. The simple example used by Theaetetus—that the powers that increase a line are distinct from the powers that increase an area, which are, in turn, distinct from the powers that increase a volume—is an expression of the capacity of the human mind to be a master, not a slave, of the objects of sense. From their visible appearance, the line, square, and cube all appear to be generated by the same thing. The square is bounded by lines; the cube is bounded by squares. The edge of a cube and the side of the square are lines, which, in their visible appearance are indistinguishable from a simple line itself. Yet, as the Pythagoreans discovered, the line that generates a square is incommensurable with a simple line, and the line that generates a cube is incommensurable with both other lines.

Theaetetus went further. He recognized that the line which doubles a square is incommensurable with the line that triples a square which, in turn, is incommensurable with the line that quadruples a square, and so on. But although these magnitudes are each separate and distinct, they could be thought of as expressions of a single principle. That principle, although apparently unlimited, was actually bounded; it lacked the power to double the cube. Those cubic powers, Theaetetus asserted, were a different species of powers.

Upon hearing Theaetetus present his discovery, Socrates proclaims with great joy that Theodorus is fully justified to praise the cognitive powers of his student. But now Socrates posed the more elementary question, "What do you mean when you say you know something?" This caused Theaetetus to caution that he does not deserve the praise, because he cannot answer that general question.

Eucliedes' transcript provides the account of what follows:

> **Socrates:** Well, but if some one were to praise you for running and to say that he never met your equal among boys and afterwards you were beaten in a race by a grown-up man, who was a great runner would the praise be any the less true?
>
> **Theaetetus:** Certainly not.
>
> **Socrates:** And is the discovery of the nature of knowledge so small a matter, as I just now said? Is it not one which would task the powers of men perfect in every way?
>
> **Theaetetus:** By heaven they should be the top of all perfection!
>
> **Socrates:** Well, then, be of good cheer; do not say that Theodorus was mistaken about you, but do your best to ascertain the true nature of knowledge, as well as of other things.
>
> **Theaetetus:** I am eager enough, Socrates, if that would bring to light the truth.
>
> **Socrates:** Come, you made a good beginning just now; let your own answer about powers be your model, and as you comprehended them all in one class, try and bring the many sorts of knowledge under one definition.

Plato's drama continues the account of this historic conversation in which the venerable Socrates, concerned for the future of his country which he has seen decay through the corruption of sophistry, seeks to instill in the young genius a ruthless commitment for the truth, and an understanding of the method by which to seek it. Socrates implores Theaetetus to use his personal experience of a creative discovery as a guidon for pursuing the more fundamental question. Throughout the dialogue Socrates encourages Theaetetus to trust only his knowledge of the power of discovery, not the knowledge of specific things.

Socrates recognizes that although this creative experience can only take place in the individual human mind, society as a whole depends on its frequent occurrence. Therefore, he insists, that as an old man concerned for what will become of mankind after his death, he must be dedicated to inspiring this capacity in others. He compares himself to his mother, who as a midwife, helped bring children into this world, whereas he helps bring forth ideas. He seeks to inspire in Theaetetus a passion for truth so strong, that as he assumes greater respon-

sibility for society, he will be willing to subject his thoughts to the scrutiny necessary to determine whether he has produced something true, or has merely brought forth a "wind egg." If Socrates succeeds in this effort, he will have created a warrior against sophistry.

For the full account, the reader is referred to Plato's dialogue (see www.perseus.tufts.edu for translation), but for our purposes here we must underscore Socrates' concluding remark:

> If after this you ever undertake to conceive other thoughts, Theaetetus, and do conceive, you will be pregnant with better thoughts than these by reason of the present search, and if you remain barren, you will be less harsh and gentler to your associates, for you will have the wisdom not to think you know that which you do not know. So much and no more my art can accomplish; nor do I know aught of the things that are known by others, the great and wonderful men who are today and have been in the past. This art, however, both my mother and I received from God, she for women and I for young and noble men and for all who are fair. And now I must go to the Porch of the King, to answer the indictment which Meletus has brought against me. But in the morning, Theodorus, let us meet here again.

Meletus' indictment charged Socrates with impiety and corrupting the youth, for his opposition to sophistry in Athens. At the trial, Socrates warned that if Athens continued to capitulate to sophistry it would pay a heavy price. He was convicted and executed. The history records, as Eucleides noted, that all Socrates' forecasts were fulfilled.

Enter Archytas

Within two years of Theaetetus' death, Plato was called to Syracuse by a coalition of Pythagoreans who were fighting a western flank against Persian-led imperialism. Plato had visited this region 25 years earlier, shortly after the death of Socrates, in his search for potential collaborators against the Persian-allied sophists. This first trip would have brought him into proximity with circles around Archytas, a great statesman and scientist based in the Pythagorean stronghold of Tarentum. Among Archytas' scientific accomplishments were a thorough study of music, astronomy, mechanics, and his famous solution to the problem of doubling the cube.

Archytas had established himself as one of the most important political leaders in the region, having been elected general for seven years, although the usual term was one. As a Pythagorean, he insisted that politics must be guided by scientific principles, not sophistry. These Pythagoreans of Sicily and southern Italy had hoped to influence Dionysius II, the tyrant of Syracuse, to reject sophistry and return to the traditions of Solon. But this effort failed, and Plato soon returned to Athens believing the Syracusans to be too corrupt to heed his advice. Although at the time Plato considered his assessment final, in 361 B.C., Archytas personally implored him to return to the region, in another attempt to solidify a flank against sophistry.

Respecting Archytas' judgment, Plato made the trip, only to find himself sentenced to death by a Dionysius more intent on pursuing his power, than on turning his kingdom into a republic. But through the direct intervention of Archytas, Plato was freed, and returned to Athens, where, among other things, he wrote the dramatic account of Theaetetus' conversation with Socrates.

In the years that followed, Plato continued to emphasize the importance of the connection between science and politics. In the ***Laws,*** his final attempt to guide Greek culture out of the pit into which it had fallen, Plato laments that the Athenians were "like guzzling swine," because they had become ignorant of the principles for doubling the square and cube. Such ignorance left the Greeks not only unaware of basic scientific principles; more important, lacking a direct, personal experience of creative discovery, they had been rendered like beasts.

Plato's emphasis on the relationship between this development of the creative powers of the individual human mind and the condition of society as a whole, was immortalized by Eratosthenes' characterization of the problem of doubling the cube as the "Delian" problem. According to Theon of Smryna, Eratosthenes wrote in his ***Platonicus:***

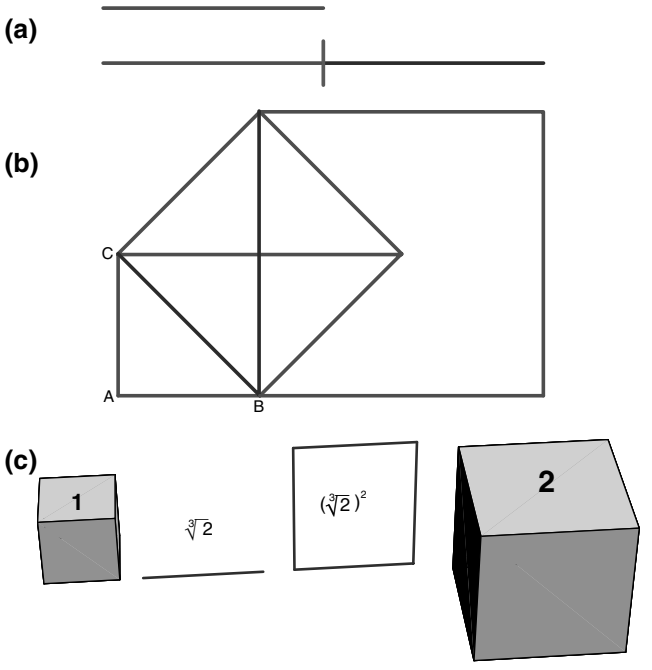
> [W]hen the god proclaimed to the Delians by the oracle that, if they would get rid of a plague, they should construct an altar double of the existing one, their craftsmen fell into great perplexity in their efforts to discover how a solid could be made double: They therefore went to ask Plato about it, and he replied that the oracle meant, not that the god wanted an altar of double the size, but that he wished, in setting them the task, to shame the Greeks for their neglect of mathematics and their contempt for geometry.

In Plato's dialogue, Theaetetus alludes to this Delian Problem, when, after recounting to Socrates his discovery of the entire species of square magnitudes, he says, "and the same for solids." We do not know how far Theaetetus' knowledge of solids had extended when he was at this age; however, the later history shows that it was Theaetetus who produced the first complete study of the Egyptian/Pythagorean science of the five regular, spherical, "Platonic" solids.

The significance of Theaetetus' allusion to solids in this context becomes clear, only when viewed from the standpoint of Archytas' solution to the Delian problem. Inversely, Archytas' solution to the Delian problem can only be understood, when viewed from the standpoint of Theaetetus' history.

As Theaetetus indicated in his youthful discussion, the incommensurable magnitudes associated with the square powers, though distinct, can be thought of as a single power.

FIGURE 2
Doubling and Powers



(a) The magnitude which has the "power" to double the length of a line is produced by simple extension. (b) The magnitude which has the power to produce a square of double area is the diagonal of the smaller square, and is called the geometric mean between the two squares. The magnitude of diagonal BC is incommensurable with, and cannot be produced by, the magnitude of side AB of the smaller square. (c) The magnitude which has the power to produce a cube of double volume is different from the magnitudes which have the power to double a square, or a line. It is the smaller of two geometric means between the two cubes, and is incommensurable with both lower magnitudes.

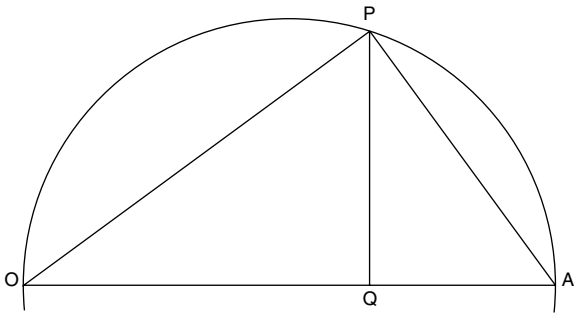
This unity is expressed harmonically by the proportion of one geometric mean between two extremes. However, as was discovered by Hippocrates of Cios a generation earlier, the incommensurable magnitudes associated with the cubic powers, are expressed harmonically by the proportion of two geometric means between two extremes. (See **Figure 2.**)

As Plato expressed it in the ***Timaeus,*** it is the real universe, not formal mathematics, that defines which of these proportions is real:

> If the body of the All had to come into existence as a plane surface, having no depth, one mean would have sufficed to bind together both itself and its fellow-terms; but now it is otherwise: for it behooved it to be solid of shape, and what brings solids into unison is never one mean alone but always two.

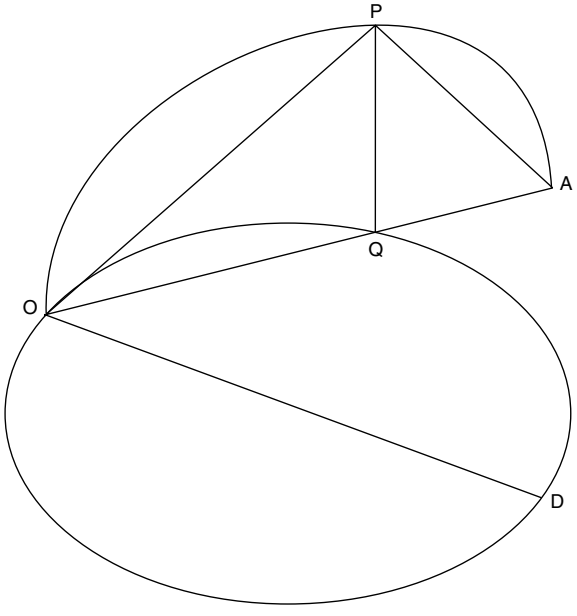
Plato's, Archytas' and Theaetetus' focus on the Delian problem drove the Sophists crazy, for the Sophists insisted that nothing could be known to be true but sense perception.

FIGURE 3 (a)
Two Means Between Two Extremes



The chord OP is the geometric mean between OQ and OA. As P moves from A to O, the entire manifold of such proportions (one mean between two extremes) is formed.

FIGURE 3 (b)

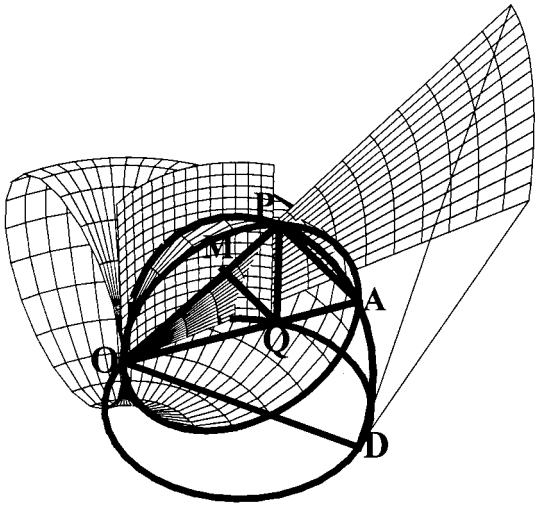


To generate two means between two extremes, the motion of 3(a) must itself be moved, to pivot around O. Thus Q moves simultaneously on line AO and on circle DQO. Circle OPA sweeps out the surface of a torus. Line PQ sweeps out the surface of a cylinder. P moves simultaneously on the circumference of circle APO and the curve (not shown) formed by the intersection of the torus and the cylinder.

Consequently, the Sophists could never double the cube, because, as Archytas' solution shows, the cube cannot be doubled by any method that is apparent to sense perception.

Because one mean between two extremes can be expressed by the motion of a right angle in a circle, it would seem, from the standpoint of sense-perception, that two means could be expressed by a similar motion in a sphere. (See **Figure 3.**) This false belief is further reinforced by the fact that the cube, as one of the five regular solids, can be

FIGURE 4
Archytas Doubles the Cube



When a cone, with its apex at O, is formed by extending chord OM and rotating it until it intersects both the torus and the cylinder at P, two geometric means are formed. OM:OQ::OQ:OP::OP:OA. If OM is 1, OQ will be the edge of the cube whose volume is 2, OP will be the edge of the cube whose volume is 4, and OA will be the edge of the cube whose volume is 8.

perfectly inscribed and circumscribed by a sphere. But Archytas showed that the action that produces two means between two extremes is not merely spherical. It requires the complex of actions that generates an intersection between a torus, cylinder, and cone. (See **Figure 4.**) This higher form of action (as indicated below) belongs to the domain which Gauss and Riemann would later call "hypergeometric."

The Sophists and their imperialist controllers were faced with the problem of desiring the results of scientific discovery, while, at the same time, demanding the suppression of the creative powers of the mind that produced those results. They set about to promulgate a new form of cult-religion masquerading as science. This dogma was codified by Aristotle, an imperial agent dedicated to smothering the method of the Pythagoreans and Plato.

The virtually satanic creed of Aristotle, transmogrified into various forms such as empiricism, reductionism, information theory, and so on, has been the primary weapon wielded aginst science by the carriers of the imperial cause from that day to the present. Crusading under the banner of "objective science," Aristotle's minions explored, not the real world, but the horrific fantasy world which the oligarchy sought to bring about: a world devoid of human creativity. After all, objectively, the human mind is a part of the real universe. Thus, the only true science, is one that is objectively, subjective.

Aristotle's form of sophistry is exemplified by the method and organization of Euclid's ***Elements.***

Euclid and the Sophistry of the *Elements*

The ***Elements*** are built on a scaffold of axioms, postulates, and definitions that are not, and never could be, proven. At the heart of this scaffold is the assumption that physical space is linearly extended, infinitely, in three mutually orthogonal directions. Upon this scaffold, Euclid builds an edifice of theorems that derive, by logical deduction, a compendium of results that begins with the plane figures, ends with the five regular solids, and sandwiches the theory of incommensurables in between. Not only does this entire structure crumble, if the assumptions on which it is based are proven not to be true (which they are not); but, even more important, *nothing in these* ***Elements*** *could have been, nor was, discovered by Euclid's method.*

For example, the entire section on the five regular solids and the theory of incommensurables, was lifted directly from the works of Theaetetus. But they appear here in a form deliberately antagonistic to the method of Archytas, Theaetetus, and Plato.

Where Euclid began with definitions, axioms, and postulates, Theaetetus began with an experimentally derived discovery that the magnitudes that double a square are of a different power than the magnitudes that double a line. He then tested this discovery and found its boundary: it could not double the cube. Yet, as Plato emphasized in the ***Timaeus,*** physical reality demands the discovery of a higher principle. As Archytas' construction shows, that higher (cubic) principle is itself bounded and generated by a still higher principle of action, the hypergeometric.

It is important to underscore, that the fallacy of Euclid's ***Elements*** is one of design. It cannot be overcome by tricks, such as reversing the order of the ***Elements*** to begin with the spherical constructions and descend to the plane figures. Euclid and Theaetetus investigated entirely different objects. The solids of Euclid are mechanical objects; Euclid describes their visible characteristics. The solids of Theaetetus, Archytas, and Plato are the immaterial, yet substantial, dynamic processes that produce the visible solids.

As the Archytas construction demonstrates, and as the case of Gauss's *pentagramma mirificum* confirms on a more advanced level, the spherical solids are themselves reflections of a "hyperspherical" form of action. Such hyperspherical, or more generally, hypergeometrical, domains can only be discovered, as the history of ideas affirms, by the Socratic method typified by Plato, Theaetetus, and Archytas.

As Plato's account of Theaetetus' conversation with Socrates attests, this method *uniquely* can obtain truthful results, because it reflects the fact that the fundamental nature of humanity, *creativity,* is a universal characteristic.

The Hypergeometric Domain

This *anti*-Euclidean method of the *ante*-Euclideans, Plato, Theaetetus, and Archytas, established the basis for all progress in science since their time. On the other hand, as Riemann stated in his 1854 habilitation dissertation, the Aristotelean-

sophistical method of Euclid had produced a darkness over science that had inhibited progress from that time to his.

That darkness began to be lifted with the work of Kepler, who applied the Socratic method of Nicholas of Cusa's ***De Docta Ignorantia*** to the determination of the physical planetary orbits.

Kepler first showed, in his 1596 ***Mysterium Cosmographicum,*** that the relationships among the visible planets corresponded to the relationship among Theaetetus' five regular spherical "Platonic" solids. This, however, implied that the planet's orbits were circular. But as he stated in the opening of his ***New Astronomy,*** the experimental evidence showed that the planetary orbits were not perfect circles. "This leads to a powerful sense of wonder that drives men to look into causes [*dynamis*]."

Kepler pursued this paradox in opposition to the "Euclidean" methods of Ptolemy, Copernicus, and Tycho Brahe, who all investigated the physics of the planetary orbits from the standpoint of the Aristotelean mathematics of perfect circles. Rejecting this approach, Kepler was committed to revolutionizing astronomy and returning to the Socratic approach exemplified by Theaetetus and Archytas. In this way, Kepler demonstrated that the orbits of the planets were, in fact, elliptical. This led him to his next discovery, that these elliptical orbits were harmonically related according to the same proportions that human beings use to communicate ideas through bel canto polyphonic music. Such proportions did not conform to whole-number ratios, but—as Kepler emphasized through his attack on the Aristotelean Petras Ramus—to the incommensurable magnitudes that had been investigated by Theaetetus. This fact is another indication of the hypergeometric characteristic of the Solar System.

Kepler provided us with a retrospective of his own thoughts in the context of the history we have here recounted, in his 1612 introduction to the second edition of ***The Mysterium Cosmographicum.*** In the first edition, Kepler had emphasized that his discoveries were not only based on the results of the Pythagoreans and Plato concerning the five regular solids, but on their method as well—as that method had been advanced by Cusa. In his original dedication, he had stressed not only his results, but the Socratic-Cusan nature of Man that his discovery of these results affirmed:

> . . . [W]hen we perceive how God, like one of our own architects, approached the task of constructing the universe with order and pattern, and laid out the individual parts accordingly, as if it were not art which imitated Nature, but God himself had looked to the mode of building of Man who was to be.

In the intervening 25 years between editions, Kepler had superseded his own discoveries, but the German-speaking world of central Europe had descended deeper into bloody religious war, along with the rise of a modern form of sophistry known as empiricism. In his introduction to the second edition, Kepler notes that although he has made many advances over his original discovery, he had decided not to change anything of substance in the original work. This was so his readers could judge his method of thinking from the retrospective of his subsequent achievements, and thus be able to recognize, in the manner of Plato's *Theaetetus,* the creative process itself. But Kepler also wanted his readers to judge his discoveries in the context of their subsequent history. For in the years that followed the first edition, the Venetian-orchestrated religious conflict, which had been simmering for more than a century, erupted into the orgy of destruction and insanity, known today as the Thirty Years' War.

Thus, Kepler, like Plato, insisted that his contemporaries, and future generations as well, view his science, as it should be viewed, as a matter of life and death for civilization.

> Would that even now indeed there may still, after the reversal of Austrian affairs which followed, be a place for Plato's oracular saying. For when Greece was on fire on all sides with a long civil war, and was troubled with all the evils which usually accompany civil war, he was consulted about a Delian Riddle, and was seeking a pretext for suggesting salutary advice to the peoples. At length he replied that, according to Apollo's opinion, Greece would be peaceful if the Greeks turned to geometry and other philosophical studies, as these studies would lead their spirits from ambition and other forms of greed, out of which wars and other evils arise, to the love of peace and to the moderation in all things.

Kepler's discoveries raised anew what had already been exposed by Archytas' solution to the "Delian" problem: specifically, the tension between the apparently spherical form of the visible domain, and the hypergeometric nature of the dynamics of physical action.

A deeper insight into this tension can be seen through Gauss's investigation into the "*pentagramma mirificum.*"

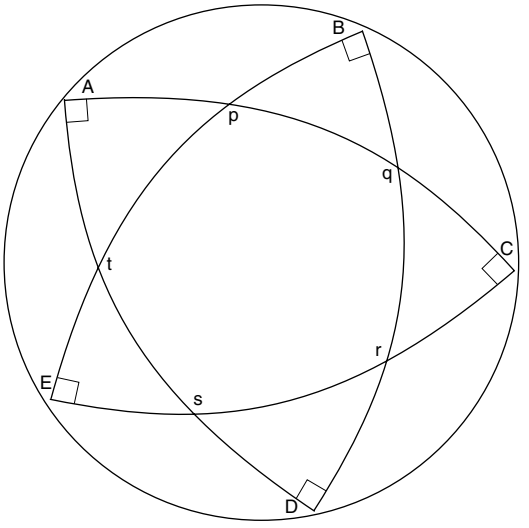
The *pentagramma mirificum* had originally been investigated by Kepler's contemporary, John Napier. In the context of developing advances in spherical astronomy, Napier had begun to uncover the hypergeometric origin of the characteristics of spherical action. His discovery involved the construction of a chain of right spherical triangles, which he called "the *pentagramma mirificum.*" (See **Figure 5.**)

But the deeper significance of this construction only emerges with Gauss's investigations, as reported in two sets of fragments from his notebooks. Although the implications of Gauss's exploration of the *pentagramma mirificum* are quite broad, the epistemological significance can be illustrated with reference to only a few of the results.

In his first fragment, Gauss investigates the relationship between the characteristics of a spherical *pentagramma mirificum* and the plane pentagon generated from it by central projection. (See **Figure 6.**) As the figure illustrates, the characteristics of the plane pentagon are nothing more than arti-

FIGURE 5 (a)

Napier's Pentagramma Mirificum

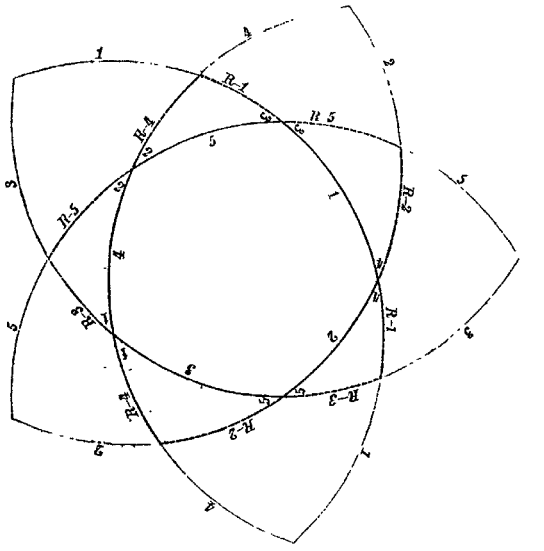


John Napier's Pentagramma Mirificum is formed from a chain of spherical right triangles. On a sphere, both the angles and the sides of a triangle are measured as angles. Thus, angles A, B, C, D, E are all right angles. Arcs pC, qD, rE, sA, tB, are all 90 degrees. The spherical pentagon is self-polar, which means that each vertex is the pole of the opposite side. For example, p is the pole of the equator sr; q is the pole of equator st, and so on. The sides and angles of the spherical triangles Atp, Bpq, Cqr, Drs, and Est are permutations of each other.

This construction cannot be performed on a plane, because on a plane a similar chain of right triangles produces a quadrilateral, not a pentagram. Thus, Napier's Pentagramma Mirificum brings to light the intrinsic five-fold periodicity of the sphere. This five-fold periodicity is also reflected by the fact, as Theaetetus and Kepler showed, that the five regular Platonic solids all can be generated from the pentagon-based dodecahedron.

FIGURE 5(b)

Gauss's Sketch of Napier's Pentagramma Mirificum



Source: Gauss, *Werke,* Book 3, p. 481.

facts of the characteristics of the spherical *pentagramma mirificum* from which it was projected. This indicates what Gauss emphasized from his earliest work until his death: *the Euclidean plane does not exist!*

But this spherical *pentagramma* also has a higher origin. In fragments five through twelve, Gauss shows how the spherical *pentagramma,* and its projection, are both artifacts of an elliptical function, which itself is an artifact of a superseding hypergeometry. (See **Figure 7.**)

Kästner's Anti-Euclidean Methods

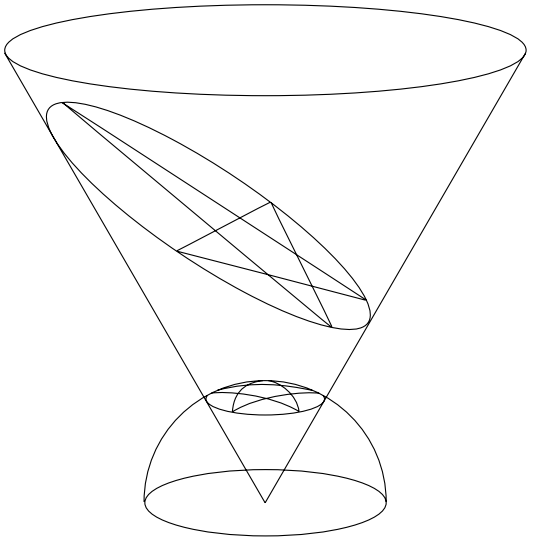
Gauss's discoveries with respect to the *pentagramma mirificum* reflect his ardent commitment to anti-Euclidean methods, to which he was recruited by his first teachers, E.A.W. Zimmerman and Abraham Gotthelf Kästner. Kästner, who was the primary defender of Kepler, Leibniz, and Bach for most of the 18th Century, was a master pedagogue. With Zimmerman and others, Kästner helped to implement Leibniz's design for an educational system that focussed on developing the creative powers of the students, through an emphasis on a mastery of language and the self-study of the original classics of science and art in their historical context. His 1758 seven volume, ***Mathematical Elements,*** presents the principal discoveries of science known at that time, as a series of pedagogical exercises designed to facilitate the student's personal recreation of them—exactly the opposite approach to the mind-deadening method of Euclid's ***Elements.***

Kästner's 1796 four-volume ***History of Mathematics from the Restoration of Science until the end of the 18th Century,*** provides a polemical overview of the historical context for those discoveries, emphasizing the superiority of the Socratic method, as typified by Leonardo, Cusa, and Kepler, and as distinct from the Aristotelean sophistries typified by Galileo and Newton. In addition to these works on science, Kästner was a leading figure in the development of classical art, writing volumes of polemical epigrams, poems, and aesthetical essays. Among his students was the dramatist Gotthold Lessing, the collaborator of Moses Mendelssohn, who was responsible for reviving Shakespeare, and establishing the foundations for the German classical stage. Gauss called Kästner, "the first poet among mathematicians and the first mathematician among poets."

Among Kästner's most notable polemics was his direct attacks on the stupidity of Euclid's ***Elements.*** In numerous essays, as well as the above-mentioned works, Kästner took aim at the ***Element***'s Achilles heel: the parallel postulate. Kästner insisted that this postulate, sometimes also referred to as the 11th axiom, which asserted that parallel lines exist, could never be proven and rests solely on the false assumption

FIGURE 6(a)

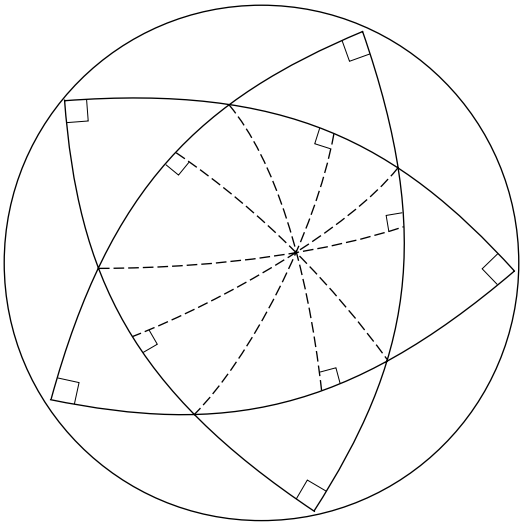
Pentagramma Mirificum Projected



Gauss considered the plane pentagon as the central projection of the spherical pentagramma mirificum. Under central projection, the spherical arcs are transformed into straight-lines, and consequently, the angles are changed.

FIGURE 6(b)

Self-Polar Spherical Pentagon



On the self-polar spherical pentagon, the altitude lines can be made to intersect at any point inside the pentagon. This is because any great-circle arc on a sphere drawn from a pole will be perpendicular to the equator.

that space is flat, and infinitely linearly extended. Were this assumption to be proven false, by physical experiment, the parallel postulate would not be true, and the entire theorem lattice of Euclidean geometry would be exposed as the fantasy world that it is.

Gauss picked up on Kästner's investigations early on, writing in his notebooks in 1797, at the age of 20, that the "possibility of the plane" (that is, the Euclidean flatness of space), must first be proven. Gauss's later work on the *pentagramma mirificum* is an extension of this youthful rejection of Euclideanism.

Kästner's fight against sophistry pitted him directly against the imperial cause centered around the British East India Company: the descendants of the banking circles associated with the enemies of Socrates, Plato, Archytas, and Theaetetus in the cult of Apollo at Delphi. This put him into a direct alliance with the leading scientist of the time, America's Benjamin Franklin, whom he hosted when Franklin visited Göttingen in July 1766. It also made him the direct adversary of the leading imperial sophists of the day, Euler, D'Alembert, and Lagrange.

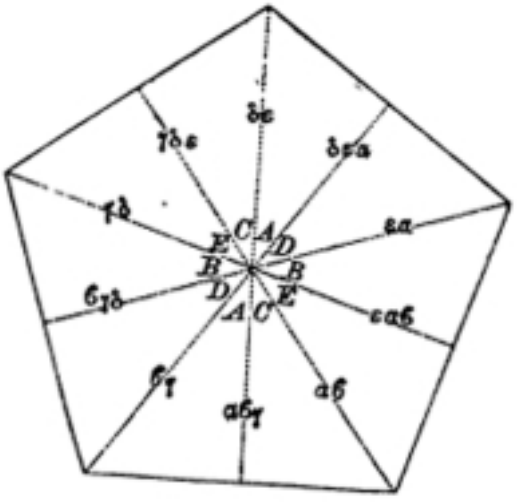
Gauss was one of Kästner's last students. Born one year after the American Declaration of Independence, he grew up in a more hopeful time than Theaetetus. The hope portended by the successful establishment of the American Republic and the influence of his Leibnizian sponsors, especially the then-aged Kästner, inspired in Gauss a passionate rejection of sophistry. This youthful passion was expressed in his 1799 doctoral dissertation, later called the Fundamental Theorem of Algebra, in which he exposed the shallowness of the imperialists' leading scientific authorities, Euler, Lagrange, and D'Alembert.

Gauss, like Kästner and Plato, was also aware of the connection between the influence of sophistry in science and the political conditions of society. In his "Introductory Lecture on Astronomy," first delivered circa 1805, Gauss underscored the importance for the betterment of society as a whole, of the improvement of the creative powers of the individual mind. Attacking those sophists who would belittle astronomy by asking, "What use is such a science?" Gauss said:

> It is not a good sign of the spirit of the time if one hears such a question brought up often and repeatedly. It bespeaks partly an unhappy incongruity between the necessities of life (or those "*needs*" considered necessary) and the resources for satisfying them; it is a silent confession of a truly unpraiseworthy degree of dependence on those needs if one believes oneself compelled to relate everything to our physical needs, if one demands a justification or occupation with a science and cannot comprehend that there are people who study merely because studying is for them a necessity. However, not merely our poverty proves (by documents) such a manner of judging to be at once a petty, narrow-minded, and lazy way of thinking, a disposition always to calculate nervously the reward of every pithy utterance, an indifference and insensibility to the great and to that which honors humanity. Unfortunately, one cannot conceal the fact that one finds such a mode of thinking very prevalent in our age, and it is probably quite certain

FIGURE 6(c)

Gauss's Projected Pentagon

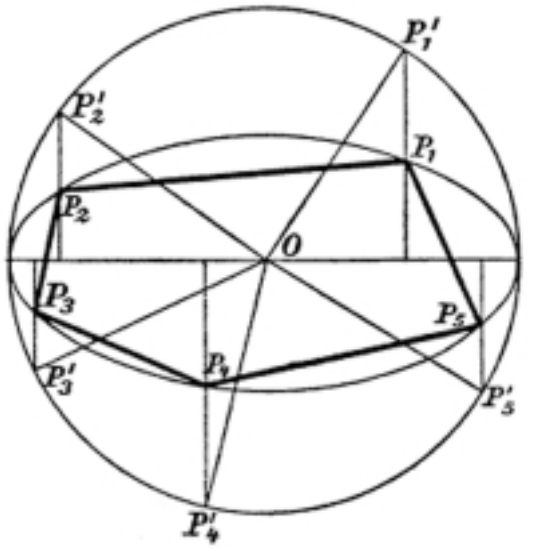


Source: Gauss, *Werke,* Book 3, p. 483.

Gauss's sketch of the projected pentagon. The altitude lines intersect at one point. This is an artifact of the spherical characteristic of 6(b). When Gauss expressed the vertices of the plane pentagon with complex numbers, he showed that all the apparent characteristics of a plane pentagon were artifacts of their spherical origins, regardless of whether the sphere is drawn or not. That is, the Euclidean plane does not exist!

FIGURE 7

The Pentagramma Mirificum As an Elliptical Function



Source: Gauss, *Werke,* Book 8, p. 114.

Because the projected pentagon lies in a plane that cuts the projection cone at an angle, the projected pentagon will be inscribed in an ellipse. Thus, the spherical pentagramma mirificum expresses an elliptical function. Gauss showed that when this relationship is expressed in the complex domain, the pentagramma mirificum provides a partial solution to the "Kepler Problem": the division of the ellipse into five parts. Gauss considered the positions P_1, P_2, etc., as the positions of a planet in an elliptical orbit, and the angles that OP_1', OP_2', etc. make with the axis, as the "eccentric anomalies." He then found a relationship between these eccentric anomalies and the elliptical arcs $P_1 P_2$, $P_2 P_3$, $P_3 P_4$, $P_4 P_5$, $P_5 P_1$ in terms of an elliptic function. Gauss generalized from this that this elliptic function was a special case of a more general hypergeometric domain, which Riemann showed was expressed by the domain of Abelian Functions. Thus, the characteristics of the sphere, as exemplified by the pentagramma mirificum, are themselves artifacts of the higher, unseen, hypergeometric domain.

> that this attitude is very closely connected with the ill fortune which of late has struck so many states. Understand me correctly, I am not speaking of the very frequent lack of feeling for the sciences themselves, but of the source from which this flows, of the tendency everywhere to ask first about the advantage and to relate everything to physical well-being, of the indifference to great ideas, of the aversion to effort due merely to pure enthusiasm for the thing in itself. I mean that such characteristics if they are very predominating, could have been a decisive intervention in the catastrophes which we have experienced. . . .

At the time this speech was first delivered, the American cause in Europe had become increasingly suppressed, after the British-directed orgy of sophistry known as the French Revolution, and the rise of modern fascism in the form of the satanic Joseph de Maistre's Napoleon Bonaparte. These are the "ill-fortunes" and "catastrophes" to which Gauss refers in his lecture. With this change in the political climate, the death of Kästner in 1800, the takeover of the Ecole Polytecnique by Napoleon's "favorite mathematician," Lagrange, and Napoleon's retaliatory direct personal attack on him, Gauss became increasingly cautious about expressing his anti-Euclidean views. Nevertheless, his entire life's work continued to be guided by this epistemological direction, and all of his important discoveries are the result of it.

Under these conditions of virtual imperial dictatorship, especially from the 1815 Congress of Vienna onward, Gauss only explicitly expressed his anti-Euclidean convictions in private correspondence with his closest collaborators. In those circumstances, he emphatically said that he was a committed *anti-Euclidean,* but he could never publish his views, because it would provoke "the outcry of the Böotians."

Shortly before his own death, Gauss was privileged to attend the habilitation lecture of his last and most promising student, Bernhard Riemann, ***On the Hypotheses that Underlie the Foundations of Geometry.*** On that occasion, much to Gauss's delight, Riemann stated publicly what his teacher never said.

And the Böotians, whom Theaetetus had died fighting, have not stopped shrieking to this day.

Cheneygate!

by Jeffrey Steinberg

A political hurricane, as devastating as Katrina, has struck the Bush-Cheney Administration. A string of long-simmering criminal probes, targetting top White House officials and key Congressional allies, has hit all at once, and the right-wing Republican juggernaut of dirty money and political corruption is now on the chopping block.

Asked on Sept. 30 to comment on the series of devastating blows delivered to the Bush-Cheney-Tom DeLay apparatus during the last week of September, Lyndon LaRouche said that "beyond the specifics of the individual instances of crime and sleaze that are now apparently being brought to account, we are seeing an overall reaction to the breakdown of the functioning of our government. The reaction is coming from various places within and around the U.S. governing institutions. In each separate instance, the instinct is the same: We cannot go on any longer with this corrupt, incompetent Bush-Cheney regime. This Administration is no damned good. The House of Representatives is not functioning, because the Republican leadership around Tom DeLay is too busy stealing everything that is not nailed down. Crooks were robbing us blind, and people just said, 'We've had enough,' and took action."

LaRouche went on to emphasize, "This is not a conspiracy against Bush and Cheney. This is a lawful reaction to the chaos and breakdown of governmental functioning that we've seen from the Cheney and DeLay crowd. And now, Mama is standing in the middle of the kitchen, smashing all the dishes. It is not orderly, but it is a long-simmering reaction that has just exploded. And none too soon. With the global financial system in a state of terminal collapse, neither the United States nor the rest of the world can survive much more of this Bush-Cheney fiasco. Plenty of people realize that, in times of crisis, we need leadership from the Executive Branch, from the White House. And Cheney and Bush were leading us straight to Hell."

Cheney's Week From Hell

While the Vice President was recovering from surgery for his heart condition, and contemplating his next moves towards war and dictatorship, he was confronted with a series of shocks:

On Sept. 28, House Majority Leader Tom DeLay (R-Tex.) was indicted by a Travis County, Texas grand jury on charges that he conspired to illegally launder $190,000 in corporate money, through the Republican National Committee, to Texas GOP legislative candidates, in violation of state election laws. Under the rules of the Republican House Caucus, he was forced to resign from the Republican House leadership. Immediately upon his resignation, a closed-door brawl erupted among House Republicans over who would be DeLay's interim successor. This reflected long-developing fault lines within the House Republican Caucus, which the DeLay indictment finally cracked.

DeLay's own legal difficulties are complicated by criminal indictments and ongoing criminal probes against right-wing lobbyist and key DeLay financier, Jack Abramoff (see accompanying article). The same week that DeLay was indicted, murder conspiracy charges were filed against three Gambino organized crime family hitmen, for the assassination of Gus Boulis, the former owner of SunCruz, a casino cruise ship line that Abramoff and partners took over without ever paying Boulis for the sale. It is that SunCruz scam that led to the Abramoff indictment in Florida several months ago. Abramoff faces a string of other criminal probes into tens of millions of dollars that he siphoned off from Indian tribes, to bankroll DeLay and his other political cronies. As *EIR* has revealed, Abramoff and DeLay were at the center of a right-wing fundraising and lobbying apparatus that implicates other leading GOP operatives, including former Christian Coalition head Ralph Reed and anti-tax lobbyist Grover Norquist.

Next, former Pentagon analyst Lawrence Franklin announced, through his lawyer Plato Cacheris, that he had reached a plea agreement with Federal prosecutors, meaning he will testify as a cooperating witness against the neo-conservative Pentagon apparatus and "Mr. AIPAC," Steven Rosen. Franklin was indicted earlier this year by a Federal grand jury in Alexandria, Va. for passing classified Pentagon material to American Israel Political Affairs Committee officials Rosen and Keith Weissman, and to officials of the Israeli Embassy in Washington.

The Franklin case goes to the heart of the neo-con apparatus embedded in the office of Defense Secretary Donald Rumsfeld—centered around Paul Wolfowitz and Doug Feith. While both Wolfowitz and Feith have left their Defense Department posts, the legacy of their neo-con "permanent war/permanent regime-change" dogmas lives on in the form of ongoing plans, currently being pushed from Dick Cheney's White House offices, for military actions against Syria and Iran. Sources close to the FBI say that Feith, who was Assistant Secretary of Defense for Policy and Franklin's boss, is a prime suspect in the ongoing probe of an Israeli espionage triangle, implicating Israeli think-tanks, AIPAC, and American national security officials.

The most devastating personal blow to Cheney, however, came on Sept. 29, when *New York Times* reporter Judith Miller reached an agreement with independent counsel Patrick Fitzgerald, to appear before a Federal grand jury probing the Valerie Plame leak. Miller had been jailed this Summer for contempt of court, after she refused to testify about her ties to I. Lewis "Scooter" Libby, the chief of staff and chief national security aide to Cheney.

EIR was the first publication to report that the leaking of the identity of CIA officer Valerie Plame to syndicated columnist Robert Novak and others had been run out of Cheney's office, by Libby and other staffers, including John Hannah. Valerie Plame is the wife of Ambassador Joseph Wilson, whose February 2002 mission, on behalf of the CIA, to Niger, discredited reports that Saddam Hussein was attempting to buy uranium from that African state. *EIR* revealed that in mid-March 2003, Cheney aides met to launch a "Get Joe Wilson" campaign, to silence opposition to the Iraq War.

In striking the deal that got her out of jail, Judith Miller named Libby as the person who revealed Valerie Plame's identity to her.

A Triple Header

Upon learning about Miller's comments and her scheduled testimony before Fitzgerald's Federal grand jury, LaRouche said: "This is devastating for Cheney and company for three reasons. First, the issue of the leak per se. Libby is now implicated in the original media leak of the identity of Valerie Plame. That is a crime all by itself. Second, is the issue of the coverup. Here, Libby and others are implicated in perjury, obstruction of justice, and a whole second category of crimes—all related to the coverup. And is anyone going to believe that Libby did this on his own, without consulting with his boss, Dick Cheney? I don't think so."

"And then," LaRouche continued, "there is the third issue, and that is the role of our current acting United Nations Ambassador John Bolton in all of this. We know that Judith Miller and Bolton were close confidants, both involved as key assets of the White House Iraq Group. And the WHIG has been at the dead center of the Fitzgerald probe from the outset. Are we about to see our UN Ambassador sent packing? Let's hope so."

"I suspect," LaRouche concluded, "that some people within the institutions see the Valerie Plame case as a perfect opportunity to get Bolton out of that UN post."

The Washington Post's Threat

Not everyone views the looming demise of the Cheney-Bush White House as good news. Even as the walls were closing in on Dick Cheney, the *Washington Post,* the unofficial voice of the Synarchist financier establishment in the nation's capital, ran a warning op-ed by chief political commentator Jim Hoagland on Sept. 29, demanding that someone step forward to read Bush the riot act, to avoid the collapse of his Presidency.

Hoagland wrote: "Bush's floundering since he was caught off base and off guard by Hurricane Katrina strips the veil from a broad pattern of recurrent inattention to the duties of governance, of misplaced loyalty to incompetent subordinates, and a crippling refusal to look back at and learn from mistakes." In a not-so-veiled reference to Bush and Cheney's leading critics, including LaRouche, Hoagland continued, "I take no pleasure from that harsh assessment. I have never shared the unreasoning conviction of many of his more partisan opponents that Bush as a national leader is illegitimate, moronic, or both. He isn't."

Nice try, Mr. Hoagland, but the Bush-Cheney ship is sinking like the *Titanic,* and a re-shuffling of the deck chairs is a little too late.

DeLay Indictment Major Step Toward Bringing Down Corrupt Cartel

by Anton Chaitkin

The control of Congress by the far right, and by the Bush-Cheney Administration, has been shaken by the Sept. 28 felony indictment of House Majority leader Tom DeLay (R-Texas).

DeLay's fall came on the heels of the Aug. 11 arrest and fraud indictment against lobbyist Jack Abramoff, an architect of DeLay's political machine, and the sensational Sept. 27 arrest of suspects in the gangland-style murder of the Florida man Abramoff is charged with defrauding.

A Texas grand jury charged that DeLay had conspired to hide the illegal funding of Texas legislative candidates by "laundering" corporate contributions through payments to and from the Republican National Committee. The grand jury had earlier indicted as co-conspirators John Colyandro, manager of DeLay's funding agency, Texans for a Republican Majority, and a second DeLay underling, James Ellis.

Lyndon LaRouche commented: "This is extremely important. There is a phase shift under way in Congress, which is timely. Many things are coming together with this. If this country is going to survive, it's going to have to change its ways, without DeLay. This gives the Congress an opportunity to make the necessary policy shifts—without DeLay."

There is great glee on Capitol Hill. The Texas and Florida prosecutors, along with Senate investigators and Justice Department probers, are all pulling on threads of the political control apparatus, the gang known and feared—until now—as "DeLay, Inc."

Jack Abramoff began in the mid-1990s putting together channels of corporate funding for DeLay, who rose in the Republican leadership after the 1994 takeover of the House of Representatives by Republican rightists. Along with lobbying strategist Grover Norquist, DeLay and Abramoff coerced corporations and trade associations to cut ties with Democrats, and to seed their lobbying offices with DeLay's close allies and former staff members. Now it seems clear that their power days are numbered.

With the fall of Tom "the Hammer" DeLay, the neo-con grip on the Congress has been weakened.

The DeLay Cartel

A decades-long partnership of Abramoff, Norquist, and Christian Coalition founder Ralph Reed, lay at the heart of this Washington power cartel, providing House dictator DeLay, and Dick Cheney, and Karl Rove, with the money of Enron and other corporate players, and the enforcement muscle of a formidable herd of religious voters.

These arrangements (which gave Anglo-American financiers a set of stone-cold pirates to run the regime) led to the actions for which both DeLay and his financial godfather Abramoff have now been indicted.

DeLay is charged with conspiring to send $190,000 contributed by Sears Roebuck, Bacardi, and other companies, to an account of the Republican National Committee. The RNC immediately wrote a check for the identical amount for use in DeLay's operations behind Texas legislative candidates, covering up the corporate donations which are illegal under Texas law.

Abramoff and his partner Adam Kidan are charged with fraud in pretending to make a $23 million payment towards the purchase of SunCruz, a Florida-based gambling casino cruise ship line, from its former owner, Konstantinos "Gus" Boulis. After Boulis protested that Abramoff had not paid him, and reportedly tried to take back control of SunCruz, Boulis was gunned down.

As the public has subsequently learned, through Senate probes and newspaper exposés, the entire DeLay, Inc. gang took part in the takeover of SunCruz.

The Senate Indian Affairs Committee was investigating Abramoff and his partner, former DeLay aide Michael Scanlon, for squeezing more than $60 million in fees, and political contributions to DeLay-related politicians, from Abramoff's clients, Indian tribes which own gambling casi-

nos. Grover Norquist, Ralph Reed, and Reed's religious networks all shared in the loot. The Washington law office of Greenberg, Traurig, was Abramoff's headquarters for both the Indian scams and the SunCruz caper.

These highlights have emerged from several probes.

- May 2000: Abramoff flew himself and Tom DeLay and DeLay aide Tony Rudy to Scotland for a golf holiday, paid for by Abramoff's casino tribes and Norquist's internet gambling clients. In July, DeLay broke with other Republicans and killed a bill that would have banned Internet gambling.
- Sept. 18, 2000: Abramoff treated financial executive Greg C. Walker to a seat in Abramoff's personal box at the Washington Redskins' football stadium, where Walker was introduced to Tom DeLay, who was then the House Majority Whip. This show of power was used to help close the deal to borrow millions from Walker's company, Foothill Capital, to buy SunCruz. Abramoff has now been indicted for allegedly lying to Foothill and forging documents, to get the money. Abramoff used DeLay aide Tony Rudy as a personal reference on his loan papers.
- January 2001: Abramoff flew Tom DeLay's aide, Tim Berry, to Florida on a SunCruz jet, to go gambling on a SunCruz floating casino. Abramoff was paying himself a $500,000 SunCruz "salary"; the DeLay team was certainly due a reward. To help Abramoff gain control of SunCruz, former DeLay spokesman Michael Scanlon had arranged with Rep. Robert Ney (R-Ohio), a DeLay and Rove man, to speak in Congress about Boulis's unfitness to run the company.

Then, after the takeover, Representative Ney spoke again, in praise of the honor and integrity of Abramoff's partner, Adam Kidan, though Kidan was a bankrupt and disbarred attorney.

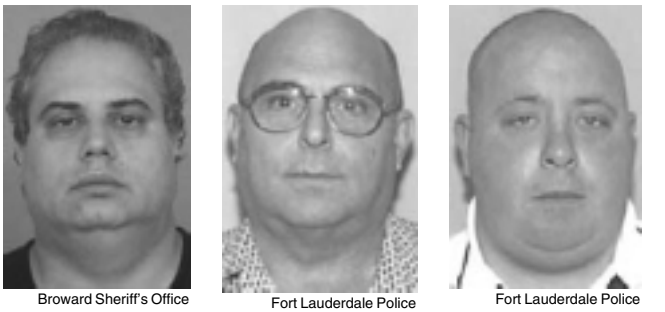
The Boulis Hit

At that time, Abramoff and Kidan were paying installments amounting to $145,000 in SunCruz funds to Anthony Moscatiello, a man identified by law enforcement as an associate in the Gambino crime family and the bookkeeper of the gang's boss, John Gotti. Although listed as a consultant and caterer, Moscatiello reportedly performed no known corporate services for SunCruz.

- Feb. 6, 2001: In Fort Lauderdale, Fla., a car stopped in front of Gus Boulis's BMW and blocked it, while a man in a black Ford Mustang pulled alongside Boulis and shot him three times.

SunCruz spokesman Michael Scanlon told a news conference that Abramoff would be cooperating with the police. But police sources recently told *EIR* that Abramoff had never showed up for an interview in the four years before his fraud indictment.

Adam Kidan had spoken publicly about moving the casino cruise ships to the Northern Marianas, the Pacific island territory officially represented by lobbyist Jack Abramoff, whose laws ensuring ultra-cheap garment labor had been put through Congress by Abramoff and DeLay.


Broward Sheriff's Office | Fort Lauderdale Police | Fort Lauderdale Police

Anthony Ferrari (left), Anthony Moscatiello (center), and James Fiorillo have been indicted for the murder of Gus Boulis.

But after the murder, the heat was on, and the Abramoff team had to relinquish its ownership of SunCruz.

On Sept. 26 and 27, 2005, police finally arrested Abramoff's Mafia-linked "consultant" Anthony Moscatiello, and two of Moscatiello's associates, Anthony Ferrari and James Fiorillo, for the 2001 Boulis murder. The grand jury indictments initially remained sealed; and other arrests are possible.

Meanwhile, U.S. District Judge Paul Huck has set Jan. 9, 2006, as the earliest date jury selection would begin in the Abramoff-Kidan fraud trial.

Tim Berry, whom Abramoff flew to a SunCruz gambling jaunt just prior to the Boulis murder, went on to become chief of staff to Tom DeLay when Delay was House Majority Leader. Berry left his post on Sept. 29, 2005, the day after DeLay was indicted. (Berry will be a lobbyist for Time-Warner.)

Tony Rudy, who flew on the DeLay/Abramoff Scotland golf junket, and was Abramoff's loan reference for the SunCruz scam, left DeLay to work for Abramoff, and then joined DeLay, Inc.'s Alexander Strategy Group—the lobbying outfit that had worked with DeLay, Ralph Reed, Dick Cheney, and Karl Rove to push Enron's deregulation schemes.

As Majority Leader, DeLay brought in Rep. Roy Blunt (R-Mo.) as his House Whip. Blunt was given responsibility to manage the so-called "K Street Project," the DeLay team's coercive relations with lobbyists. The better to do this assignment, Blunt was married to the head of lobbying for Philip Morris. Blunt got regular free meals at Abramoff's expensive Washington restaurant.

Blunt also came to co-manage the religious-voter menagerie with Ralph Reed, in tandem with Blunt's K Street Project co-leader, Sen. Rick Santorum (R-Pa.), and with John Colyandro, the Texas political operative indicted as a co-conspirator with Delay.

Blunt has now been named interim House Majority Leader to replace the fallen DeLay. But the betting is that Blunt will not last long, as the pace of indictments and arrests picks up.

You Can't Carpool in a Combine; Hyperinflation Hits Food Supply

by Marcia Merry Baker

Apart from the vast hurricane damage to agriculture in the Gulf Coast states, the shock effects from speculation, financial bubbles, and out-of-control energy prices are slamming the U.S. farm-belt at large. Taken together with the economic breakdown effects internationally from the same causes, the demand by commodity cartels for continued domination, and the lack of Federal action, a food supply crisis is in the making.

What's involved are the immediate effects of hyperinflated fuel and energy costs of all kinds, on the inherent cycles in agriculture—sowing, reaping, drying, shipping, processing, animal-raising, etc.—hitting on top of decades of marginalized infrastructure and family farm circumstances. Therefore, non-linear effects are everywhere. For example, farmers in the corn-belt are making triage decisions about which crop fields to leave unharvested, because it's too expensive to combine. What happens next crop season? Many are saying, "I quit."

It's just these kinds of shock-effects which are not in the models of today's generation of so-called economists, nor the thinking of the average man on the street. The current blather heard daily on TV business talk shows is ridiculous for what it says, but worse for the fact that it's tolerated. You hear, for example, "Well, true, the fuel component of agriculture expenditures will rise this year, but . . . supply and demand . . . farming will adjust next year."

A Kansas farm leader got at the truth of the crisis when he warned, even before Hurricane Rita, "You can't carpool in a combine." The U.S. farm sector, and therefore its food chain, is on the line.

The situation in Kansas is indicative of the crisis across-the-board. It's a world center of wheat output, and a leading U.S. cattle state as well. Details are given below on the "Kansas Syndrome" in the energy price-inflation crisis, and key characteristics of American agriculture vulnerability generally. First, the political focus is on what can and must be done.

LaRouche: Act on Oil and Food Prices

Lyndon LaRouche raised the matter of food supply, in connection with the necessity of dealing with the out-of-control oil prices, at his Sept. 16 Washington, D.C. webcast, "The Great Change of 2005." It was held in the midst of Congressional first-reactions to the Hurricane Katrina devastation and Executive Branch negligence. In response to a Senate Democratic office asking, "What exactly is going on? Who or what is actually controlling the price of oil, and how specifically should the Senate respond to it?" LaRouche started off by saying, "Supply and demand is something for sick children to believe in."

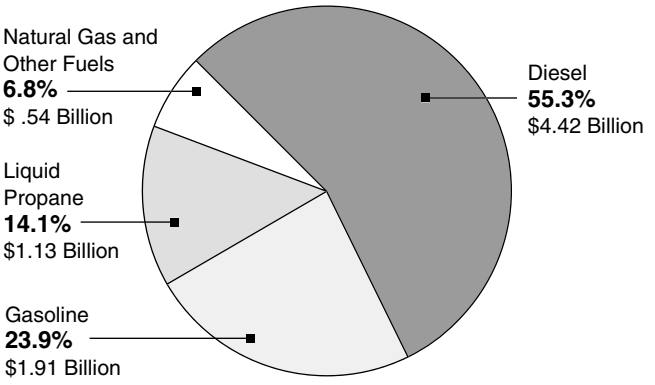
He stressed the responsibility of government to act in the national interest, and what it must do now. "Internationally, the oil price—we could control it. I guarantee you, we have the access to governments abroad, who as a concert of governments, would agree in a flash, to join the United States in regulation of oil in terms of supply, as if on a war-time basis, to make sure that everybody gets it at a fair price. And the speculators will just have to take a bath. We may find some water for them.

"Now, another thing we've got, which is a similar situation, which is not as obvious yet, but we're on the verge of it—it's happening right now—is food! Its supply and its price. Food! Now some people around the Congress have said this, and asked about this.

"The United States government has to guarantee, use its power, to ensure that the food supplies of the American people are maintained at a fair price. Adequate supply and fair price. That is in jeopardy now. It's already in jeopardy on price. Look at the changes in food prices. Look at the incomes of

FIGURE 1

Types and Share of Fuels Used in U.S. Agriculture—$8 Billion Total Expenditure, 2004



Source: U.S. Department of Agriculture, National Agriculture Statistics Service.

people. Our problem is not poverty. Our problem is that people are being ruined, starved to death, crushed. This is where the problem lies.

"Don't get taken in by the so-called financial advisors, by these spin sessions that they go through. It's all garbage! There is no such thing as supply and demand. We know this doesn't work. . . . We don't have a supply-and-demand problem. We have a stealing problem, and we have to protect the vital interests of the United States and other nations from that. And if I were President, I guarantee you, in about three days, I could get this thing through."

Responding to another Senate office's question about restoring price regulation on both energy and food, LaRouche elaborated, "*We organize the flow,* of what we need in so-called energy supplies, and we regulate the price, put a cap on it, and we work with other nations to keep that price, a lid on it!

"Now, we also have a problem of food supplies. Most people don't realize it, but our food chain is quite vulnerable now. Therefore, we have to mobilize, and ensure that everybody gets a chance to eat. Those two things—at this time. There are a minimal number of things we should try to do, in terms of management, from the Federal government, but these are two things that *must* be done! Because, if these things are not done, the whole system can blow, the whole effort can fail, as a result of not doing it. That's the basic thing."

During September, the Lyndon LaRouche Political Action Committee submitted testimony for the record on the urgency of re-regulating energy supplies and prices, to hearings of two Senate committees (Sept. 6, Energy and Natural Resources Committee, on "Global Oil Demand/Gasoline Prices"; and Sept. 21, Commerce, Science and Transportation, on "Energy Pricing") and the House Energy Committee. (See www.larouchepac.com.)

In line with this thinking, the Russian government on Sept. 19 announced a cap on gasoline prices for the coming months, on the principle of the national interest. On Sept. 9, the Duma had unanimously passed a resolution calling for a price freeze for gasoline and fuel prices for agriculture. (See article, p. 71).

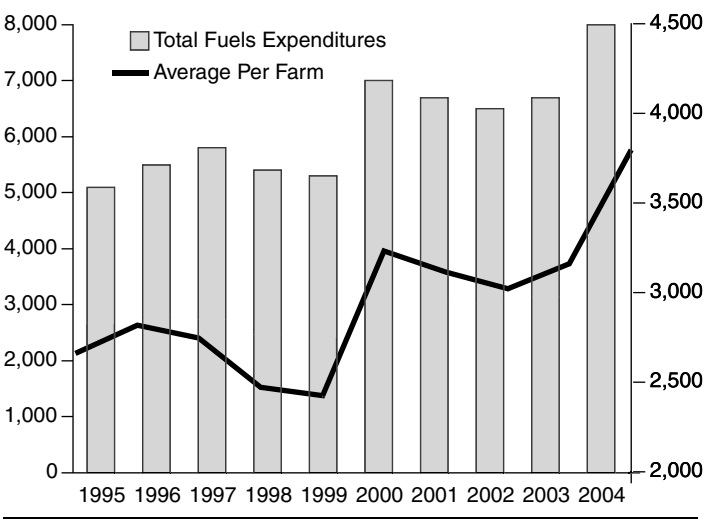
Fuel Critical in Agriculture

Figure 1 shows the relative shares of types of energy used in U.S. agriculture as a whole during 2004, and what was spent on those fuels. Over half is diesel fuel for tractors, field machinery, generators, etc. Gasoline is the next-largest type, almost one-quarter. Liquid propane is a significant 14% of fuel used. And among the 8.6% percent of farm expenditures going to other fuels, the largest component is natural gas—used for drying crops, among other purposes. Not included here is electricity, also an important farm expenditure, especially for dairy, and many livestock confinement operations, and in many locations generated by utilities using natural gas generators.

Prices for all of types of fuels used in agriculture are now soaring. Moreover, this fuel inflation comes on top of last year's record $8 billion spent on fuels in agriculture, a big jump over the year before. **Figure 2** shows the total expenditures on fuels in U.S. agriculture by year, and the average per farm, for the past nine years.

FIGURE 2

Expenditures on Fuels in U.S. Agriculture—National Total, and Average Per Farm, 1995-2004

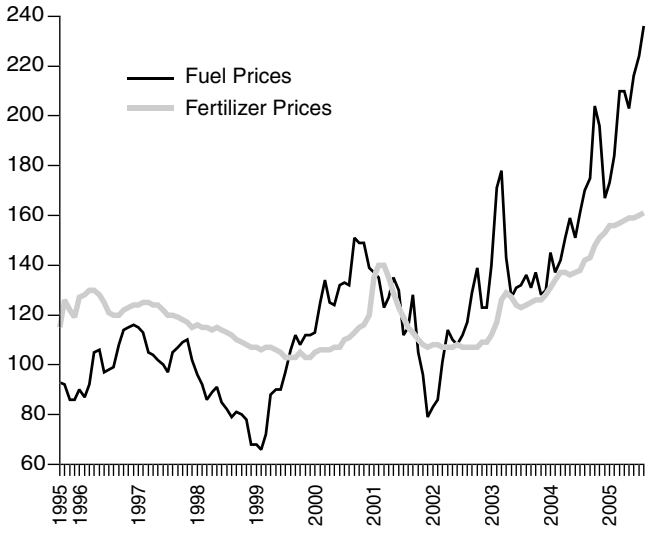


Source: U.S. Department of Agriculture, National Agriculture Statistics Service.

FIGURE 3a

Prices Paid by Farmers for Fuel and Fertilizer Expenses, Monthly, January 1995 to August 2005

(Indexed to 1990-92 Prices)

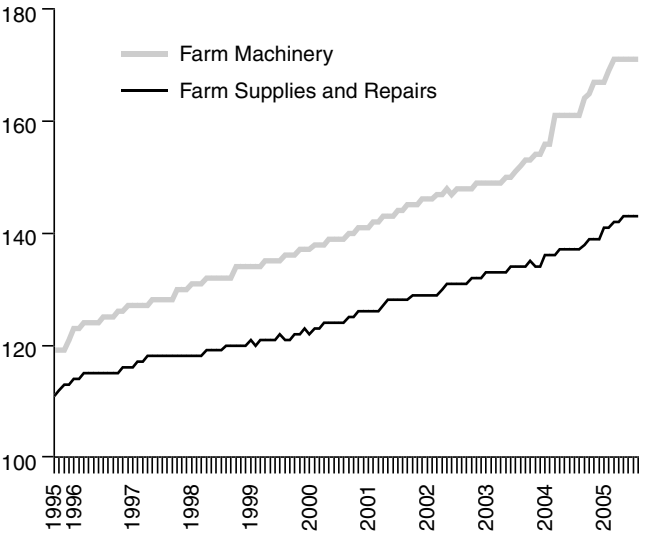


Source: U.S. Department of Agriculture, National Agriculture Statistics Service.

FIGURE 3b

Prices Paid by Farmers for Farm Supplies, Repairs, and Machinery, Monthly, January 1995 to August 2005

(Indexed to 1990-92 Prices)



Source: U.S. Department of Agriculture, National Agriculture Statistics Service.

Years 2000 and 2001—the heyday of the Enron rip-off era—stand out. But now, a new post-Enron, even bigger wave of stealing is under way. Under the current hyperinflationary take-off, farm fuel expenditures are on the way to topping $10 billions or more—except that non-linear effects occur first, namely farm failures, inability to pay, farm closures, and thus food supply breakdown.

(The reason that per-farm fuel expenditures rise more sharply than the national total, is that farm numbers are also decreasing, except for "lifestyle" or hobby farms. This loss of family farms is also a threat to the food supply.)

Prices are rising for other key farm inputs, along with fuel prices. **Figures 3a** and **b** show indices for the rise in fuels and fertilizer, and for supplies and repairs, and machinery, by month over the past 10 years through August 2005. These four items together (including construction with supplies and repairs, and seeds and chemicals along with fertilizer) added up to nearly one-third of the national expenditure on farming inputs in 2004. Other inputs, not shown here, include livestock, feed, farm services of various kinds, labor, taxes, interest, and rent.

In Figure 3a, what stands out is the rise and volatility of prices of fuels—given the onset of energy deregulation as of the late 1990s—along with the simultaneous upsweep in speculation of all kinds, not just commodity-related. Fertilizer prices likewise display wide swings in prices. Anhydrous ammonia, a leading fertilizer, uses natural gas as a feedstock.

In Figure 3b, prices of machinery and supplies and repairs likewise rise over the past 10 years, but without the gyrations of the fuels and fertilizer prices.

Putting these trends of rising farm input costs in context, **Figure 4** shows how *the prices paid out by farmers for their inputs to production have exceeded the prices they are receiving for what they produce, for the past 15 years!*. The graph covers 30 years, indexing prices to the levels of 1990-92. Until that time, the prices farmers received for their output were more than what they paid to produce it. But since about 1991, this has never been the case again.

How are farmers managing to remain on the land? Two main factors—up until now: First, the principal farm operator, his or her spouse, children, and relatives work off-farm jobs, providing non-farm income to subsidize money-losing farming. Income from farming averaged just 16% of total farm household income in 2004.

Figure 5 shows the geographical patterns, by county, as of 2002, of what percent of principal farm operators work off the farm at least 100 days a year. Nationally, some 46% of farmers were doing this in 2002. The darkest tone shows counties with 55% or more working off the farm at least 100 days. Even the lightest tinted counties are over 40%.

The second, lesser factor in supporting farmers to stay in operation, is that there has been a flow of Federal government

payments to farmers. But in reality, these payments amount to pass-through subsidies to the few cartel companies dominating agriculture and underpaying farmers for their crops and livestock in the first place.

For example, in flour milling, only four companies control over 60% of the market (ADM, ConAgra, Cargill, Cereal Food Processors). In beef, only four companies control over 80% of U.S. slaughtering (Tyson/IBP, Cargill/Excel, Swift/ConAgra, Farmland National). So when the farmer-producer is underpaid by these cartels for bushels of wheat, or heads of cattle, any Federal monies going to that farmer are, in effect, a subsidy to allow Cargill et al. to continue to underpay the farmer, and still keep a source of commodity supply to sell into the food chain at anything-goes rates of profit.

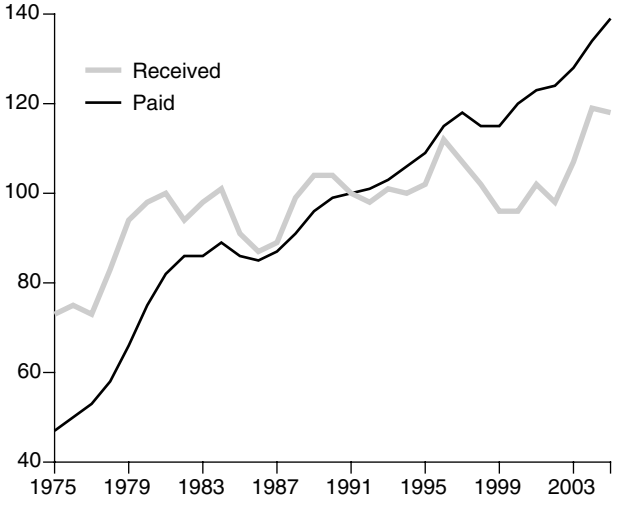
This system parallels the Federally protected profiteer role of the oil cartels. Likewise, just as there are huge gains made of "paper oil" trades, the speculative trading on the Chicago Mercantile Exchange and other venues allows for pure, non-production-related rake-off from betting, up or down, on farm commodities.

Almost none of this was taking place over 50 years ago, when *parity pricing* was still the principle governing Federal agriculture policy. The idea was—in order to guarantee meeting the public interest in a secure food supply at stable prices, plus land management—family farms were to be guaranteed a parity, or percent of parity price. That is, the prices they received were on a par with what their costs of production were, plus a reasonable profit. This was entirely phased out under the swindle of free trade, and global sourcing for food. Now the United States is food-import dependent in most items of diet, except for basic grains, beef, chicken, pork, oils, and grains-related sweeteners.

FIGURE 4

Prices Paid by Farmers for Production Expenses Compared with Prices Farmers Received for Output, 1975 to 2005—Expenses Exceed Receipts for Over a Decade

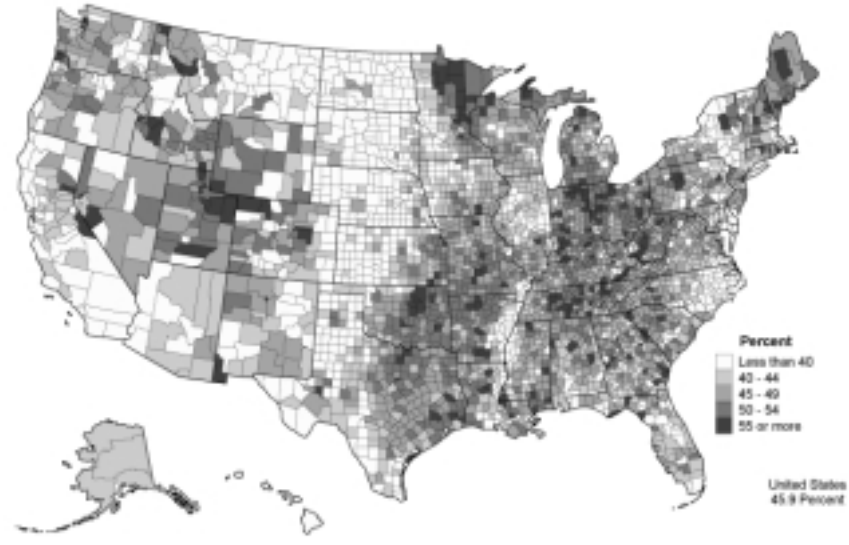
(Indexed to 1990-92)



Source: U.S. Department of Agriculture, National Agriculture Statistics Service.

FIGURE 5

Percent of Farmers Working Off Their Farms 100 Days or More a Year, by County, 2002



Source: U.S. Department of Agriculture, National Agriculture Statistics Service.

The Kansas 'Quadruple Whammy'

This brief picture shows how vulnerable the U.S. farm situation, and food supply chain have already become in recent years.

Hence, Jere White, Executive Director of the Kansas Corn Growers Association, was quoted Sept. 11 by AP, "If consumers buying fuel are feeling the pinch, you can imagine what farmers are feeling when they purchase the amount of fuel they need for harvest and those types of things. It's a huge cost increase, but there really is no way they can offset it—they can't carpool a combine."

Kansas is indicative of the shock effects spreading throughout the U.S. farm-belt. In this state, the number-one wheat producer, fertilization is customarily done at the same time as Winter wheat is seeded (for harvesting in June

2006). This process started around mid-September. At the same time, corn, sorghum and other livestock feed crops are ready for harvest. So there is a double whammy at the moment in the wheat-belt, from soaring prices for both fertilizer (made from natural gas) and diesel for planting machinery.

There is even a triple whammy, because corn is also ready for harvesting, so fuel is needed for combines. And a quadruple whammy, because fuel is needed to dry the crop. Kansas, as the number-three U.S. cattle state, needs its corn crop for cattle feed (it even has to "import" corn for feed from out of state). The best cropping practice is to harvest whenever the weather and crop are both good, and then ideally, dry the corn in storage by natural gas or propane—both now through the roof in price. To avoid the drying costs, farmers may leave the corn in the field to dry, and take a hit on damage and losses.

For all of these functions, costs are soaring. Fertilizer has more than doubled in price in a short time period. The price for anhydrous ammonia fertilizer has risen to $450-475 a ton, up from $200 a ton in 2003. Grain transport costs are now at record highs. Bids for guaranteed placement of rail cars for transport in Kansas, for October delivery, are running at a record $544 on the BNSF Railway, and $508 on the Union Pacific, which compares to the previous all-time high of $350 in October 1997.

Barge shipping is the same. David Marshall, spokesman for AgriPride FS, Inc. in Nashville, Illinois—a farmer-owned co-op—reported in mid-September, "Barge shipping costs have exploded. Right now, barge freight has traded at a record high from the Ohio [River] to New Orleans."

Casinos or Development: Mississippi After Katrina

by Mary Jane Freeman

A casino economy, or a "Super TVA," to create an economy upon which Mississippians could finally leave the oppressive legacy of poverty behind and create a future for their children? This is the choice posed by Hurricane Katrina's path of destruction. Disaster often presents opportunity. But will Mississippi's and the nation's leaders seize this moment to mobilize human, economic, and scientific resources for economic justice, or will they be small-minded, offering bandaids and casino chips when economic development is needed? The current condition of Mississippi's economy starkly poses this life and death question.

In Katrina's wake, nearly half a million Mississippians have sought aid or shelter. Well over 76,000 homes are damaged or destroyed, with the three worst hit counties—Hancock, Harrison, and Jackson—not yet surveyed and included. One hospital, Hancock Medical Center in Bay St. Louis, was severely damaged, and tens of others are not yet fully functional. Nine of Mississippi's 15 community and junior colleges had major or substantial damage, affecting thousands of students, while 70 of its K-12 districts have schools either totally obliterated or severely damaged. As of mid-September, over 64,000 people had filed for unemployment disaster relief. The state's agricultural industry lies in waste. The Mississippi Tax Commission's low-ball revenue loss estimate is $213-272 million for September to December.

Gov. Haley Barbour, a former GOP national chairman who is close to President Bush, called the legislature into special session on Sept. 27, proposing 26 bills to provide short-term aid until Federal funds (he hopes) are secured, along with tax relief and other measures to aid Mississippians. But the "800-pound gorilla" on Barbour's agenda, as a local paper wrote, is his bill to legalize land-based casinos. When casino gambling passed Mississippi's legislature in 1990, casinos had to be built on water. Katrina left the casinos in shambles. The state's addiction to this revenue stream, and Barbour's adherence to a monetarist free enterprise ideology, fit with the Bush agenda.

Mississippi's Congressional leaders have, so far, chosen only to seek relief aid, putting forward no vision for a future. To his credit, Sen. Trent Lott (R) at least insists that Federal Medicaid funds be made available, despite White House opposition. Rep. Gene Taylor (D) blasted former FEMA director Michael Brown's self-serving "blame the local officials" testimony before a House select committee, retorting, "I'm a witness to what happened in Mississippi. You folks fell on your face. You get an F-minus in my book." Both Rep. Charles Pickering (R) and Rep. Bennie Thompson (D), at separate hearings, raised objections to post-storm FEMA contracts for various projects going to non-Mississippi contractors.

Rail Loss a Key Bottleneck

Since the time of Representative Banks's interview (following), *EIR* has compiled more data concerning the state's ravaged agricultural sector. Agricultural production in 78 of Mississippi's 82 counties sustained sufficient losses to warrant a disaster determination by the U.S. Department of Agriculture. The remaining four counties, as contiguous counties, also received USDA's designation as disaster areas. Mississippi State University's Department of Agricultural Economics issued its preliminary finding of an estimated loss for the state's agriculture, aquaculture (oyster and shrimp), and forestry industries, at $1.6 billion (see **Table 1**). This was based on a survey of what crops, cattle, timber, and so on were destroyed, versus those expected for market this Fall, and the physical areas impacted by Katrina. Table 1 shows that 85% of the loss derives from the poultry and timber industries.

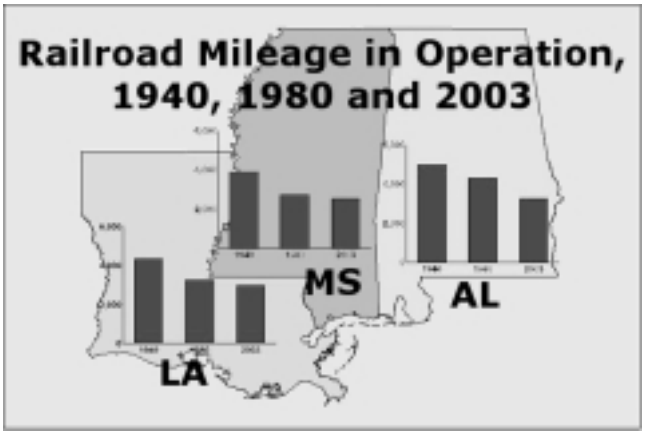
TABLE 1
Katrina's Impact on Mississippi Agriculture

Crop	Total Estimated Loss (millions $)
Forestry	$1,280.00
Poultryy	$94.05
Beef & Forage	$72.14
Aquaculture	$72
Cotton	$34.31
Dairy	$21.08
Horticultural Crops	$18.00
Rice	$11.68
Soybeans	$5.95
Corn	$2.16
Grain Sorghum	$0.07
Total Losses	$1,611.44

Note: In most cases, damage estimates are for a range of value. This table presents the mid-point of damage estimates for individual items. Damage estimates include value of lost production, value of damaged or destroyed facilities/equipment, increased production costs, and lost potential income.

Sources: "Agricultural Economic and Policy Perspectives," September 2005, Mississippi State University's Department of Agricultural Economics, www.agecon.msstate.edu/farmpolicy; Gulf Oyster Industry Council; *EIR.*

FIGURE 1
Mississippi Has Lost 35% of Its Track Miles Since 1940



Many dairy farms, due to loss of electricity, had either to dump milk, sell off their cows, or, in some cases, shut down operations. Continuing fuel shortages and transportation bottlenecks have severely hindered these farms.

As of 2003, poultry and aquaculture, together, accounted for 50% of the state's agricultural revenue. The agriculture sector generates 7% of the state's GDP. Nationally, its poultry "boilers" industry accounted for 9.4% of United States receipts, and its aquaculture generated 31.3% of United States receipts.

Katrina's ravaging of the timber industry is a paradigm for what is lacking and what should be on the rebuilding agenda. "We have 60 million tons of wood on the ground . . . and we will consider ourselves lucky if we can salvage 10% of that harvest," a Mississippi forestry spokesman told *EIR.* To compare, Hurricane Ivan in Alabama last year left 20 million tons of wood on the ground, and they "salvaged 5 million tons. If we could salvage 20% [this time] we'd be very fortunate. They got 25% and they estimated they got 10% of what it was worth." But to salvage it, the spokesman pointed out, you must have "a lot of log trucks and extensive use of the railroads."

Loss of railroads is the limiting factor as to whether the timber industry will survive. The forestry spokesman said, "Of course, the railroads have been torn up over the last 10-20 years, they were abandoned." All that is left are some major north-south lines and east-west lines. "All the small railroads went out of business over the last 50 years. That has really hurt the timber industry. . . . In any natural disaster, whether it is an ice storm or hurricane, the critical missing link is hauling the wood out of the affected area, because every wood-process plant in the affected area is going to be overcome with wood. So to salvage it, you've got to move it. With the limited rail access, that is a real problem."

Mississippi has lost 35% of its rail track miles since 1940 (see **Figure 1**). It is ironic that while the Mississippi Congressional delegation has, under the direction of Barbour and Sen. Thad Cochran (R), opted for working behind the scenes hoping to pull favors from what is now a fast-disintegrating web of GOP cronyism, it was Sen. Trent Lott who, before Katrina hit, had proposed a far-reaching and forward-thinking rail development bill. Even though the bill, S. 1516, deals with Amtrak and passenger rail, its impact on freight rail is obvious.

Katrina's devastation in Mississippi needs to be met with vision for trade and development. Its ports must be rebuilt and expanded, its rail network re-established, and its agricultural sectors revived with state-of-the-art technologies. Unleashing a "Super TVA" for Mississippi and the nation, will go a long way to eradicating entrenched poverty—officially, at nearly 19% across the state, before Katrina hit—there and elsewhere.

What Katrina Has Done To Mississippi's Economy

Mississippi State Representative Earle Banks, a Democrat, has represented House District 67 in Hinds County since 1993. He is an attorney, a funeral director, and insurance executive as well. Representative Banks serves with the Jackson State University Foundation, and 100 Black Men. He was interviewed by Mary Jane Freeman on Sept. 21, shortly after he had toured some of the state's counties which were devastated by Hurricane Katrina.

EIR: Can you give us an idea of the magnitude of devastation that Katrina has wrought upon your state of Mississippi, and what the legislature is doing?
Banks: We had a meeting at which all committee chairs were reporting to the Speaker and to each other, on what they had found to be the extent of damage in various areas. The damage, from reports that we've had from across the area and across the state, includes these estimates: about $1.4 billion damage to highways and bridges; $1.2 billion to the timber industry; over $1 billion to the K-12 school system, damage to the buildings, buses, books and equipment; $1 billion to higher education buildings and other state property; at least a half a billion to the poultry industry; and this is not even considering the private businesses, or local- and county-owned buildings, and so forth. . . .

EIR: I've been looking at the damage to the ports. As far as I can tell, the ports of Pascagoula and Gulfport were the worst-hit.
Banks: Right. The damage to those ports is in the neighborhood of at least $40 million. I think it was around $17 million damage to the Port of Pascagoula, and at least $25 million to Gulfport. Also, the damage to the marine industry, the aquamarine industry, the aquaculture, destroyed all the oyster beds and the shrimping industry; they have no estimates out, but they are going to be devastated. The Mississippi Sound produces about 40% of the country's oyster harvest and 10% of the shrimp industry. We have some barrier islands about 12-15 miles out into the Gulf, and the area between there is called the Mississippi Sound. They have been decimated.

EIR: The other thing I've looked at is the wipe-out of the rail lines in the state. Also the road infrastructure.
Banks: Oh, yes, but I don't even know the extent of the damage to rail as yet. The only thing I do know, is that they do plan to rebuild. Also the casinos, that were hit bad, do plan to rebuild.

EIR: Is there any perspective on what kind of rebuilding ought to be done at this point?
Banks: Well the Governor has called for a special session next Tuesday, Sept. 27. In that special session, I think the only thing he can have on the table are the casinos, and $25 million in Small Business Administration development loan grants.

EIR: Did you say $25 million? That's not much.
Banks: Yes, agreed. But, that is our governor.

EIR: What about the power and utility situation across the state? Has it been restored?
Banks: To my knowledge, all power has been restored to the areas. Individual homes that were flooded, of course, will not be reconnected until those properties can be examined by licensed electricians. But the whole area, in general, has had power restored.

EIR: Do you have any picture of the impact of the oil price hike?
Banks: No, I don't. I do know the refinery in Pascagoula, which was the largest refinery in Chevron's network of refineries, was shut down during the storm.

EIR: What else can you tell us about what is happening in Mississippi after Katrina; and do you have any message for the Federal government as to what they should do?
Banks: Well, they have to revamp FEMA, of course—which everybody from the Gulf Coast to New Orleans realizes. The other problem that I have seen—and this is the part that makes it so horrific—is that FEMA, the Red Cross, Salvation Army, all these agencies, these first responders—and I commend them for what they are doing; I'm not knocking them. But the shortsightedness of what they are doing, is that they are setting up first-response facilities in areas where the most vulnerable people—the ones who could least afford to get out of Gulfport or Biloxi, or New Orleans . . . who did not have the transportation to get out, or the money for the fuel, or whatever—they are setting up these units of first response in areas that may be three and four miles away from where these people reside.

Therefore, what I have seen, is that you have people who are 65-plus years of age who do not have any transportation, and the public transportation system was shutdown; so they are having to walk up to seven miles round-trip to get food, or water. This is ridiculous—and this is in urban areas in downtown Biloxi and Gulfport. These staging areas are so remote. I mean they are in areas where these elderly people, who lived in these neighborhoods all of their lifetime, are not being served.

The other problem that I saw down there, and this is what I saw six days after the storm: In Biloxi for example, six days after the storm, there was no running water, and yet no portable toilets set up anywhere in these neighborhoods. So you have a city of tens of thousands of people with no running water, because all the pumps were shutdown because of the surge of the flooding; and yet FEMA has not come in to set up any port-a-potties anywhere in neighborhoods to collect the human waste. So now you have this cesspool of stuff behind homes—having to bury it, or whatever they have to do with it. It is horrible. It shows how the Bush Administration, Michael Brown—you know, Bush says he takes the blame for it. But it shows how unprepared the Bush Administration was to deal with this type of catastrophe. This is in spite of 9/11, which was over four years ago; it should have said to FEMA and the Bush Administration, "We have got to be prepared for emergencies, whether man-made from terrorism or some other accident, or emergencies of nature." They are completely unprepared for this.

You go to Shelby, Mississippi—we stopped there—elderly and other people have reported seeing trucks of ice go from one staging area to another staging area. I mean, they've got to get the ice to the people. Stop paying thousands and thousands of dollars for ice to be driven across the South.

EIR: Do you have any estimate on how many homes have been destroyed in Mississippi?

Banks: Let me put it this way. Harrison County and Jackson County were hit, but I could not tell you the exact number of houses today; but I could get that to you in a day or two. But on the Gulf Coast, in just those two counties alone, I would say [that] about 70% of the homes and businesses were affected. Probably about 40% of those houses will be found to be destroyed. Whereas you have Hancock County, which is where the eye of Katrina hit; and in that county alone, estimates are coming out as high as 90-95% of all homes and businesses were destroyed.

EIR: It would seem we need a Federal plan the way FDR did, like the old WPA, to put people back to work and rebuild their homes and businesses.

Banks: That is what it is going to take. But as you probably already know, Halliburton is already down there. Yates Construction here in Mississippi, another good old boy tied in with the Republican administration, is already down there. . . . I mean, all these companies are already hand-picked to be there, getting contracts in the hundreds of millions of dollars. Probably with Halliburton, it is billions of dollars. . . . These are government contracts; not including what private contracts they may get. No bids. It is horrific what they are doing down there. These companies are going to be coming in with their people, and not local people who know the community and may be well qualified. You have, the tax base of the infrastructure down there has been destroyed; that includes the municipalities, the counties and the school boards. They are gone. So we are having to look at what can we do to supplement the tax base. It is going to take *years* for these tax bases to recover from this type of damage.

EIR: So, so far you have not seen that there is hiring of Mississippians going on?

Banks: No. . . . Not Mississippians from within that area. They may come down there and they may have a few Mississippians on their payroll. But I haven't seen the hiring of Mississippians that were displaced by the storm down there.

Another area of the state that was hit extremely bad, is Jones County, which is where the city of Laurel is located. I also understand, although I have not been to Pike County yet, but it was also hit extremely hard by Hurricane Katrina. Our emphasis in Mississippi seems to be on the Mississippi west coast, but Pike County is about a 50% Black county, same thing in Jones County. But you are not hearing about any kind of relief or efforts for the needs of these two counties. They had 12 deaths alone in Jones County. It was to the east of where Katrina landed and yet it was severely hit. I saw, from being in Jones County—although I could not go through the whole county—that about one-fourth to one-third of homes suffered some type of structural damage. This community was without phone service for almost a week. . . .

EIR: Yes. I think the issue now is what must be the demand made to the U.S. Senate and the Congress, that they do from the top down; or the way LaRouche put it, is you've got to have a massive commitment from the Federal government for rebuilding.

Banks: Well, the first thing that we are advocating, of course, is that the local government and individuals down there must have a say-so in how their community is rebuilt. They are the ones that live there. They are the ones that will continue to live there. We cannot come in there to rebuild these communities the way we think they should be; but we have to ask the local people, how do they want their communities rebuilt? It can't be what Gov. Haley Barbour wants. It has to be what the local mayors, council people, and county commissioners say they want, in terms of how their communities will be rebuilt.

Avian Flu Experts Sound the Alarm

by Christine Craig

At a Sept. 19 forum in Washington, D.C., two experts on infectious diseases sounded the alarm. The ultimate biological disaster is looming on the horizon: pandemic avian influenza. Epidemiologists overwhelmingly agree that a flu pandemic is inevitable, and that the most likely agent will be the highly pathogenic A/H5N1 avian influenza virus, which has already killed at least 65 people and wiped out poultry flocks in several Southeast Asian countries. The main questions on the table wherever these experts gather are: How much time do we have, and what can we do to minimize the catastrophe?

It's the Economy, Stupid

The speakers at the Washington forum, however, took the debate to a higher level. Speaking at the Woodrow Wilson International Center for Scholars, Michael Osterholm, director of the Center for Infectious Disease Research and Policy; and Helen Branswell, medical writer for the Canadian Press Agency, presented the alarming statistics about the confluence of circumstances which will lead to, not just a global pandemic, but a global economic meltdown as well.

Osterholm laid the blame at the door of the global, "just-in-time delivery" economic system, which has rendered nations incapable of amassing even the bare necessities to avert catastrophe—vaccines, surgical masks, food, clean water, fuel. When the flu strikes, countries will panic and close borders, hoarding resources; but almost no countries have all the necessary resources within their borders, due to the globalized free-trade economy, which has made stockpiling supplies obsolete. Parts for products may be made on different continents, assembled on yet another continent, and delivered "just in time" by Fed-Ex.

Often, only one or a few companies manufacture supplies for the *whole world.* Only two companies, for instance, manufacture 80% of all surgical masks. Just a handful of companies in nine countries, make flu vaccines. Tamiflu, the leading antiviral agent effective against the flu, is currently made by a single company, Roche, in a single plant in Switzerland. During a pandemic, these necessities would be unavailable for most of the world. Grain and other foodstuffs which used to be warehoused for months, are now delivered "just in time," often from other countries. National economies would slam to a halt during a flu pandemic.

Health-care systems and emergency services, Branswell emphasized, no longer have built-in surge capacity for disasters, even in well-off countries. This was made clear in the tragedy which followed Hurricane Katrina. Resources are taxed by a normal flu season. Osterholm stated recently that the supply of ventilators, which are necessary for severe respiratory infections, is fully used even during a normal flu season. Need would outstrip availability by hundreds of thousands of units in a pandemic.

These views resonate with a forecast made over 30 years ago by statesman and economist Lyndon LaRouche, when he warned of the development and spread of pandemic diseases as a result of the looting policies directed against Third World nations by the International Monetary Fund and World Bank. A global biological holocaust would be inevitable, LaRouche argued, as national physical economies and cultures devolved and collapsed.

Why Bird Flu Is Such a Threat

Influenza A/H5N1, like all influenza A viruses, naturally resides in wild birds. These viruses have a very flexible genetic system, consisting of eight strands of RNA. Not only is RNA inherently much more unstable than DNA, allowing a high rate of mutation and recombination, but the existence of the eight strands allows different genetic types of viruses to swap strands during replication of the viruses in the host, a maneuver termed reassortment. The existence of homologous RNA strands from human-adapted and bird-adapted viruses in one host, for instance, could lead to a reassortment resulting in a virus better able to infect humans. These mechanisms make possible the well-established predilection of the virus to jump species, to adapt to these new species, to change virulence within the new host species, and to dodge host defenses once intrenched.

As an example, the Spanish flu, the influenza A/H1N1 virus which swept the globe in 1918, is hypothesized to have begun as a bird virus, which, in several phases, adapted to humans. In its pandemic phase, it killed 50 to 100 million people worldwide within a year.

Bird Flu on the Move

Influenza A/H5N1 first moved from wild birds to poultry in Hong Kong in 1997, and proved a very efficient killer of chickens. It jumped almost immediately to humans, causing 18 cases and 6 deaths. Eradication of all of Hong Kong's poultry flocks brought a reprieve, but the virus re-emerged in 2003, in South Korea, and then, by 2004, began wiping out poultry all over Southeast Asia, as well as Japan.

In the Spring of 2005, a slightly changed A/H5N1 moved back into wild birds, causing a die-out of thousands of waterfowl near Lake Qinghai in China, an important stopping-point on the migratory routes of Asian birds, as they move north to Summer breeding grounds. As the survivors moved north, they apparently spread the virus to domestic birds

in their path, and the virus has turned up in Kazakstan, Uzbekistan, Russia (Siberia), Tibet, and Mongolia, sparking concern in these countries, though no human cases have been reported.

Meanwhile, in Southeast Asia, where it all began, the toll of human infection and deaths began to rise through 2005, though almost all cases appeared to stem from contact with infected birds. Vietnam peaked at over 90 infections and 44 deaths, the largest outbreak to date.

As the wild birds moved north, spreading the virus into new areas, the march of human cases moved south, where the virus became endemic in poultry flocks from China to Indonesia, the newest hotspot. Indonesia has estimated that 48 people are infected, most in the last few weeks, and four have died so far. Several cases raise suspicions of human-to-human transmission.

The Asian media has focussed with fascination on the fiasco in Indonesia, where the impoverished government of a far-flung nation of islands and archipelagos, hard-hit by both last year's tsunami and the International Monetary Fund, has been unable to rein in the disease. A/H5N1 has become endemic in poultry in 22 out of 33 provinces to date. It is also present in the pig population.

Pre-Pandemic Preparations in Asia

The situation in Indonesia has been a wake-up call to surrounding nations, which are beginning to take steps to protect themselves: The Philippines is tightening its ban on imports of exotic birds, and has allocated $4.5 million for preparing for an invasion of the bird flu. Malaysia is arranging with the pharmaceutical company, Roche, to buy Tamiflu to stockpile in case of an outbreak of bird flu. Australia is allocating $5 million toward fast-tracking a vaccine, and another $7.5 million to fund research into better preparations for a flu pandemic, including emergency planning. Indonesia, too, is beginning to fight back. A special team has been organized to prepare for the pandemic, and to coordinate with foreign agencies contributing supplies and funds. They are running a media campaign to raise the population's awareness of the risks.

Multinational organizations are also stepping up. The Association of South East Asian Nations (ASEAN) convened recently to map out strategies and arrange for funding to fight the bird flu pandemic in Asia. The Southeast Asian Red Cross and Red Crescent societies have met to create a regional disaster management committee to prepare for disasters such as avian flu, and have agreed to set up a regional disaster management training center in the Philippines. Japan has sent advisors to Indonesia to study the problem there and give advice.

Now, realizing that the disease cannot be left to fester as an "Asian problem," the European Union is finally getting serious. In conjunction with a number of international organizations, such as the World Health Organization, the Food and Agriculture Organization, and the World Organization for Animal Health, it is planning a conference this year to map a strategy and arrange funding to combat the avian flu in Asia. The U.S. Department of Health and Human Services will spend $419 million in pandemic planning this year, and the National Institutes of Health's research budget for flu has increased five-fold in the past five years.

The Bottom Line

Will the national and international efforts now ramping up throughout the world be enough to beat back the threat of pandemic from avian flu? That depends.

In Dr. Osterholm's view, not much could be done, technologically, if the flu struck today, or a year from now. As he wrote in the latest *Foreign Affairs* magazine, "What is needed is a detailed operational blueprint for how to get a population through one to three years of a pandemic. Such a plan must involve all the key components of society. In the private sector, the plan must coordinate the responses of the medical community, medical suppliers, food providers, and the transportation system. In the government sector, the plan should take into account officials from public health, law enforcement, and emergency management at the international, federal, state, and local levels."

In the longer term, a well-defined international effort should be initiated to research and produce enough vaccine for the entire world. Pursuing purely national goals for vaccine production is a fallacy of composition if the rest of the world is not so protected. Osterholm commented, "Even the vaccinated will be devastated when the global economy comes to an abrupt halt. Pandemic-influenza preparedness is by nature an international issue. No one can truly be isolated from a pandemic."

What no one has been talking about, including Osterholm, Branswell, and others who recognize the fragility of the world economy when challenged by disaster, is what we can do to make the global economy more resistant to devastation when disaster strikes. What kind of economy would it take to protect the general welfare of the 6 billion people now threatened with annihilation by a virus so small it takes an electron microscope to "see" it well, and so simple it barely qualifies as alive?

For the answer to that we must refer again to LaRouche, who has written powerfully and prolifically over many decades, about the measures needed to turn this nation, and the world, back from the economic collapse which is already playing out, even without a pandemic. The world must return to the economics of the sovereign nation-state, and the fair-trade policies of a New Bretton Woods. It must turn back from the free-trade, globalization paradigm which has brought us to the brink of a Dark Age, through war, famine, and pestilence waged against the poorest and most populous nations of the world by the global financial oligarchy, until we all face the Fourth Horseman, in the guise of a tiny virus.

Geometry of World Politics Can Be Changed in Dresden

by Rainer Apel

The Oct. 2 by-election in the Dresden-I district delayed the publishing of the final vote result of the Sept. 18 national German election by two weeks, and this development may change the political line-up in the German Parliament. The three-seat advantage of the Christian Democrats (CDU) over the Social Democrats (SPD), as of Sept. 18, may be confirmed, or lost, in Dresden. And because a tiny majority will determine the outcome of the brokering between the CDU and SPD in the likely Grand Coalition government of the two parties, numerous prominent figures, including incumbent SPD Chancellor Gerhard Schröder and CDU challenger Angela Merkel, have streamed into Dresden in an effort to affect the final outcome.

But in Dresden, they were confronted by a strong campaign intervention force composed of about 60 activists of the LaRouche Youth Movement, who were determined to make sure that neither the candidate of the CDU nor of the SPD, wins that district. The LaRouche Youth backed Katarzyna (Kasia) Kruczkowski, the candidate of the LaRouche movement's BüSo party. Normally, one would say that the Dresden campaign was a showdown between the two big parties; but this was not a "normal" election, as was shown by the simple fact that a week before the Oct. 2 vote, 40% of the voters (70,000 citizens) in that district were still undecided, according to pollsters. This unprecedented ratio shows the depth of the discontent that voters had with the established political parties.

The big advantage that the BüSo has over all other parties, is its international orientation by emphasizing global economic and financial issues, and its emphasis on science and technological progress. The BüSo brought the idea of freezing oil prices through state intervention against speculators, into the campaign for the Sept. 18 election, which interested many voters, and forced the other parties' candidates to state their views on the matter. And it is the BüSo which brought the issue of international financial speculation into the subsequent Dresden campaign, with a Sept. 23 statement on the "financial locusts" that are planning to take over the Dresden municipal housing sector (WOBA) in the same way, as they take over industrial corporations. A paper-maché locust, with the face of neo-con Angela Merkel, has become a favorite campaign weapon of the BüSo in interventions in the street demonstrations in Dresden, or in sound-car tours through Dresden residential areas.

The WOBA issue had become a central campaign issue in the Dresden election. A reflection of the extensive impact which the BüSo's anti-"locust" intervention has had, was that the National German Association of Tenants (Mieterbund) declared on Sept. 26 that the struggle for the protection of municipal housing in Dresden was "crucial for the building of a line of defense against greedy locusts also on a national scale." Leading Mieterbund officials announced that they would come to Dresden, during the last days of this election, to intervene in the political debate.

BüSo and International Politics

The environment for the BüSo was favorable: it gained a high recognition among Dresden citizens, because the "LaRouche people" answered questions of the citizens on the bigger, international issues, which all the other political parties tried to evade. This included the issue of inflation, which interested citizens very much, because their shrinking incomes, or shrinking jobless benefits, were already making their daily lives very difficult. The BüSo campaign also proposed a remedy to the crumbling, speculation-driven world financial system: the New Bretton Woods proposal of the LaRouche movement.

In a special campaign statement issued on Sept. 25, BüSo

EIRNS/Toni Kastner

The BüSo jolted the campaign in Dresden out of the usual proper constraints with this paper-maché locust, with the face of neo-con Chancellor candidate Angela Merkel, warning that "financial locusts" wanted to take over the Dresden municipal housing sector, the way they took over German industrial corporations.

EIRNS/James Rea

Katarzyna (Kasia) Kruczkowski, campaigning in Dresden as the candidate of the LaRouche movement's BüSo party.

party chairwoman and candidate for Chancellor Helga Zepp-LaRouche warned that 1923-style Weimar Republic inflation would return, triggered by skyrocketing oil prices caused by speculation in oil derivatives. "Dear Voters of Election District 160," the statement said, "You've had painful indications of it already: Energy and raw-materials prices are exploding! And it has absolutely nothing to do with supply and demand. Rather, the explosion of prices for gasoline, heating oil, gas, and raw materials is entirely the result of massive speculation on the part of the hedge funds, the so-called 'financial locusts.' These hedge funds, since the Spring, have suffered huge losses as a result of the bankruptcy of the U.S. auto industry, and are now using their control over the energy and raw-materials sectors to make good these losses through speculation on a gigantic scale. When a barrel of oil is sold at $65, for example, the profit for the speculators is $30 to $40! And, since the inflation in raw materials and energy prices will ultimately impact all prices, hyperinflation is now threatening."

"Already, the rate of oil price inflation is reaching that of the Summer of 1923! Only this time, this hyperinflation is not limited to one country, as with Weimar Germany, but is affecting the entire world economy. If this speculation is not brought to a halt, there will soon be a hyperinflationary crash as in November 1923!. . . Something can be done to prevent this: The next government must set prices for energy and raw materials; the oil price, for example, at $25-30 per barrel, and the gasoline price at about 70 euro-cents a liter. With their derivatives speculation, the hedge funds are ruining the entire world economy, and must be stopped by governments. When Federal Chancellor Schröder sought to make energy speculation the theme of the last G-7 summit, the United States and Great Britain vetoed every proposed measure. So the other governments must still work together, without the United States and Britain, to bring speculation under control.

"Regardless of what coalition forms the next government, it must bring this hyperinflationary process under control. Otherwise, there will soon be no Germany. Our grandparents can remember what happened in 1923, when the cost of a loaf of bread reached a million marks, and then a billion, and people finally lost everything. Any party that is not prepared to combat speculation, is not competent to participate in the government.

"There is a candidate who will put precisely these types of controls on speculation, on the agenda of the new Bundestag: Katarzyna Kruczkowski! Don't vote for representatives of parties that consider speculation to be 'free-market economics,' or your vote will be thrown away before you have chosen at all! You can make the difference right here, in the 160th Election District, by making Katarzyna Kruczkowski your first choice for the Bundestag. Yours, Helga Zepp-LaRouche." (The mass-circulated statement included a graphic, which compared current oil and copper prices, with inflation in 1923 Weimar.)

Paradigm Shift?

The Oct. 2 vote for the BüSo candidate for the Dresden-I district, Kasia Kruczkowski, will be a crucial indicator of whether or not the ongoing political-cultural paradigm shift away from the speculation-oriented era, towards a return of the production-oriented economy in Germany, can be consolidated. Kruczkowski campaigned for the fundamental political-economic issues, which the "established" parties have either suppressed, or have only vaguely touched upon.

In a Sept. 22 interview with the BüSo's news weekly *Neue Solidarität,* Kruczkowski said: "Dresden can now really change the geometry of world politics. All the activists of our youth movement can now concentrate on this district for a full two weeks, explaining to the citizens why their vote for me can cause a political earthquake." She emphasized the importance of her candidacy, along with the struggle of the LaRouche Democrats in the United States, for a return to a Rooseveltian New Deal approach on productive investments and public infrastructure development, as well as for a New Bretton Woods financial system.

She pointed out that Dresden today has only 2% of its workforce employed in productive jobs, whereas more than 50% are employed at service-sector jobs—including such questionable "services" as sex shops and movie theaters. Public administration jobs, of which there are many in Dresden, the state capital of Saxony, add another 20% to the non-production sector. "It is, after all, industry, which produces real physical value for the society. Great infrastructure projects are an incentive for industrial production," Kruczkowski said, calling for investments into productive jobs. "That is why these investments are not inflationary."

It is important also, she added, not only to address perspectives for the next four years—one legislative term—but rather for the next 50 years, to have the appropriate framework for large-scale international projects of infrastructure development.

The city and region of Dresden, Kruczkowski stated, is not just a spot on the map; located at a crucial junction between the grand North-South and East-West Eurasian transport routes, Dresden has a pivotal role to play in the development of Eurasia. If Dresden stands up, Germany will stand up as well, and Germany is, after all, "the economic locomotive for Europe" which will pull the continent out of the depression, Kruczkowski said in the interview.

Indeed, Dresden does have a special history as a region that pioneered in railway development, promoted by Germany's "American System" economist, Friedrich List, in the 1830s and 1840s. Dresden is, therefore, destined to become a pioneer also for development of the Eurasian Land-Bridge transport infrastructure. With its renowned Friedrich List Institute of Transport (Logistics) Research, Dresden does have a special, particular scientific capability to contribute to this broader perspective.

Wall Street Wants To Buy Philippines—Cheap

by Mike Billington

In a blatant display of servitude to the lords of the collapsing global financial system, Philippines President Gloria Macapagal Arroyo and one of her leading economic advisors, Speaker of the House José de Venecia, travelled to New York and Washington in September to offer up the nation's patrimony—its industries, forests, mineral wealth, and more—to the holders of the nation's huge, unpayable, and illegitimate debt. President Arroyo presented the proposals to the United Nations, while de Venecia, one of the architects of the schemes, took their offerings to the IMF and the World Bank in Washington, with an obligatory appearance at the Heritage Foundation, a neo-conservative anti-nation-state economic think tank which advocates the types of policies which the Bush Administration is carrying out.

Their offerings came in two forms. The first is a plan to change the Constitution, called Charter Change, which de Venecia has supported for many years, as has de Venecia's mentor, former President and infamous U.S. asset Gen. Fidel Ramos (de Venecia was Ramos's chosen successor as President in 1998, but lost the election). The Charter Change plan calls for a Constitutional Assembly to scrap the Presidential system, and the checks and balances which go with it, to be replaced by a unicameral parliamentary system, in which both the executive and the legislative branches are run by a single party. Both the President and the Speaker have openly acknowledged that their intention is to do away with the "disruptive" voice of the opposition in the Congress, which has held back their implementation of IMF-dictated austerity "reforms." Included in their plan for Charter Change is the elimination of Constitutional restrictions on foreign ownership of certain industries, properties, and mineral wealth.

Their second offering is a "Debt-for-Equity" swap plan, pompously proposed on behalf of not only the Philippines, but more than 100 other developing nations besides—without bothering to gain those countries' support for the colonial scheme. De Venecia and Arroyo made very clear that they were not asking for debt forgiveness, debt reduction, or a debt moratorium, but rather that 50% of the existing foreign debt be transformed into equity in valuable Philippine enterprises.

De Venecia, during his presentation to the Heritage Foundation on Sept. 12, took pains to demonstrate how committed he was to implement Charter Change and Debt-for-Equity. Asked by *EIR* if his Charter Change proposal was aimed at meeting the IMF demand for the Philippines to eliminate Con-

UN Photo


UN Photo

Philippines President Arroyo (right), and one of her economic advisors, Speaker of the House José de Venecia, offered up their country cheap during their trips in September to Washington, D.C. and New York.

stitutional protections against foreign takeover of the nation's patrimony in minerals and national industries, de Venecia answered simply: "Those restrictions on foreign ownership are outmoded."

EIR also asked if his intent in eliminating the Presidential system were to eliminate the "checks and balances" in the Congress, to quiet the voice of dissent from the minority, which is built into the Presidential system. He concurred, explaining that under his leadership, the House had rammed through several austerity measures, despite "poisonous negativism" from the opposition. Then, he complained, they filed impeachment resolutions against President Arroyo. He bragged that he'd moved to kill the impeachment proceedings on a technicality. Now, he asserted, the Philippines will move to a Parliamentary system, adding that there will be a provision by which votes of no-confidence will be forbidden for at least the first two years of a Prime Minister's term.

On Debt-for-Equity, de Venecia promised that the "return on investment" would far exceed the current returns on the debt: "Instead of earning 1% or 2% over prime as you do now," the Speaker said, sounding very much like a snake-oil salesman, "we are proposing debt-for-equity in very attractive, very high-yield projects, where real returns on investment can be over 100%, 200%, 300%." He pointed especially to forestry and mining operations that would be up for grabs.

Senator Santiago on 'Bankers' Arithmetic'

When the forced devaluations of the Philippine peso are taken into consideration, the Philippines has actually paid its foreign debt twice over since the 1997-98 speculative assault on the Asian currencies, as *EIR* demonstrated in "Looted by the Bankrupt IMF System, the Philippines opens to LaRouche" (see *EIR* June 3, 2005). That fact has now been acknowledged by Philippine Sen. Miriam Defensor Santiago, a former Presidential candidate and a leading *supporter* of President Arroyo. Santiago told the Senate on Aug. 25 that the nation was "caught in a debt trap," in which "interest payments forced the Senate to divert most of the meager funds that should have been allocated to health, education, and food security." The Philippine foreign debt, officially at $62 billion as of 2003, and rising rapidly, extracts over $10 billion per year in debt service from the Philippine economy, according to the Asian Development Bank (ADB).

Santiago continued: "It appears that from what the Philippines has paid in debt service, we have already repaid twice our external debt. Further, we have paid our foreign creditors five times more in debt service than we have received as official development aid." She called for the government to "avoid the IMF teams, and reach agreements directly with our creditors. We should support an international program to reduce debt service by 75% and the debt capital also by 75%," an idea that draws on the precedent set by Argentine President Néstor Kirchner, after his nation defaulted on their illegitimate debt in 2001. It was Kirchner who negotiated a 75% debt write-off with the nation's creditors, and publicly adopted *EIR*'s famous slogan as his own: "There is life after the IMF."

Santiago went further, noting that "most of the export income of the underdeveloped countries is devoted to servicing the external debt," while the export firms are themselves increasingly transnational, such that the apparent "growth" of the Philippines deriving from exports is actually "captive trade, merely a corporate team operation in which the Philippines has no say."

Washington's Control

With a top government ally such as Senator Santiago speaking so directly about the economic destruction of her nation by the international financial institutions, why is the President offering up the nation cheap to these same institutions? What is happening to the Philippines is exemplary of the end of national sovereignty, as demanded by the financial oligarchy to save their system.

In reaction to the level of control over the Philippines by the neo-conservative networks in Washington, and their Wall Street controllers, a scandal has exploded into the open over the past weeks. A Filipino-American working as an agent for the U.S. Federal Bureau of Investigation (FBI), Leandro Aragoncillo, and a fellow Filipino with high-level political contacts back home, were arrested for pilfering secret documents from the Bureau and forwarding them to three unnamed political figures in Manila. The documents included numer-

www.senate.gov.ph

Philippines Sen. Miriam Defensor Santiago identified the debt trap that is destroying her country, and called for bypassing the IMF, and a program to reduce the debt service and debt capital by 75%. She noted that the Philippines has already repaid this debt twice.

ous reports from the U.S. Embassy in Manila regarding contacts with Filipinos. Many of the documents have now been leaked to the press.

The most damning documents came from former U.S. Chargé d'Affairs Joseph Mussomeli and his subordinates at the U.S. Embassy in Manila, following the near-collapse of the Arroyo government in July. In June, with Arroyo's popularity plummeting, primarily because of the economic disaster across the Philippines, and aggravated by the mounting oil shock, a set of tapes purporting to expose the President fixing the May 2004 Presidential election was released to the Congress and to the public, setting the Philippines into a political frenzy.

On July 8, former President Cory Aquino (who had been placed in office in 1986 by U.S. Secretary of State George Shultz and his assistant Paul Wolfowitz, in a Washington-orchestrated military coup against nationalist President Ferdinand Marcos) dropped her support for President Arroyo, calling for her resignation in favor of Vice President Noli de Castro. On the same day, the President's economic team—the same Cabinet members who had implemented the murderous austerity policies on behalf of the IMF—resigned their positions and joined Cory Aquino in demanding the President's resignation. It appeared that Arroyo's Presidency was finished.

However, the "de Castro solution" didn't have the required approval from Washington. First, General Ramos, the master coup-maker in the Philippines for Washington (including the 1986 coup against Marcos which put Cory Aquino in power, and the 2001 coup against President Joseph Estrada which put Arroyo in power), stepped forward to defend President Arroyo—demanding only that she move immediately to dump the American-style Presidential system.

Then, as has now been revealed by the documents pilfered from the FBI in Washington, U.S. Chargé d'Affairs Mussomeli called in Vice President de Castro for a "job interview," and found him wanting. "If this is what de Castro can offer on domestic and foreign policy issues," says the report, under Mussomeli's signature, "then the opposition should rethink its position as protracted uncertainties will deepen and increasingly harm the current political and economic situation." De Castro, the report added, complained about the low level of economic support from the United States, and did not adequately support the U.S. war on Iraq.

Other secret documents in the stash were Embassy reports on the potential for military action to depose Arroyo, acknowledging that the Embassy was "being courted by both sides—opposition and administration." Lacking Washington's approval, the momentum for Arroyo's resignation rapidly dissipated.

The Venable Scandal

Equally damning among the FBI documents was a secret contract signed by the President Arroyo's National Security Advisor Norberto Gonzales, with the prestigious law firm and lobbyist, Venable LLP in Washington. The contract called for Venable to find support *within the United States* for the Charter Change in the Philippines—a bald admission by Manila of a lack of commitment to national sovereignty, over an issue as serious as the character of the national Constitution. Worse, the $900,000-per-year contract was being paid by a secret, private source, perhaps even a U.S. source. The Philippine Congress is so furious over the secret deal that a Senate Blue Ribbon Committee investigating the case has detained Gonzales for refusing to reveal the secret source of financing. Amidst the uproar, President Arroyo has cancelled the contract, but the Senate is hardly satisfied, and will not release Gonzales unless he comes clean.

The tension in the Philippines has reached a critical stage. Demonstrations have become regular events in Manila's Makati business district, where Mayor Jejomar Binay is a leading voice calling for the President's resignation. President Arroyo has taken the reckless step of declaring a "no rally, no permit" policy, saying that the demonstrations, although they have been peaceful, "have become licentious, to the detriment of the peace and order and the welfare of the greater majority." Her Executive Secretary Eduardo Ermita declared a "rule of calibrated pre-emptive response" against demonstrators. Presidential Press Secretary Ignacio Bunye, using classic synarchist terminology, said the government "needs to stop anarchy to preserve freedom." Reports of preparations for emergency rule fill the press and the Congress.

Opposition leader Sen. Aquilino Pimentel warned that the President was "pushing the people into the path of violence." Senator Santiago, the chairman of the Senate Committee on Foreign Relations, supported the detaining of Gonzales, despite her support for President Arroyo, and called a hearing of her own committee into the affair.

If Santiago's call for true sovereignty over the nation's economy and financial system, described above, is heeded, then the political turmoil can be resolved in a reasonable manner, one way or another. The alternative is chaos.

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Is Sharon Launching A Third Intifada?

by Dean Andromidas

Five years ago, on Sept. 28, Ariel Sharon made his infamous march on the al-Haram al-Sharif/Temple Mount, and ignited the Al Aqsa Intifada. Now his bloody anti-Hamas military campaign, Operation First Rain, could ignite a third Intifada.

On Sept. 26, the Israel Defense Forces (IDF) launched Operation First Rain, targetting the West Bank, and the Gaza Strip. With this operation, Israel has renewed its policy of targetted assassinations by killing several militants, arresting almost 400 Hamas operatives in the West Bank, and firing artillery shells into populated areas of the Gaza Strip. On Sept. 27, Israeli Defense Minister Shaul Mofaz announced that Israel would begin assassinations of senior Hamas leaders, while Major Gen. Yisrael Ziv, chief of operations, warned that Israel would launch artillery barrages against the Gaza town of Beit Hanun if home-made Qassam rockets were fired from that direction.

Contrary to the Israeli government claim that the latest escalation of violence was a reaction to the launching of a barrage of home-made Qassem rockets from Gaza into the neighboring Israeli town of Sideot, Operation First Rain was planned months ago. Its mastermind is Sharon's hand-picked IDF Chief of Staff, Gen. Dan Halutz. It had been mooted in the Israeli press that such an operation had been planned to take place after the completion of the evacuation of the Israeli settlements from the Gaza Strip, to "root out terror," as Sharon and his generals have been saying, but also to prevent any diplomatic initiative from taking hold.

If Sharon continues to act unilaterally against the Palestinians, he will provoke Palestinian attacks which he will use as a pretext not to implement the so-called Road Map to a Middle East peace. At this point, Sharon is testing the waters to see if Washington will intervene to force him to implement the Road Map.

Sharon told the United Nations General Assembly in September, that his evacuation of Gaza was part of his "painful concessions" for peace. But at a press conference in New York, he said that Israel would not allow Hamas to participate in the Palestinian elections, and even threatened to prevent the elections from taking place. This was a slap in the face to efforts by Egypt and the Europeans to bolster Palestinian President Abu Mazen's efforts to encourage Hamas to rein in its militants, and participate in the elections scheduled for January, in hopes that such a move would stabilize the situation in the occupied territories, and put pressure on Sharon to begin negotiations. "The escalation is putting the entire peace process in real jeopardy," Mazen warned Sept. 30. "We call on Israel to stop these acts, especially since all our factions have committed themselves to the cease-fire."

Aluf Benn, another senior *Ha'aretz* correspondent covering the Palestinians, reported that even in the Israeli military, certain circles disagree with Sharon's policy. "A senior source said this week, that Hamas's participation in the elections could be advantageous to Israel. The more it plays an institutional role, the more it will heed public opinion and show responsibility. But Sharon rejects this argument and is afraid of the international legitimization Hamas would recieve."

The IDF is targetting the Hamas-linked Islamic Jihad, but has also killed several leaders of the al-Aqsa Martyrs Brigades, who have been adhering for months to a cease-fire brokered by Abu Mazen.

Situation Worsens After Netanyahu Defeat

On his return from New York, Sharon was able to win a crucial vote in the Likud party Central Committee that defeated an attempt by Benjamin "Bibi" Netanyahu to bring forward primaries for the leadership of the party. If Sharon had lost that vote, it would have led to an early fall of his government, and brought Bibi back into the Prime Minister's office. Bibi's defeat, most likely, forestalled an attempt by Vice President Dick Cheney to get Israel, under a Bibi government, to attack Iran's nuclear sites. According to Israeli sources, Sharon, fearing the obvious consequences, was not enthusiastic about an Israeli solo attack against Iran, at least not in the immediate future. While Netanyahu's defeat may have pulled the situation out of the "permanent revolution and permanent war" paradigm, Sharon has now been given a free hand to keep the region in the throes of his hardline policy against the Palestinians, which promises the same result.

Sharon reportedly made his policy clear to the Likud Central Committee: "Today we must invest all our efforts in what is possible, in what is vital," which he defined as securing their hold on Jerusalem, the large settlement blocks, and completing the security fence, fortifying the Jordan valley, buffer zones, and the Golan Heights. This means grabbing over 40% of the West Bank, and holding on to the occupied Golan Heights, which rules out any possibility for peace with Syria.

A few days later, one of Sharon's strategic advisors, Eyal Arad, speaking at the Interdisciplinary Center in Herzlya, clarified Sharon's policy: "If we see that the standstill continues," Arad said, "there may be room to consider turning disengagement into a strategy." He called this "a strategy of unilaterally determining the permanent borders . . . of Israel."

The Herzliya Center, which is financed by U.S. neo-con billionaire Ron Lauder, is where Sharon first announced his so-called disengagement plan almost two years ago, and now it is where Sharon has announced his plan to unilaterally draw the permanent borders of Israel. This is not a policy for peace, but for permanent war.

Russia Freezes Gasoline Prices

by Rachel Douglas

Russian Industry and Energy Ministry spokesman Stanislav Naumov announced Sept. 19 that LUKoil, Sibneft, Rosneft, TNK-BP, Tatneft, and Surgutneftegaz, the country's largest oil companies, have agreed to freeze prices on gasoline at least until the end of this year. Heads of the companies met on the matter that day with Minister of Industry and Energy Victor Khristenko, after a Sept. 9 resolution in favor of a price freeze for agricultural enterprises passed the State Duma unanimously, and Presidential Representative for the Far East Federal District Konstantin Pulikovsky warned that gasoline and fuel-oil prices were making it impossible to prepare for Winter in that area.

For one of the few times in the past decade and a half of submission to rapacious "market forces," Russia's government pushed through the price freeze to head off new emergencies in in the physical economy.

Duma First Deputy Speaker Lyubov Sliska of the majority Unified Russia bloc, had warned that the current harvest and upcoming Winter crop planting were endangered by the recent gasoline price surge. Vagit Alekperov, head of LUKoil, told the press the move would stabilize prices and "make them independent of world prices," but Sliska and others worried aloud that the freeze is at too high a level to solve the economic problems involved.

In parallel with attempts to shield domestic oil users from inflated world oil prices, the Russian government is considering tax changes to try to bring more of Russia's own oil production onto the domestic market. Under consideration at the Ministry of Economic Development and Trade, the Kommersant-daily reported Sept. 12, are a reduction in the tax on fossil-fuels extraction or institution of a lower tax rate for lower-quality oil extraction (to boost output), and lowering the excise tax on high-quality oil (supposedly to encourage more investment in refineries in Russia).

Boost Oil Output

On Sept. 20, Industry and Energy Minister Khristenko sought President Vladimir Putin's approval for "tax exemptions" for oil companies that explore new fields. In a televised cabinet meeting, Khristenko said that Russian crude output is growing at twice the rate at which new reserves are being confirmed. After several years of double-digit growth in output from West Siberian fields, accomplished by using advanced technologies to extract oil from previously only partly exploited deposits, Russian oil production is expected to grow only 2-3% this year. Yuganskneftegaz, the main Yukos Oil production unit that was taken over by the state-owned Rosneft company, is experiencing zero growth.

Presidential Press Service

After consultation with the Russian Minister of Industry and Energy, the country's largest oil companies agreed to freeze gasoline prices until the end of this year. Russian President Putin has also approved tax exemptions for oil companies that explore new fields. Here, Putin (left) with German Chancellor Gerhard Schröder, in Moscow in April.

Putin Meets Oil Execs in U.S.A.

During his visit to the United States, where he addressed the United Nations General Assembly and, on Sept. 16, met with President George Bush, Putin also met in New York with top executives from multinational oil companies. Conoco/Phillips, ExxonMobil, and Chevron were represented at a group meeting with Putin, followed by one-on-one discussions, behind closed doors, between the Russian President and some of the executives. Gazprom CEO Alexei Miller was in Putin's delegation.

Russian press pointed to development of the Shtokmanovskoye offshore natural-gas deposit in the Barents Sea, as one agenda item. Conoco/Phillips is reportedly seeking to buy a 20% stake in LUKoil. Putin spoke publicly about the "huge potential" for Russian oil and natural-gas sales to the United States, which currently buys only 2% of Russian output.

Editorial

It Wasn't President Reagan

Eugene Robinson, writing on *The Washington Post*'s OpEd page for September 30, was wrong, when he wrote, "Reagan changed everything, shifting the nation's center of gravity to the right," although he was fair to add, in his next sentence, ". . . the man had at least a certain generosity of spirit." As Presidents come and go, it was not Reagan who identifies "the shift of gravity to the right," it was President Harry S Truman who, as soon as FDR was dead, faithfully followed the lunatic, anti-Roosevelt recipes of Britain's Winston Churchill, in carrying out the sharpest right-wing turn yet experienced in U.S. policy orientation in our national history since our republic's self-inflicted catastrophes under the Coolidge, Hoover—and Andrew Mellon administrations.

President Eisenhower did much good for the nation and the world, in turning the U.S.A. back toward traditional U.S. outlooks, but the change to the right, under President Ronald Reagan, to which Robinson refers, was actually caused, not by the Reagan election. It was caused by the effects of the Carter Administration's Trilateral Commission program of deregulation, as engineered by National Security Advisor Zbigniew Brzezinski. Candidate Ronald Reagan was swept into office by a surging national revulsion of 1979-1980 against the 1970s policies associated with neo-Confederate, right-wing Harvard Professor William Yandell Elliott's "Nashville" Agrarian trainees Henry A. Kissinger and Brzezinski.

That is not my only rejection of the populist misjudgment shown by Robinson's commentary. The root and issue of his blundering view of President Reagan is it tends to steer his readers into evading the most crucial and politically urgent fact about the brutish and catastrophic policies of the Charles II-like Bush-Cheney Cabal of today. Robinson echoes sensitivity to some of today's important instances of social injustice, but his sloppy choice of rhetoric must be condemned in the public interest, as a dangerously misleading lack of comprehension of the current threat to our nation at this moment of its currently soaring existential crisis.

We are suffering under the most incompetent, as much as corrupt Presidential administration in memory, while facing the world's worst monetary-financial breakdown-crisis in modern history, since Europe's mid-Fourteenth Century. With about three years remaining until the next presently scheduled general election, we are in a situation, under this administration, that our constitutional system of government could not stand three more years of this massive mixture of sheer lunacy mixed with fathomless corruption. All other issues are dwarfed by the enormity of that specific challenge.

What those who were adults back then, remember about the Truman Presidency, was the U.S. delaying the implementation of terms of surrender negotiated with the Emperor of Japan through Monsignor Montini's Vatican Office of Extraordinary Affairs for long enough to drop the only two deployable nuclear-weapons prototypes in our arsenal upon the Hiroshima and Nagasaki populations of a virtually defeated, and almost hermetically isolated Japan. Few, even then, knew the fact that it was the "premature" surrender of Germany which prevented "Bomber Harris's" Winston Churchill from enjoying the dropping of those prototypes still in preparation, on Berlin; so, Truman chose Hiroshima and Nagasaki, instead.

Churchill's and Bertrand Russell's shared common purpose in that, was the use of nuclear arsenals then to be built up, for launching a preemptive nuclear assault on the Soviet Union, that for the sole purpose, as stated by Russell publicly in 1946, of establishing a one-world government under a transformed, Anglo-American dictatorship of the type to which Russell and H.G. Wells had agreed publicly in 1928. That, dear chaps, was the real "right-wing" turn of 1945-1946, not 1981.

However, few then recognized the real issue of the closing days of the actual war-fighting in Europe, between Allied Supreme Commander Dwight Eisenhower and types such as his subordinate General George Patton. Patton was right about Montgomery;

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but, Eisenhower was right about Patton.

The issue then, in 1945, was the same issue, but under vastly different circumstances, with the Bush-Cheney Administration today, an administration far, far, far below the intellectual level of the Churchill and Truman of 1945.

Obviously, Robinson knows none of this, and therefore does not understand the realities of the present situation in Washington, D.C. today. He clearly fails to grasp the essential reality of the present situation. The problem which Robinson's blunder exposes for today, is the same problem against which the Egyptians warned Solon of Athens and Plato, back then: we have too few really old men who can remember three millennia of those crucial points of the continuing, living history of today's globally extended European civilization, issues which, in their recurring, present incarnation, are still shaping the issues of current history today.

In these days, for most politicians, as for the contributing authors for most leading news agencies, as for Robinson, history plainly "ended" in 1989-1991. We live in a time when trivial people today exchange even more trivial opinions as billiard balls might do; everything must be explained by what they chance to have chosen to remember from the gossip they swapped, percussively, at the preceding weekend's social event.

What Really Happened in 1980

There are two principal facts which must be put into focus to locate the source of Robinson's blunders.

In fact, the immediate sociological factor behind President Reagan's election victory over both George H.W. Bush and Jimmy Carter, was the "68ers." It was the hatred against the horrifying effects of both the oil-price hoax orchestrated under National Security Advisor Henry A. Kissinger, and the hatred against Brzezinski's Trilateral Commission, which denied Bush the Presidential nomination and sent Carter into retirement.

The rest was chiefly the effect of the aging process. The Baby-Boomer generation's compulsion to overturn the Franklin Roosevelt "New Deal" economic tradition took over the Democratic Party of the 1970s and 1980s, while the Republicans of the same generation, took over more and more of the Republican Party for the promotion of a shift from producing steel to a form of legalized stealing, the looting of our dwindling agro-industrial capacity, as expressed by the currently ongoing financier looting collapse of the air-travel and national automobile industries.

Behind and below all those shenanigans, the immediate form of the essential issue is, today, the same old fight which began in the aftermath of that February 1763 Paris Treaty which gave virtual imperial-power status to Lord Shelburne's neo-Venetian British East India Company. Today's situation inside the U.S.A. is, once again, the fight for, and against the principle upon which our Federal republic was founded, the fundamental commitment to promote the general welfare of our population and its posterity, included as the fundamental principle of law in our Constitution.

The leading expression of that fight, inside the U.S.A., as throughout the world today, is the existential struggle of the forces of constitutional self-government of sovereign nations against the predatory rampage of vast cartels of financier interest which, in a modern continuation of the predatory Venetian tradition, demand that governments, when permitted to exist at all, must be merely lackeys of financier cartels. These are, again today, continuations of the Synarchist cabal behind the creation of the dictatorships of banker Volpi di Misurata's Mussolini, the Bank of England's Montagu Norman's choice of Adolf Hitler, and G.K. Chesterton's favorite, Francisco Franco. That is the meaning of the campaigns by Cheney's controllers against the memory of FDR, for a "post-industrial society," for "globalization," against regulation of the financier interests behind the greatest world-wide swindle in known history since the mid-Fourteenth-Century "New Dark Age," hedge funds.

We have reached the point of immediately looming, hyperinflationary global breakdown crisis, today, that we either return the U.S. to the policy-shaping outlook associated with the memory of FDR, or the lunatic incompetence and greed of the Bush-Cheney Administration, combined with the lunatic incompetence of the financier interests behind the hedge-fund swindles, means the early breakdown of civilization as we have defined that term in modern times. That is the issue which the misguided Robinson, among others, seeks to avoid by trivializing facts which, in any case, are not really the important facts actually threatening each or all of our principal constituencies today.

—Lyndon H. LaRouche, Jr.
September 30, 2005

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  TimeWarner Ch.13
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  Wed: 3 pm

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  Tue: 9 am
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  Wed: 6 pm
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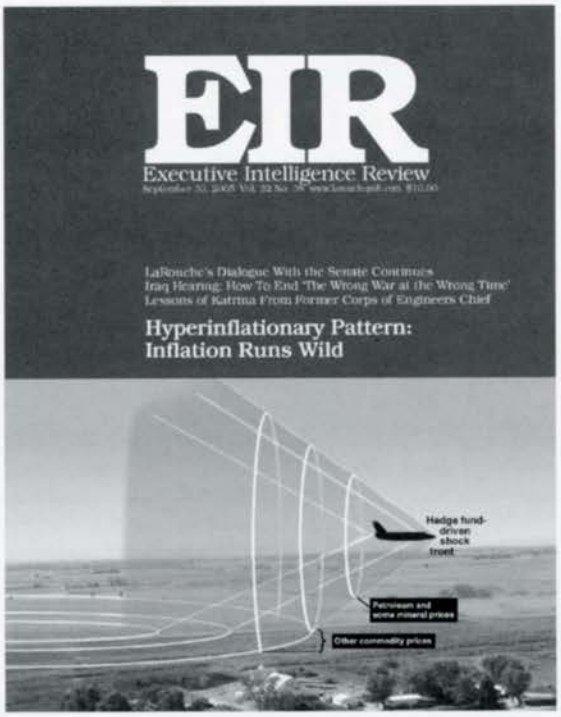

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