

## HOW TO DEFINE A PHYSICAL-ECONOMIC COLLAPSE

# Marat, De Sade, And 'Greenspin'<sup>1</sup>

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You wish to know what is going to happen to you in the coming weeks and months. Then, face certain facts. Learn the lessons of the past mistakes most of you have been making, repeatedly, over the recent decades. After studying those facts, understand that the future is often what we make it. Then, let you answer the question, what is going to happen to you?

Fact. For more than thirty-five years, virtually all of the publicly known, medium- and long-term economic forecasts, by virtually all leading U.S. governmental agencies and professional economists, have been consistently wrong. Ask yourself: how many of you believed those sources? How many believed in the limitless future prosperity of the so-called "new economy," for example? How many trillions of dollars of financial-asset values of people who could not afford to lose, were wiped out in recent months. because those victims were taken in by mass-media and other reports of endless financial gains "in the market"? How many of those people lost much more than they could have afforded to lose,

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1. Peter Weiss, *The Persecution and Assassination of Jean-Paul Marat, As Performed by the Inmates of the Asylum of Charenton Under the Direction of the Marquis De Sade* (Boston: Atheneum, 1966). In post-war literature, this play is the classic representation of "the inmates taking over the asylum." The historical Marquis de Sade was imprisoned in the Bastille when the French Revolution broke out, and was transferred to the Charenton asylum. In the play, he and the other inmates take over Charenton, banish the staff, and put "on trial" an inmate playing the part of Marat—whom they proceed to kill.

because they rejected the warnings against exactly that impending collapse, which I caused to be widely circulated?

Another fact. Contrast that record with all of my own forecasts from the same period, each of which I placed on the written record; they have all been successful ones.<sup>2</sup>

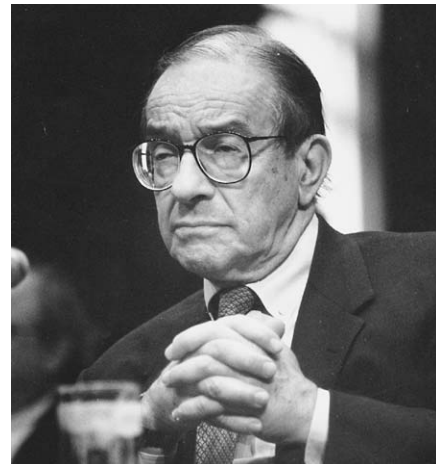
Consider the fact, that, despite all that evidence, over all those decades, there are still many persons, even in high places, who cling to the delusion, that economic growth can be measured in terms of simple financial statistics, or even in those increasingly fraudulent, published data called "market indices."

Faced with those facts, some pretty reasonable observers are asking me and my associates: "You may have been right in the past, but how can we decide for ourselves which method is right for the future: your method, or that represented by so-called 'mainstream opinion'?"<sup>3</sup> I reply to such

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2. Although my first long-range forecast was made during 1959-1960, and repeated in various locations with limited circulation, at several times over the 1961-1965 interval, the first widely published versions of that forecast appeared as offshoots of my teaching at various college and university locations during the 1966-1968 interval. Since then, all of my subsequent, medium- to long-term forecasts have been presented in written form, with significant elaboration. See, Lyndon H. LaRouche, Jr., "The Coming Disintegration of Financial Markets" (LaRouche's Ninth Forecast), *EIR*, June 24, 1994, for a summary of this record. For that reason, I refer to the recent "thirty-five years" in comparing my record to what should have been known to at least a significant number of ostensibly leading economists from that time-frame. I stress forecasts actually made by me, to exclude discussion here of a significant number of intentional misrepresentations concocted by adversary media.

3. This is the same argument which the founder of modern astrophysics, Johannes Kepler, made against the method shared in common by the so-



*Left to right: The Marquis de Sade, Jean-Paul Marat, and Federal Reserve Chairman Alan Greenspan. The Jacobin Terror of the French Revolution, in which the lunacy of “popular opinion” —manipulated by the British oligarchy— seized control of a nation, is being replayed in Alan “Greenspan’s” America. Among today’s common symptoms of such moral corruption, LaRouche writes, “is the utterance of the magical words, ‘my money,’ an utterance often accompanied by a certain diabolical glint of Nintendo-style threat in the speaker’s eyes.”*

questions in two steps.

First, I shall describe the kinds of false assumptions which have misled most typical forecasters into those erroneous methods of forecasting adopted by today’s mainly downstream mass-media.

Then, after having cleared away some of that jetsam of false beliefs, we shall be able to focus on the central issue of the appropriate method of making economic policy today.

My task here, is to help you to approximate, at least, the same superior quality of expert conclusions I have succeeded in producing. Understand this through your own mental efforts. Then, you, too, will have an insight into the future, as well as the past. In this report, I shall give you some crucial hints on reaching an accurate understanding of the dangerous world economic situation in which you now find yourself.

Before turning to the pages which will immediately follow, I must perform that certain chore which must be performed by any competent writer or teacher. I must consider: For what reader is this report intended? With that author’s responsibility in mind, I have chosen to address a mixed audience, of not only professionals, but also influential international as well as national and other political figures, and include a wider audience of readers who are simply literate lay persons. That requires that the subject be addressed in a way fully up to relevant professional standards for competence, but must provide all the intended members of the audience the opportunity, either to follow me, step by step, through the re-enactment of the concept presented, or to point to ways in which they might proceed to work the

point out for themselves.<sup>4</sup>

I presume, of course, that the reader considers the issue important enough, that he or she would be willing to spend a certain amount of effort to learn what you need to know. Shall we say: not any less effort than what should be the level required for learning to own and drive an automobile, and perhaps conduct some repairs.

The wretched performance, over more than thirty years, of both those U.S. government and Federal Reserve officials and most academically trained economics professionals, should suggest to you, how most citizens have been more or less consistently misled into tolerating the disastrous policies of our government and political parties over those past decades.

Fortunately, that ignorance of the most important issues of national policy-shaping, which has become so typical of most of our citizens, could be overcome through a suitable combination of education and experience. The first fact to be made clear, is that the believers in the so-called “market” have been the victims of a swindle, a post-Franklin Roosevelt delusion, which grew into the form of a mass hysteria, especially so over the course of the post-Kennedy decades. Once that is cleared up, the citizen’s mind is more likely to be open to discovering the needed, fresh way of thinking about economics in general.

I believe, that if you are willing to study the evidence to which I point, you will be convinced, that today’s popular ignorance of economics can be cured, on the condition that the victims of popular delusions about the U.S. economy, are willing to consider the evidence. The problem is not a lack of

called leading authorities quoted in his time: Claudius Ptolemy, Copernicus, and Tycho Brahe. See Lyndon H. LaRouche, Jr., “Faith, Hope, and Agape!” *EIR*, June 1, 2001.

4. The requirements of all three classes of audience are best served, by relegating the matter of certain niceties to footnotes supplied.

those facts which could have been available to a member of the public who had looked for them. By definition, it is the characteristic feature of the hysterical victim of an induced delusion, such as today's widespread notion of "the market," that such persons will simply refuse to learn, even despite all available evidence to the contrary, and will cling to their delusions, even to proverbial bitter end.

It is that continued, hysterical refusal, among officials, professionals, and many ordinary citizens, to consider any of that relevant, crucial, physical evidence, which has misled the U.S. and many other economies, to the present brink of a very bitter end. This has been the case, even when all the warning signs of an oncoming financial collapse were available.

I know of the cases of relatively many Americans, for example, who said of me, "Lyndon is wrong. The U.S. is entering a period of great prosperity under the new economy. Perhaps Europe will be in trouble, but never the U.S. economy!" There never was any evidence to support that consoling delusion; it was something self-deluded people chose to believe, simply because they passionately wished to believe it.

Unless the citizens of the U.S.A., or at least many of them, can overcome the hangover-like effects of the delusion which increasing numbers of them had come to share during a period of approximately three decades or more, the worst would be inevitable, for all of you, during the period immediately ahead.

Fortunately, in the pivotal words of playwright Eugene O'Neill's *The Iceman Cometh*, the ongoing breakdown of the world's financial system, combined with the presently accelerating spread of 1930s-depression-like economic conditions, has taken "the life out of the booze." More and more of your fellow-citizens, are experiencing a "reality shock." Among the saner ones, the reaction is, in effect: "I realize I've been fooled. I am willing to accept that fact." That is way in which a similarly deluded majority of the U.S. population of the Coolidge-ridden 1920s, reacted, when they were confronted with the realities of the 1929-1933 Depression. "Now, perhaps" (but only "perhaps") "I am ready to understand what it is we must do to overcome this situation."

That is the situation which confronts all of us among leading policy-shapers, inside and outside governments today. That is the challenge which confronts the ordinary person trying to see his or her way through the presently worsening disaster our economy has become.

The purpose of this report, is to show to you what is wrong with the delusion many had come either to adopt, or to regard as the irresistible force of prevailing political opinion. However, before prescribing the needed medication, let us agree on the nature of the disease to be cured. Therefore, I shall now complete my prefatory observations, by describing one of the most crucial problems in dealing with the present political situation. What is passing through the minds of those citizens who are still, even now, gripped by that delusion which has been called "popular opinion," and which I, with good reason,

prefer to call "vox pox"? How should we describe their continued, still widespread "state of denial" of the plain, and rapidly accumulating evidence in front of them?

## Those in a State of Denial

Once again, the principal cause of the presently onrushing economic catastrophe, is the relevant moral corruption shared, not only among leading officials and professionals, but also popular opinion generally. Among today's common symptoms of that moral corruption, is the utterance of the magical words, "my money," an utterance often accompanied by a certain diabolical glint of Nintendo-style threat in the speaker's eyes.

These poor fools, officials, professionals, and just plain greedy individual citizens alike, had clung, hysterically, to faith in the delusion, that "my money," as reported on the fabled "bottom line" of an accountant's financial statement, is a measure of actual economic improvement in the physical conditions of both individual life and of the future of the physical economy of the locality, the nation, or the world. Citizens so deluded, even believed that very short-term, purely speculative financial gains, were the pathway to long-term growth of the real economy! Was this merely "irrational exuberance," or a vaster and more lunatic re-enactment, by U.S. Federal Reserve Chairman Alan "Greenspin" himself, of the John Law "bubble-headedness" of the early Eighteenth Century?

At this moment, such a citizen might remind us of some legendary, vacationing canoeist, who had been cruising dreamily from Duluth, Minnesota, down the Great Lakes, and is now nearing Niagara Falls. Above the rising din from that approaching cataract, we hear that fellow-citizen saying, "What crisis? ! I have been sailing these waters for months now, and I have not gone over Niagara Falls yet. Why should I believe you now?"

Admittedly, there is more to such tragic denials of reality than simply a lack of competent knowledge of economy. Sometimes, people are simply so afraid of facing a frightening reality, that they will refuse to admit the existence of facts which are staring them in the eye. For example, a sudden and total collapse of the world's financial system, is not something the ordinary citizen, or politician, usually wishes to think about. For example, imagine Bush's Treasury Secretary O'Neill looking at the charts, which show the downslide, and, on a sudden wishful inspiration, turns the charts upside down, in his attempt to convince even himself, perhaps, that the lunatic Bush tax-cut will bring about an upturn in the economy, looming not many months ahead.

Often, the principal factor driving a victim into such a state of denial of a reality staring them in the face, is their sense of helplessness in face of forces which they believe they could not control, even if they wished to do so. "Who am I, a little guy like me, to take on powerful interests like those?" As many said words to the following effect, to me, during the

course of the Year 2000 Presidential primary campaign, “My friends and I are going to pretend I never heard what you just told me. I am going along to get along. I have to spend all my energy believing that you are wrong!”

Or, imagine the case of some imaginary Tarzan, who was raised from infancy by a female chimpanzee. Imagine that fellow being told that that beloved maternal creature was not his natural mother. He would probably fall into a paroxysm of four-palmed stamping, shrieking, and tooth-threatening fury, shrieking, “Lies! Lies! Lies! All lies!” He might bite you! Some children react similarly to being told that Santa Claus is really only a figure in a charming fairy-story. People who are afraid to face the sudden truth placed right in front of their face, are sometimes known to fall automatically into a fit of screaming denial of the plain truth standing right in front of them. Facts and science no longer persuade them.

The idea of an onrushing total collapse of the world’s present financial system, can produce such Classically tragic flights of insanity in two kinds of persons.

In the first such case, there is a strong inclination to deny the possibility of a crisis for which he or she knows no feasible alternative. That is the kind of hysteria to be expected among ordinary U.S. citizens. In the second case, the affrighted person may be a compulsive financial speculator. He has been informed of an existing solution, but hates the remedy more than the disease, as the hard core of the Bush Administration and its devotees do.

In the first case, the victim of the delusion insists that, “You must be wrong. They will always come up with something!” One is usually left to wonder exactly who “they” is; perhaps it is “invisible little green gentlemen under the floor-board,” or, the same thing known by a different name, “the invisible Hand.” They may argue, “Look, we’ve been in crises before; they always came up with something. I know they will never let it happen.” Will those “boys in the back room,” or, perhaps, “the Invisible Hand,” actually come up with something to keep the system going? Are you assured that, pickpockets aside, the “Invisible Hand” actually exists?

In the second case, the financier parasite’s response is of the form, “I would rather see this planet exterminated, than that I should have to give up my way of life!” Obviously, such fellows are extremely dangerous, if they are allowed to have the power to get their way in such a situation.

The Bush leaguers, for example, respond to the present crisis as the pagan god Zeus would have reacted to the signs of the approaching “twilight of the gods” of Olympus. Few are more awful, when they have power, than a cowardly tyrant faced with either an actual or perceived threat to his power, a tyrant like the Roman Emperors Caligula or Nero, or tragic Adolf Hitler in his bunker.

In both of the two types of cases, the mind of the victim has played a trick. Therefore, we now begin a close examination of the reasons people allow themselves to be fooled by popular opinion about economics. Once you are able to recog-

nize the way in which that kind of trick may be used to control your mind, you are, at the worst, less likely to be tricked again. We begin with that fact.

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## 1. Escaping from an Imaginary Goldfish Bowl

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Once again, the subject of this report is economics. By economics, I mean, first of all, a branch of physical science which was first discovered and developed by Gottfried Leibniz, over the interval 1671-1716, which he named “physical economy.” Up to the present day,<sup>5</sup> Leibniz’s original definition of that branch of physical science, supplies the only known basis for the development of political economy *as a branch of physical science*. My own original discoveries in this field, were a continued, qualitative development of notions first introduced to my thinking, by him.

To introduce the treatment of that subject to be presented here, I now supply a series of indispensable, summary technical definitions of topics to be referenced in the course of this report.

By “physical economy,” I mean the individual’s physical relationship to nature as I shall define that relationship, once again, in a later section of this report. For the moment, I shall emphasize, that it is a relationship situated within the medium of his or her historically determined, functional relationship to society.

More broadly, the emphasis is upon the relationship to nature of humanity as a whole, and that of that society in particular, as expressed in three rough estimates: 1.) The increase of physical output, to society, per capita, over necessary physical input, from society, per capita; 2.) The ratio of physical input-output per capita, measured in terms of per square kilometer of the surface area of the entire society, and the Earth as a whole, respectively; and, 3.) The correlation of such increases in physical input-output, with improvement in the life-expectancies and related demographic characteristics, of growing entire populations over successive generations.

These raw measurements of physical-economic performance, presume efficiently corresponding changes in society’s actions on nature. That means, that the efficiency of the response of nature to mankind’s actions, is improved through those qualities of willful innovations in man’s actions, which are typified by experimentally validated discoveries of universal physical principles, as those qualities of innovations are applied to both society in particular, and nature in general.

As I have elaborated the argument, in many locations,

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5. It should not be considered necessary for me to show, once again, what I have covered more than adequately in many earlier locations: that the notion that Bernard Mandeville, Adam Smith, Jeremy Bentham, et al., are competent authorities in the field of political economy, is an intrinsically anti-scientific belief.



## Chairman Greenspan remains in control

over approximately a half-century to date, the most crucial of the events which define a successful act of physical economy, is the application of the discovery of an experimentally validated universal physical principle, as this would be typified by the reader's re-enactment of Johannes Kepler's original 1605 discovery of a universal principle of gravitation, and Gottfried Leibniz's related, and also uniquely original discovery of the calculus and of the still higher, subsuming notion of a monadology.<sup>6</sup> This quality of action is not limited to what have been customarily termed "physical principles," but includes similarly defined discoveries in the domain of what I shall identify, later here, as the cognitive aspect of human relations, as the latter are typified by principles of Classical artistic composition.

By physical science, I mean the modern definition of experimental physical science, as introduced to modern European civilization by Nicholas of Cusa's *De Docta Ignorantia*.<sup>7</sup> This is the modern science continued by such avowed followers of Cusa as Luca Pacioli, Leonardo da Vinci, and Johannes Kepler. This notion of science is grounded on the general principle, that we know nothing except that which is experimentally validated as a discovery

6. J. Kepler, *New Astronomy*, trans. by W.H. Donahue (Cambridge, U.K.: Cambridge University Press, 1992). Cf. Lyndon H. LaRouche, Jr., "Faith, Hope, and Agape!" *EIR*, June 1, 2001.

7. See, Helga Zepp LaRouche, speech on May 6, 2001 at a conference of the Schiller Institute and International Caucus of Labor Committees in Bad Schwalbach, Germany, *Fidelio*, Summer 2001; also, Pope John Paul II, message to a Mass at the Cathedral of Trier in Germany, May 15, 2001, cited in "His Ideas Are Efficient to This Day," *EIR*, June 8, 2001.

of a universal physical principle.<sup>8</sup>

The branch of physical science called physical economy, addresses the discovery, transmission, and cooperative action of experimentally validated universal physical principles, that to the purpose of increasing man's power within and over nature. My own original contributions to the further development of the science of physical economy, typify the application of Cusa's method of *docta ignorantia*, as does my praise for certain crucial aspects of the contributions by V.I. Vernadsky, and my adoption of the standpoint of Bernhard Riemann's revolutionary definition of physical geometry.

Within the practice of that branch of physical science, we are often confronted, in actual cases, with the pathological effects caused by the persistence and recurrence of both assumed principles which are false to reality, and of

arbitrary practices whose violation of principles causes destructive effects during the medium to long term.

In the present section of this report, I focus upon the axiomatic features of those forms of socio-pathological economic behavior, which are relevant to the root-causes for the presently onrushing, planet-wide financial collapse. As I have already indicated at the outset, my emphasis in this present section, is on the increasingly aberrant mass-behavior of the recent period of approximately thirty-five years, especially U.S. mass behavior. In the later, following sections, I summarize the needed alternative to recent U.S. habits in economics and related practice.

## The Children's Games Adults Play

Perhaps most of you may have heard the story, that a goldfish, released into a pond, after months spent swimming in a small bowl, would continue to swim in the same tight circles to which life in the bowl had accustomed that creature. While I am willing to apologize to that goldfish, should he prove to be falsely accused, I shall never be justly compelled to make any apologies for reporting the "goldfish-bowl-like" behavior of many of my fellow-citizens, and of most among our own and other nation's recent choices of elected governments.

8. This is the definition of the modern form of Platonic method, which Cusa named "*docta ignorantia*." It is also the definition underlying Bernhard Riemann's revolutionary definition of physical geometry, in his 1854 habilitation dissertation, "Über die Hypothesen, welche der Geometrie zu Grunde liegen," *Bernhard Riemanns Gesammelte Mathematische Werke*, H. Weber, ed. (New York: Dover Publications reprint edition, 1953).

Something inside people's minds often causes them to fool themselves into limiting their actions to choices within purely imaginary boundaries. They might say, "I did that because I had no choice," when, in fact, there were no grounds which were both real and rational, for accepting such limitations on their choices of behavior.

During my childhood and youth it was widespread practice to use concrete for sidewalks, frequently with the result that each portion of the sidewalk was separated by a crack from the next. Usually, the concrete developed additional cracks. Sometimes, I observed a fellow walking strangely along such a cracked walkway. Curiosity led me to recognize that the awkward gait of such poor fellows, was often caused by his effort not to step on any of the cracks.<sup>9</sup> Brick sidewalks invited similar behavior. The same kind of behavior was prescribed in certain commonplace children's schoolyard and sidewalk games. There was an "old wife's tale" that matched such plainly neurotic (or, psychotic) behavior: "Step on a crack; break your mother's back!"

In general, there are two kinds of boundaries imposed upon willful human behavior. In one case, the boundary is an efficient physical boundary, which may be fairly described, for that place in time, as existing independently of the individual's, or society's will. In the alternate case, the boundary is not a natural one, but is either purely psychological, or the result of some legal fiction. Sometimes, these psychological boundaries are recognized as examples of neurotic or psychotic behavior; in other cases, the actions may be equally absurd in fact, but, because they occur in the guise of obedience to either political authority, or some popular convention, that society does not usually consider such behavior to be "abnormal" in any general sense of the term, nor as specifically neurotic or psychotic, even when the latter assessment is the only objective one. For example, the belief that society must work within the bounds of what is called "free trade," rather than the American System of political-economy, of Alexander Hamilton, the Careys, and List, is such a delusion.

The mechanism by which such artificial kinds of patho-

logical behavioral values become socially induced forms of irrational behavior, is typified by studies of the manner in which children play and invent games. Among adults, that childish tradition is typified by the kind of purely positive, virtually fascist doctrine of law, as such rules are made up childishly, in such forms as the influence of Carl Schmitt, the architect of the Nazi legal system, or the similar behavior of U.S. Supreme Court Associate Justice Antonin Scalia.

This childish trait may also be exhibited in the classroom, where students have often been conditioned into interpreting the universe according to the conventional classroom definitions, axioms, and postulates of a so-called Euclidean geometry. In such a geometry, as taught at the schoolroom blackboard, so-called conventional forms of arbitrary beliefs rule as axioms, instead of experimentally demonstrated universal physical principles. So, the child may grow up to become that unfortunate adult, who claims to "know" only the traditions which "my parents and schools have taught me."

The same childish trait also occurs in the stubborn declaration, "I believe only what my senses tell me," by the poor fish who insists that the universe outside his aquarium is the pictures which a child had pasted on the exterior surface of that aquarium, or the poor couch potato who believes that the world at large is what is told and shown to him by his Orwellian television set. Such are examples of the ways for substituting the methods of childish games for conceptions of the real universe.

Given the evidence, that not only individual persons, but even entire societies fool themselves in such ways, how could you, confined within the skin on which your living existence depends, distinguish what is real about objects existing outside your skin, from the objects of a fantasy-world?

Begin with the case of the person who is deluded by the assumption that, "What is real, is what my senses tell me." What are that person's senses, that he should rely upon them in that way? Should we, perhaps, recognize as behind such truculent utterances, a fearful note of hysteria, the plaint of what one famous American described, autobiographically, as "a life of quiet desperation"?

Ask yourself, "What are our senses?" These faculties of sight, hearing, touch, and smell, are what are fairly described as sources of impulses ostensibly transmitted to the brain by what we call sense-organs. These sense-organs are, in turn, living tissue, tissues secreted by the elaboration of our bodies, tissues, some of which are part of the brain itself, which transform their sensations into what becomes the input sent into the brain.

What is sent to the brain, is the sense-organ's reaction to a stimulus, *not that which prompted the stimulus*. There is nothing in the sensation itself, or in the "message" it transmits to the brain, which is a truly objective representation of the event to which the sense-organ has reacted. Our sensations may usually reflect events which have actually occurred outside our skins, but there is nothing in the perceptions associ-

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9. Creativity and playfulness are normally interrelated phenomena. At least, this is true to the degree that people who are not playful about life in general, and all really serious other matters, are not creative. Something to the same effect was argued by the late Dr. Lawrence S. Kubie, in such of his published writings as *The Neurotic Distortion of the Creative Process* (New York: The Noonday Press, 1961; reprint of 1958 University of Kansas Press edition), and his *Daedalus* feature on "The Fostering of Scientific Creativity," Spring 1962. The rigidly, compulsively deductive man of learning, shows such neurotic qualities. Serious studies prompted by playfulness, are typical of that which separates the prolifically creative personality from the learned dullards. The forms of irony and metaphor which coincide with Leibniz's definition of *Analysis Situs*, are typical of the gulf of distinction between the creative scientific and artistic personality, and the blockheaded dullness of the uncreative pedant. Most of my own important discoveries, as well as my significant capacity for problem-solving of a certain type, are the fruit of the kind of playfulness, which is illustrated by that impromptu study of the crack-skippers' gait.

ated with those sensations, which is, functionally, an actual replica of the experienced events.

You would therefore be badly, even tragically mistaken, if you simply assumed that reality is primarily what you consider the experience of your senses. The experience may be real, but the implied outside agency might not have existed; even if the outside stimulus had existed, you had no evidence from sense-perception as such, from which to conclude, that that which occurred outside your skin, was “objectively” in the form your brain interprets its sense-experiences as such. Therefore, those who actually know much of anything about such matters, have rejected the childish superstition, that “seeing is believing.”

## The Universe as We Know It

The greatest philosopher of European civilization, and founder of its scientific method, Plato, compared such sense-experiences to shadows on the irregular surface of the wall of a dimly firelit cave. Unless the sense-organs have made a mistake—which they sometimes do, the shadow you call experience is the shadow of something which has, functionally, real existence; but, that perception is not the same thing as the reality which has caused the shadow to appear to your senses. As modern microphysics illustrates this point, perhaps most forcefully, the challenge is to discover what caused that shadow to appear to your senses.<sup>10</sup>

There are characteristics of the healthy form of those cognitive processes we attribute to the human brain, which prompt us to assess it as a most remarkable living organ. The point is to know what it is that that organ actually does, not to credit it with all kinds of things it does not, and could not do.

Therefore, the first question is: What do we mean by the word “to know”? The second, follow-up question, is: “What is it possible to know, and how?”

In the case of the mythical goldfish, the assumption has been made, that the goldfish learns to behave in conformity with what behaviorists call a “conditioned reflex.” It is assumed, that repeated experience, such as bumping against walls, “teaches” the goldfish to move within certain ranges equivalent to those of the repeatedly experienced boundaries.

The behaviorist argument is a copy of the argument made by the Eighteenth-Century, pro-satanic ideologue, Bernard

Mandeville,<sup>11</sup> the argument adopted by Friedrich von Hayek’s and Professor Milton Friedman’s Mont Pelerin Society.<sup>12</sup> The same assumption was made on behalf of feudalism by Physiocrat Dr. François Quesnay, and Quesnay’s wild-eyed *laissez-faire* argument was copied by Lord Shelburne’s lackey Adam Smith. Among disordered minds such as those of Mandeville, Quesnay, and Smith, like the notorious Bogomil (Cathar) cult before them, the belief prevails, that, under the statistical floorboards of the empiricist’s universe, there dwell invisible little green men, known to some as “the Invisible Hand.”<sup>13</sup> This “invisible hand,” is the pagan god the “free trade” devotees actually worship and service, which, according to them, tilts the roulette-wheel of fate, to cause some men to become rich, and others ruined.

The empiricist, in his role as a behaviorist, assumes, as Kant did, that the choices of “conditioned reflex” determined by large numbers of either percussive, or percussive-like, billiard-table-like impacts, determine statistical phenomena which they regard as substitutes for ideas. Kant’s notion of “negation of the negation,” fairly summarizes the empiricist view on this matter. Charlatans akin to Kant, term the kind of behavior producing such fictitious constructs, as a hedonistic quality of “human nature.”<sup>14</sup> Similarly, such charlatans argue, and superstitious people often believe, contrary to Louis Pasteur, for example, not only that human intelligence can be replicated by non-living, computer-like machines, but that life itself must have originated in a molecular biology of non-living material.

If, as I have just insisted, sense-perception is not knowledge of the real world, then, what is? Why do I recognize Plato as the first known elaborator of that quality of scientific method we should associate with the work of Nicholas of Cusa, and such followers of Cusa as Leonardo da Vinci, Johannes Kepler, and Gottfried Leibniz? Let us start with the

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11. *The Fable of the Bees, or Private Vices, Public Benefits* (London: 1714).

12. Friedrich von Hayek, “Dr. Bernard Mandeville,” *The Collected Works of F.A. Hayek*, W.W. Bartley III, ed. (Chicago: University of Chicago Press, 1989).

13. The behaviorist form of this same argument is the central feature of Immanuel Kant’s ideology, as featured in his *The Critique of Practical Reason*, under the section-heading “The Dialectic of Practical Reason.” Kant’s argument there is copied by Dr. Sigmund Freud as the latter’s doctrine of repression.

14. Granted, pathological traits of certain cultures and of individuals, such as the circles of President George W. Bush, Jr., may cause them to exhibit the traits popularly associated with an hedonistic personality-type, rather than the alternate assessment, that such traits are symptoms of a diseased form of human culture, or simply a pathological form of the development of the personal character of the individual. As I shall emphasize, afresh, later in this report, the innate quality of the human individual is goodness. The goodness may require redemption, but like any intrinsically good value, it exists to be redeemed. It is consistent with the avowed common intention of the doctrine of Mandeville, et al., that they advanced their misanthropic view of human nature, in order to give license to the practice of evil by their followers.

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10. From the standpoint of materialism or empiricism, what perception represents as an individual object, acts upon other objects, and is acted upon by other objects, as the empiricists insist upon that view. From the opposite standpoint, that of competent physical science, reality is not composed of collisions among objects, but of the object’s role in changing, and being changed by, the characteristics of the domain in which it acts. In other words, it acts upon the action within the domain in which it occurs, rather than the false view, in which the domain is composed of the sum-total of interacting objects. The correct view is to be seen most clearly from the standpoint of the science of physical economy, that for reasons I shall summarize at a later point in this report. In the meantime, focus upon the role of the human mind; we shall come to the physics of the matter a bit later.

word “universe.” What should we mean when we use that word? Since no one has ever seen, heard, touched, or smelled an actual universe, what, first of all, is the object which corresponds to a non-silly use of that name, and, second, how do we know that object to exist?

The literate use of the terms “universal” and “universe,” signify the notion of “everywhere,” or, in other words, “in all cases.” Therefore, the sane use of those terms could never mean a single object of sense-perception, or a mere collection of such objects. It means a *principle of action* which is efficient everywhere; the term *universal physical principle* is paradigmatic. Thus, the only sane choice of referent for the word *universe*, is the notion of the existence of an open-ended, coherent collection of efficiently interacting universal physical principles.

This notion of a universe incorporates what Carl Gauss’s greatest student, Bernhard Riemann, defines as a *multiply-connected manifold*. Riemann’s famous habilitation dissertation of 1854, is the first explicit statement of a general principle of *physical geometry*, to replace every variety of Euclidean and other “at-the-blackboard” variety of abstract geometry. Riemann’s use of “multiply-connected manifold” and “hypergeometry,” and my own use of the term “physical geometry,”<sup>15</sup> are cases of different terms which signify the same thing. The history of the scientific method leading axiomatically into Riemann’s discovery, is inseparable from both Johannes Kepler’s uniquely original discovery of universal gravitation, and Leibniz’s related, and uniquely original discovery of the calculus.<sup>16</sup>

Those notions neither include, nor tolerate the idea that something exists outside the universe so defined. In any sane society, “little green men under the floorboards,” and “invisible hands,” are strictly confined to the psychiatric wards.

The next question is: *How could we know a definite such, actual universe to exist?* What is the nature of that remarkable object?<sup>17</sup>

## Your Children Must Study Geometry

Since the seminal work of Plato, as, for example, in his *Timaeus* dialogue, the most effective, most direct approach

to today’s discussion of the notion of universality, requires us to introduce a crucial technical point.

The most efficient approach to the question just posed, emphasizes the contrast between so-called *Euclidean* geometry and what Leibniz’s follower, and Gauss’s teacher, Abraham Kästner, defined as *anti-Euclidean* geometry. The meaning of “anti-Euclidean” geometry, as distinct from “non-Euclidean,” becomes clear though the continued development of Leibniz’s notion of *physical* geometry. The notion of an anti-Euclidean geometry, as developed after Kästner, by such notable figures as Gauss, Lejeune Dirichlet, and Bernhard Riemann, is a result of that still ongoing progress.<sup>18</sup> I emphasize, in contradiction to much classroom and textbook error on this subject, that the distinction between the two terms, “anti-Euclidean geometry” and “non-Euclidean geometry,” is not a mere difference in terminology; there is a fundamental matter of physical-scientific method at issue.

What globally extended modern European civilization named “Euclidean geometry,” came into existence as a review of the earlier development of geometry, including, among its most crucial elements, the contributions of Plato and his Academy.<sup>19</sup> Reference to the pre-“new math” version of widely accepted classroom geometry, suffices as a choice of reference for the purpose of our discussion here. Begin with the way in which modern classroom convention, up into the 1950s, often used a Euclidean, quasi-Cartesian notion of space and time, as a way of representing what was often claimed to be the way to represent physical universality at the classroom blackboard.

In such classrooms, a Euclidean geometry of what was assumed to be the physical universe, was premised upon induced acceptance of what were called *definitions*, *axioms*, and *postulates*. These consisted of what were usually described as “self-evident truths,” and were, in that sense, either arbitrary intuitions, or, as postulates, inserted to resolve certain deductive inconsistencies, or ambiguities in the system of definitions and axioms. It was usually assumed that such postulates not merely perfected the system of definitions and axioms; but, this often implied, for those who held to an extreme view, that the postulates asserted nothing that should not have been understood to inhere, as corollaries, in the set of definitions and axioms itself.

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15. Not overlooking the revolution which I have made, by my expanded application of these terms.

16. Leibniz created the calculus as a solution to a problem defined by Kepler. Leibniz’s calculus also incorporates the principle of relativity of space-time which he, together with Christiaan Huyghens, Jean Bernoulli, and others, developed in response to Fermat’s related discovery of a universal principle of “quickest time” as the alternative to the popular notion of shortest distance. Thus, Leibniz’s calculus, contrary to the castrated version produced by Augustin Cauchy, is premised upon a true notion of the still, today, misunderstood notion of universal non-linearity.

17. In mathematics, the idea of such a universality is associated with an actual infinity, as distinct from a pathological use of the term, such as “at infinity.” Since nothing exists outside the universe, as I have defined it here, infinity is not a number; it is a notion of the universality of cases within a self-bounded

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universe, outside of which nothing exists, and for which no exact number could exist.

18. Anti-Euclidean geometry is not to be confused with the, unfortunately, all too common explanations of “non-Euclidean geometry.” The opening paragraphs of Riemann’s 1854 habilitation dissertation outlaws all of the notions of definitions, axioms, and postulates associated with a classroom Euclidean geometry. Kästner student Gauss shared the essential feature of his follower Riemann’s views on so-called Euclidean geometry, but avoided making that politically hazardous view public until the controversy with young Bolyai brought the issue to limited public attention.

19. E.g., *Euclid: The Thirteen Books of the Elements*, Sir Thomas L. Heath, trans. (New York: Dover Publications, Inc., 1956).





*"The competent student does not believe that a Euclidean geometry is the standard for mathematical physics; rather, he, or she, wrestles it, seeks out its weaknesses, and thus conquers, and supersedes it."*

This effort to explain the physical universe from the standpoint of such an essentially fanciful geometry, was understood to be a way of explaining the *deductively* attributable form of observed relations among those shadow-objects which exist only in the form of sense-perception.<sup>20</sup> During the rise of the Roman Empire, this doctrine came to be associated with the method attributed to the principal writings of Plato's adversary Aristotle, whose works the pagan Romans revived.

Typical of this latter trend, was a notable, deliberate hoax against the previously established competence of Classical Greek science, the hoax which was perpetrated by Claudius Ptolemy. Ptolemy concocted a system to make astronomy appear to conform to the dogma of Aristotle. The result was a pro-Aristotelean hoax, the so-called geocentric system of epicycles, which came to replace the experimentally

20. This includes objects which were not actually experienced, but are concocted as something which the believer presents as in the form of actual objects of sense-perception. "Invisible ghosts" are included among such fantastic objects, objects which, although not perceived, have the same attributes as objects which are perceivable.

grounded solar hypothesis of pre-Roman, Greek science. Ptolemy's hoax continued in authoritative use even after Kepler had conclusively proven that method, including such examples as the method of the empiricist Galileo, to be anti-scientific.<sup>21</sup>

Nonetheless, the Euclidean view of physics, space, and time, has been ironically useful in classroom and related work, up to the present day. Ironically, this usefulness is found chiefly in its devastating fallacies, more or less as the study of diseases produces benefits in knowledge which reach beyond the mere mastery of such diseases themselves. The competent student does not believe that a Euclidean geometry is the standard for mathematical physics; rather, he, or she, wrestles it, seeks out its weaknesses, and thus conquers, and supersedes it.

To recognize why it is urgent to insist on the term anti-Euclidean, it is sufficient to observe the fact, that the customary classroom use of the term non-Euclidean geometry, refers to certain new developments within the bounds of the same method already associated with what modern classroom tradition had recognized as Euclidean geometry. The most famous of these non-Euclidean geometries, are those of Bolyai and Lobatchevsky. These challenge aspects of the system of postulates of what is otherwise the generally accepted classroom view of Euclidean geometry. Therefore, they are rightly termed "non-Euclidean," as distinct from "anti-Euclidean," the latter physical geometries are those which reject the Euclidean axiomatic system, as Riemann did. "Non-Euclidean geometries" have a certain usefulness, but fail to grasp the deeper issues addressed only by an anti-Euclidean geometry.<sup>22</sup>

The Euclidean "ivory tower" model of geometry, is the typical model to be confronted in the mathematics and physics classroom, to show two things. First, to use the method of exposing the kinds of insoluble paradoxes internal to any closed, formal deductive system, to show the absurdity of blind faith in sense-perception. Second, these fallacies, which inhere in any implicitly closed deductive system, provide the most convenient classroom example of the way in which a "goldfish-bowl mentality" causes entire societies to insist on doing obviously stupid and destructive things to themselves, as I expose that problem in this report.

To clarify this important point in this report, it were prudent that I stay with the choice of examples I have used in other published locations, the cases of the way in which the

21. Kepler, *New Astronomy*. Although Copernicus copied Nicholas of Cusa in restoring the Classical Greek Solar hypothesis, as Kepler demonstrated (op. cit.), Copernicus' method was the same childish, "connect-the-dots" one used by Ptolemy and Tycho Brahe.

22. For example, Hermann Minkowski, in his celebrated lecture on Space, Time, and Matter, adopted Lobatchevskian non-Euclidean geometry as the method for representing the principle of relativistic time. It was an inspiring lecture, but the Euclidean assumptions buried within the argument led toward a dead end.

fundamental discoveries of Kepler and Fermat set a comprehensive form of modern mathematical physical science into motion.<sup>23</sup> I explain why I chose those illustrative cases.

By using the term “comprehensive” in that way, we mean “universal,” or, as I have said, a “universe.” In much of the development of modern physical science, the method by which progress toward the goal of universal conceptions has been achieved, is by challenging pre-existing assumptions, such as those of Euclidean geometry, which had been held up as universal. Challenging the generally accepted classroom definition and use of the Euclidean system, is the most convenient way of attacking the general problem of so-called universal systems, such as systems of popular axiomatic beliefs.

For that purpose, the development of modern experimental physical science, has relied upon Cusa’s definition of the Platonic method as a Socratic *docta ignorantia*. The best way to describe the most successful applications of that method, is to show some important examples of such successes, by describing those cases in terms of what Leibniz identified as “*Analysis Situs*.” The best such examples to be used to introduce this application of *Analysis Situs*, are those successes based on directly refuting the attempt to explain the universe in terms of devastating paradoxes incurred by the use of Euclidean geometry as a model for mathematical physics. This produces the relevant, added benefit, of illustrating the systemically pathological error of regarding physics as a branch of formal mathematics.

The significance of our use here of two examples from the work of Kepler and Fermat, is that these two sets of discoveries are outstanding successes, in constructing paradoxes which overturn the Euclidean notion of universality; paradoxes of that type have had a vast and deeply embedded impact in leading to much of the most important achievement of modern science.

Kepler’s overthrow of the use of the ivory-tower fantasies of Euclidean geometry in the practice of physical science, led him to the original discovery of the principle of universal gravitation, and, by this discovery, establish, for the first time, the construction of a comprehensive mathematical physics based upon the notion of an efficient universal physical principle.

He showed that it was incompetent, to attempt to derive the orbit of planets of the Solar System by means of extrapolation premised upon the kinds of calculations inhering in a Euclidean model of geometry. He showed, that to predict both the position and velocity of a planet at some randomly chosen future time, we must introduce the *intention* represented by a principle entirely outside the Euclidean form of statistical “connect-the-dots” extrapolations, such as the method of extrapolations proposed by Galileo.

Fermat showed, from study of the experimental evidence,

that the pathway of refracted light was not determined by a principle of shortest distance, but, rather, of the quickest time. Fermat’s theorem was then developed by Christiaan Huyghens, Leibniz, and Jean Bernouilli. The leads supplied by these combined discoveries of Kepler and Fermat, pointed their followers into the development of the notion of a relativistic mathematical physics as provided by Riemann. The case of Fermat’s referenced discovery of quickest time, provides the simplest and best illustration of the principle of *Analysis Situs*.

Given a geometry, such as a Euclidean geometry. Use the geometry as the basis for a mathematics to be used in the practice of physical science. Now, state the results of Fermat’s experimental observations of both reflection and refraction of light in that geometry. Introduce to that geometry the assumed dimension of time, with the implicit assumption that light moves fastest across the shortest distance between two points. The result of the attempt to provide a Euclidean sort of mathematical juxtaposition of events adduced from an observation of motion along a quickest path, rather than shortest distance, is a paradox within a physics based upon the definitions, axioms, and postulates of a Euclidean geometry.

Fermat’s “quickest pathway” paradox, is comparable to the paradoxical results upon which Kepler was led to his discovery of universal gravitation. This latter paradox Kepler proved by his more meticulous study of the astronomical observations made variously by both Tycho Brahe and himself, that a mathematical physics designed to be consistent with a Euclidean geometry, or the method of Aristotle, was incurably wrong.

So it went, until Riemann’s revolutionary 1854 habilitation dissertation, when Riemann brought the process to a certain conclusion. Since Riemann, no definition, axiom, or postulate has any place in a geometry of physics, except as it is proven, experimentally, to be a universal physical principle.<sup>24</sup> That discovery by Riemann, is also crucial, as I shall show, for understanding the cure for the kind of pathological behavior commonly expressed in everyday decisions on policy in the U.S. today.

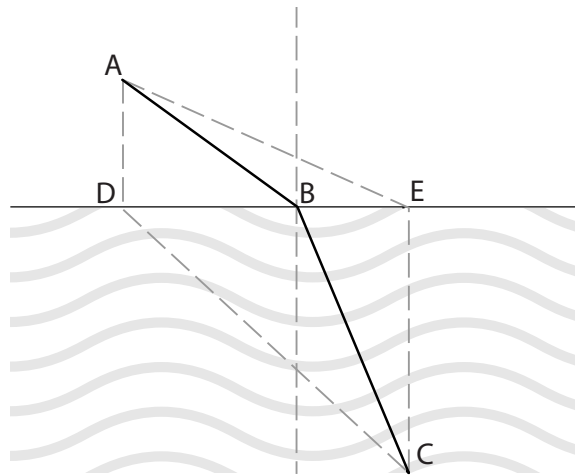
That said, now focus attention back on the question from which we started this section of the report: *If sense-perception does not show us the actual universe outside our skins, how could we possibly know what lies “out there”?*

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24. If one understands Riemann’s work, one recognizes that the foundation of what became known as a Riemannian manifold was already richly embedded in the preceding work of Gauss. The principal difficulty for the student of the history of mathematical physics, is that Kästner student Gauss already understood, as a youth, and also used the significance of an anti-Euclidean physical geometry throughout his later work. Gauss’s exchange of letters on this subject, as with both Janos and Farkas Bolyai, and also others, refers to both that youthful work, and also references the political reasons Gauss did not dare to reveal his discoveries to that effect during most of his adult life-time. One should never underestimate how much of Gauss there is in Riemann’s revolutionary discoveries. I will not cater to such an underestimation.

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23. Op. cit.



**Fermat's Principle of Least Time:** When a ray of light passes from air into water, the light ray is bent. In the illustration, AB is the light ray in air, BC, the new direction of the ray after it enters the water. When the ray passes from a less dense to a more dense medium, it always bends towards the normal (perpendicular) to the surface, but the angle depends upon the density of the medium it is entering.

In 1661, the French philosopher and mathematician Pierre de Fermat, proved that the light bends at such an angle that it always traverses the path from A to C in the least time. This is Fermat's celebrated Principle of Least Time, which he hypothesized to be a universal law of nature ("Nature always acts by the shortest course").

We have just answered that question, at least in first approximation. By applying Cusa's Platonic method of *docta ignorantia* to challenge the arbitrary assumptions associated with either sense-perception or sheer fantasy, as Kepler, Fermat, and their followers did, we may discover experimentally validated universal physical principles whose existence and characteristics are known in practice. Those proven principles were named by Plato *ideas*.

We know such ideas of universal principle, because we are able to demonstrate that we are able to increase mankind's practical power in and over the universe by means of applying such discoveries. Moreover, we are able to do this, as we can not accomplish such resulting increases in potential relative population-density in any other way.

There are five principles by means of which we can know the actual existence of a universe as being contrary to the naive images we associate with sense-perceptions.

1. Any assumed set of principles can be tested experimentally in ways which show that set to be essentially false in some part. Fermat's discovery of a principle of a pathway of quickest time is an example of such a proof.
2. Such an experimentally based, or functionally equivalent paradox, challenges the cognitive powers of the individual mind to invent a hypothetical uni-

versal principle, which, if proven, will either overturn the challenged principle, or will serve as an added principle not to be excluded from consideration in such cases.

3. The experimental, or functionally equivalent proof for the universal case, transforms the successful hypothesis into a universal physical principle. This is the case for what today's classroom customarily considers physical science; it is also the case for matters pertaining to relations among individual human minds, as typified by experimentally validated universal principles of Classical artistic composition.
4. In no case, can any proven universal principle be identified as an object of sense-perception.
5. Universal physical principles are ideas which govern the actual relations among the objects of sense-perception. Sense-perception pertains to the shadows, whereas the principles corresponding to valid hypotheses, are the unseen, experimentally demonstrated, efficient causes of the *existence of the behavior* among the shadows.

This gives us immediately, two very important results.

First, it shows us that sense-perception does not betray us, on the condition that we do not misinterpret the benefit it presents to us. However, we must never forget that the objects of sense-perception are merely the shadows of the reality we are experiencing. Second, that it is by using the principle of paradox, as illustrated by the method of *Analysis Situs*, we are able to craft a purely mental image of the causes which the patterns of behavior among those shadows merely reflect. We are then, thus enabled to act in ways which change the way in which those shadows behave. It is our success in bringing about willful changes in the behavior of those shadows, which is rightly known as Socratic truthfulness, or, in other words, science.

Microphysics is but one, relatively obvious example, of the willful changes in perceived behavior caused by efficient application of unseeable causes.

## Gravitation, For Example

Usually, today's citizen who is "walked through," step by step, even the first crucial phase of Kepler's discovery of the principle of universal gravitation, must find his, or her mind gripped by the sense that he, or she is experiencing the universe in a new way. In his 1605 *New Astronomy*, where the original discovery of the principle of universal gravitation was first reported in print, the citizen is shown that the orbit of a planet, such as Mars or Earth, can not be determined by projecting a future position of the planet as a statistical projection. It could not be predicted by the methods used by Copernicus, or Brahe, for example. Kepler asked himself, what is the *intention* which governs the regular orbit of the planet.

Consider only the simplest aspects of Kepler's discovery on that point. Beginning from study of the observation of the orbit of Mars, Kepler determined that the orbit described an ellipse, not a circle, and that the Sun was located at one of the two focal points of that ellipse. Then, by measuring the rate of change of the angle the planet moved in its orbit, Kepler determined that the planet swept out equal areas of its elliptical orbit in equal time.

Halt at that point, and consider what this series of observations says about the way people think about what they consider objects moving within their perception of the world around themselves. Consider the angular motion of the planet along its orbit. In this case, that means observing Mars, from a fixed point on a rotating Earth, an Earth which is orbiting the Sun, as is Mars.

At this point, the citizen should draw a map of the region of the Solar System including the Sun, Earth, and Mars. The citizen should think about both the orbiting and rotating motion of Earth and Mars, relative to the Sun. Forget the simplistic, textbook explanations. Then, crucial details of Kepler's method of work are forced to our attention.

Remember, that the evidence proving Kepler's system, in opposition to the methods of Ptolemy, Copernicus, and Brahe,

is evidence based upon the sense-perceptions of the successive positions of those Solar bodies. These are the shadows on the irregular surface of the wall of a dimly lit cave. Kepler's principle defines the observed change of position of the planet; the methods he rejects do not. Therefore, the method he uses is proven experimentally, while the method used by Ptolemy, Copernicus, Brahe, and Galileo is proven incompetent.

In other words, the difference between the Platonic method of Kepler and the Aristotelean method of Ptolemy, Copernicus, and Brahe, is that Kepler's method exposes the way in which changes in the sense-perceptual positions of the planets occur, whereas the Aristotelean and empiricist methods do not. The difference is, that the failed methods each and all rely upon the assumption that what is real is what is perceived; whereas, the scientific method, as typified by the discoveries of Kepler, defines the certainty of the unseen principles which cause the observable changes in the shadows called sense-perception. The practice of microphysics illustrates the point quite nicely.

How might we know something which we can not observe directly with the senses? How can we know a principle in an efficient way?

We define a paradox in the form of *Analysis Situs*, by applying what is assumed to be a universal mathematical physics (for example) to evidence which is valid in terms of that supposed universal system. In the case, that the deductive application of that system shows that a pair of pieces of evidence, each equally valid by the standards of experiment used for that system, produce statements which are mutually contradictory in the terms of that system. Fermat's case is typical.

Since the system applied assumes itself, implicitly, to be universally efficient in what is assumed to be the real universe, such a paradox is called an *ontological paradox*, a paradox in the conception of the nature of the elementary existence of universal substance. The solution to such a paradox must be either, the deletion of some false principle or principles of the system, the addition of one or more validated principles, or a combination of both corrections. Focus on the case in which a single correction of principle is required. How is that solution to the paradox to be discovered?

I have described that process in numerous earlier published locations.<sup>25</sup> Briefly, the discovery is generated within the sovereign cognitive processes of the mind of the individual discoverer. These processes are opaque to observers; they are processes which can not be observed as subjects of sense-perception.

However, the experience of such a discovery of principle

25. See, Lyndon H. LaRouche, Jr., "A Philosophy for Victory: Can We Change the Universe?" *EIR*, March 2, 2001; \_\_\_\_\_, "The Tragedy of U.S. Education: Shrunken Heads in America Today," *EIR*, April 20, 2001; and \_\_\_\_\_, "Faith, Hope, and Agapē!" *EIR*, June 1, 2001.

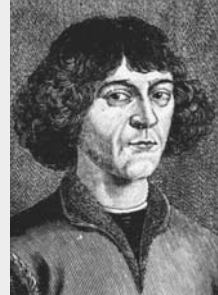
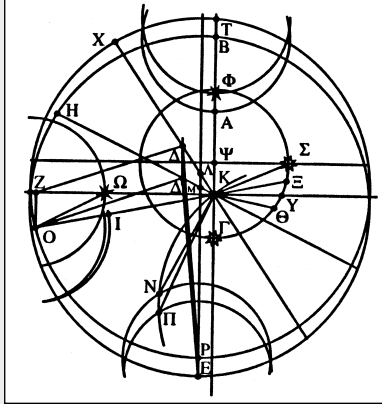
# The Keplerian Revolution

The difference between the Platonic method of Kepler and the Aristotelean method of Ptolemy, Copernicus, and Brahe, is that the failed methods rely upon the assumption that what is real is what is perceived; whereas Kepler's scientific method defines the certainty of the unseen principles which cause the observable changes in the shadows called sense-perception. Shown here are diagrams from Kepler's *New Astronomy*.



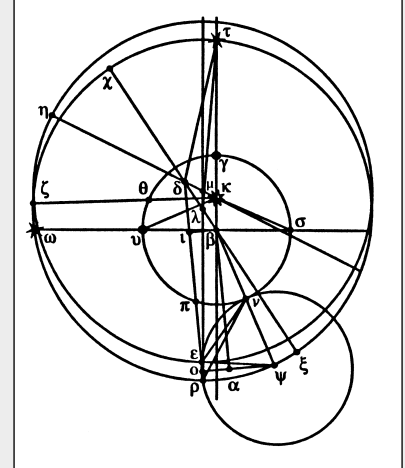
**Claudius Ptolemy**  
(2nd Century A.D.)

The diagram is Kepler's representation of Ptolemy's geocentric worldview. The Earth is at point K; the Greek letters show the paths of the apparent motion of the Sun and other heavenly bodies, travelling around in epicycles. These were purely geometrical constructs, required to "save the appearances"—or permit prediction of astronomical phenomena. Ptolemy made no claim to describe the physical reality which would make such bizarre movements possible.



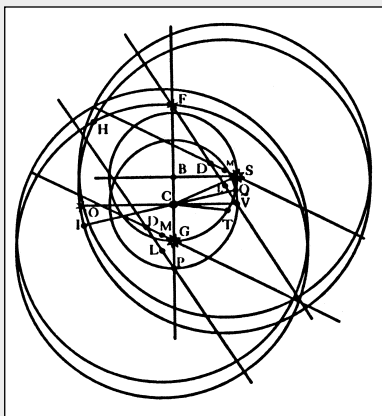
**Nicolaus Copernicus**  
(1473-1543)

His model of the cosmos moved the Sun to the center (at K), but still required a plethora of epicycles in order to "save the appearances," because it was not based upon understanding of the physical causes of the motion of the heavenly bodies.



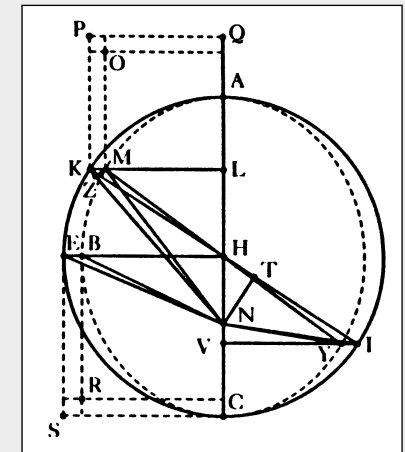
**Tycho Brahe**  
(1546-1601)

Tycho's construct was an attempt at a compromise between the Ptolemaic and Copernican models. The stationary Earth is at C. The Sun (S) revolves around the Earth, as do the "outer" planets (Mars, Jupiter, Saturn); the "inner" planets (Mercury, Venus) revolve around the Sun.



**Johannes Kepler**  
(1571-1630)

His *New Astronomy* shows how he developed what he calls "a method, using this physical—that is, authentic and perfectly true—hypothesis, of constructing the two parts of the equation and the authentic distances, the simultaneous construction of both of which was hitherto impossible. . . ." This diagram is one of many by which he charts his revolutionary discovery of the physical principles which result in the elliptical orbits of the planets.



in the mind of one person, can be re-enacted within the mind of another. By sharing the paradox which the proposed principle (called an *hypothesis*) solves, and the experimental demonstration of that principle, two minds can come into agreement

on the essential features of the act of discovery replicated in both minds.

As I have emphasized in earlier locations, just so do the sovereign cognitive processes in the mind of a student today

re-experience the same act of discovery which prompted Archimedes to shout “Eureka!” more than 2,200 years ago: all competent methods of education, are based upon that method of inducing re-enactments of validated original acts of discovery of universal principles. These are what are known as *Classical humanist methods of education*.

Study of Kepler’s writings, shows us today that that Classical humanist method of education, the method of *docta ignorantia*, was the basis for the practice of Kepler, as for Leibniz, and so on.

*If those methods of education had been used in U.S. public schools and higher education, during recent decades, and if those methods had supplied the standards for defining competence for responsible positions of influence in public and private occupations generally, the U.S.A. could never have drifted into the terrible mess it is in today.*

Today, competently educated people know, that the definitions, axioms, and postulates of a Euclidean geometry are false principles, disastrously so when they are applied to physical science. However, the special importance of those false principles, lies in the fact, that the Euclidean standpoint presumes itself to be a representation of our universe; therefore, every principle which is proven by refuting the falseness of a Euclidean assumption, represents a step forward by human reason, toward increased potential for human mastery of our universe, with the aim of indefinitely increasing potential relative population-density of the human species. It is a step of progress away from those pathological systems of belief which tend to ruin, or even destroy, nations and cultures. It is freeing one’s mind from life in a self-imposed goldfish bowl.

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## 2. Science and Society

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In the preceding section, we have considered the nature of those pathologies of belief and behavior associated with ideas about mathematical physics. We included emphasis upon the dangers risked in the use of Euclidean geometry as a model of universality, for controlling man’s intended actions upon the world around us. We identified a contrasted, healthy form of universal physical system of axiomatic assumptions (principles), as a multiply-connected manifold of a Riemannian type.

In this present section, we focus on the pathologies of a second quality of such a multiply-connected manifold. Our attention is now focussed upon the axiom-like assumptions about society, which underlie the way in which specific individuals and groups form those decisions which they attempt to impose on both society and the surrounding parts of the universe.

With the addition of this present section, we shall be able to explore directly those pathologies we associated with the image of the fish in a pond who imagines he is swimming in a goldfish bowl.

We must take individual belief into account; but, our emphasis here is upon economic, political, and other social behavior, of both nations and large groups within and among nations. Our emphasis is upon nations and groups whose net behavior (its so-called “cultural paradigm”) tends to conform to the axiomatic implications of some specific set of such assumptions. These are assumptions which define the behavior of one group as either specifically distinct from that of other groups, or approximately so.

I illustrate what I mean by such distinctions among specific types of social paradigms.

Typical are the qualitative differences in behavioral impulses between two large groups in the U.S.A. One is the tradition of a science-driven agro-industrial society organized in a way which at least approximates U.S. Treasury Secretary Alexander Hamilton’s description of the anti-British, American System of political-economy. The chief opponents of that American System within the U.S.A., opponents whom President Franklin Roosevelt identified as “the American Tories,” are those who, like both the Ku Klux Klanners and the notorious “Nashville Agrarians,”<sup>26</sup> share the pro-British tradition of the Confederacy.<sup>27</sup>

This legacy of two conflicting paradigms, is the underlying cultural issue of the conflict reflected in an attempted political coup against even the last remnants of the American System, by what is regarded as the “radical right” political base of President George W. Bush, Senator Trent Lott, and Attorney General John Ashcroft. This is the now widely recognized conflict which exploded into the public political arena, with Senator Jim Jeffords’ announcement of his break with the Republican Party of Mississippi’s Senator Trent Lott.

Think about that example of two essentially distinct differences in culture, as typified by the U.S. Civil War and its

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26. See Stanley Ezrol, “Elliott and the Nashville Agrarians: Warlocks of the Southern Strategy,” *EIR*, Jan. 1, 2001. The Nashville Agrarians, or Fugitives, were launched during 1928-1930 by a group of Vanderbilt University student “poets,” under the leadership of Rhodes Scholar John Crowe Ransom. Their manifesto, “I’ll Take My Stand,” proclaims their support for “a Southern way of life against what may be called the American or prevailing way. . . . Agrarian *versus* Industrial.” Among the founding members (also a Rhodes Scholar) was Harvard’s William Yandell Elliott, the mentor of Henry Kissinger. Despite their historical defense of the Ku Klux Klan, then and now, their manifesto is claimed as a founding document for both the Gingrichite “Conservative Revolutionaries” and the “leftist” environmentalists and Wellsian one-worldists. Today, they exist as the Southern League, which publishes the *Southern Partisan*.

27. My use of “British” here, signifies two characteristics of the English monarchy under William of Orange, and the British monarchy since the accession of Hannover’s Georg Ludwig (a.k.a. “George Louis”), to the present date. The narrower significance is the British system of political-economy, as that was derived from the empiricist liberalism associated with such as Locke, Mandeville, Hume, and Bentham. Politically, it references the British monarchy’s function as the virtual “hereditary Doge” of a ruling financier-oligarchy which is modelled upon the period of Venice’s power as the ruling imperial maritime power of Europe.

legacies. Use your knowledge of both of those clinical, social types, then and now, to identify axiomatic qualities of belief which you are able to recognize as underlying the most typical differences in behavior between these two types.<sup>28</sup> Use that case as a model of reference, for my treatment of the subject of cultures, or sub-cultures, which we must regard as mutually exclusive types, when we apply the same standard of species-distinction among axiomatically different geometries.<sup>29</sup>

That said, I begin with a crucial topic, one with which some of you may be familiar from my earlier published works, but others will be meeting this principle of scientific method for the first time.

## You and Society and the Universe

As I shall illustrate that point within the following pages, the most important concept in all science, is *the principle underlying the notion of the perfect sovereignty of the cognitive processes of the individual human mind*. As I have already emphasized, in the preceding section, those are: *cognitive processes by which an individual mind discovers a principle which solves an ontological paradox, a noëtic process which can not be observed in action by the senses of any other person*. That is what I identified, in the preceding section, as the principle of Classical humanist education. One individual's act of discovery can be known by another person, *but only* if the second person undergoes his, or her own, sovereign individual act, of re-enacting the discovery and its experimental validation.

This principle of sovereignty has still deeper underlying implications, implications which, if understood, define the method for solving the kinds of mass pathology which have been pushing the U.S. to the present brink of ruin, over the course of the recent thirty-odd years. To situate those deeper implications, we must return attention, for a moment, to the subject of physical economy.

If we accept a rational meaning for the word "economy," that word implies the development of methods by means of which we increase the potential relative population-density of a society, or of humanity as a whole. By "rational meaning for the word 'economy,'" we signify a notion of a lawful function, as determined by some multiply-connected set of universal principles. Then, we are speaking of a form of organized physical action, by means of which the individual acts to express mankind's increased power to exist, *in and over the universe*, as measured per capita and per-square kilometer of relevant surface-area. These functionally defined forms of

organized physical action, are bundles of interacting universal physical principles, combinations of principles also expressed as the technologies which those discovered principles subsume. All increments in the power of the human species to exist, depend upon the socially determined result of the discovery and application of such principles and their subsumed technologies.

In that degree, those actions express the sovereign cognitive development of the individual person. However, the paradox is: society is not a collection of individuals; the individual is a product of a process which is called society. From the standpoint of what is customarily called physical science and technology, it is the transmission, to the present, of the discoveries which were made as far distant as millennia or even longer in the past, which produces the developed individual intellect in the student and others today. The ability of *society as such* to use a discovered principle effectively, depends upon the re-enactment of that discovery in the minds of others, even very many others. That is the social process within which the existence of the individual is defined.

Hence, the decisive role of a universal Classical humanist mode of education, in fostering the physical-economic productivity of the labor-force as a whole. The content of the transmission of those ideas rightly defined as universal physical principles, depends upon the faculty of cognition in both the person who prompts the discovery of a principle in the mind of the other, and the function of those sovereign cognitive processes on which the other depends for his, or her ability to re-enact that discovery. Without that medium of transmission of discoveries of universal physical principle, the medium of cognitive creation, neither the discovery, nor its actual transmission were possible.

Thus, in that way, the perfect sovereignty of the individual personality persists, but efficient communication of cognitive thought occurs as a functionally efficient coupling without breaching that sovereignty. The larger process expressed by such modes of cognitive communication, is the foundation of the social process upon which civilized forms of cultures and societies depend.

This is a uniquely human quality of function. Excepting the human species, no living species has the power of cognition expressed by the original discovery of an experimentally proven-to-be universal physical principle. No other species has the power to discover and transmit a universal physical principle; no other species has the ability to increase its species' potential relative population-density by an act of individual free will. Man is, as *Genesis* 1 insists, a very special creature.

There is nothing magical about the power of the individual mind to generate valid discoveries of universal physical principles. For example, the collection of the dialogues of Plato, if acted as Classical actors would act a play, is a complete course of the comprehensive, preliminary training of the adolescent and adult mind, both to think cognitively, and to trans-

28. For just one example, contrast the Christian, who believes that God made "man and woman equally in His own image," to the typically racist cases among the Bible-Belters, such as President George W. Bush's Attorney General John Ashcroft, who plainly rejects that principle.

29. The strict definition of such classes of behavior, culture, or society, is approached from the standpoint of Leibniz's notion of a higher calculus, incorporating the principles of *Analysis Situs*, which he named a *monadology*.



mit such valid discoveries of principle to others.<sup>30</sup> This is the most natural method imaginable; it is the natural expression of *human nature*, both perfectly sovereign individual human nature, and the nature of humanity as an historical, social process. This principle of cognition, in and of itself, sets man, as a species, apart from, and above all other species. This cognitive link, not only among contemporary persons, but of the present to both the future and the past, defines the only meaningful use of the term “history,” the only competent method for study of history, and the only competent basis for defining those universal principles of historical method which should govern all aspects of statecraft.

From the study of the human social process in this way, we are confronted with certain principles, which are *universal principles* in the same sense as those we associate with a universalized mathematical physics. This second set of principles, is the topic emphasized in the present section of this report. However, this emphasis is made without generating any functional separation between such principles of historically situated cognitive processes, and the multiply-connected manifold of universal principles we associate with the physical universe in which we exist, and upon which we act.

It is from this standpoint, that we must judge societies and cultures, as such, as either sane, or not.

## Principles of History

As I shall now show you, it is important to recognize the three crucial features of the moral superiority of Plato’s dialogues over the Classical tragedies. Once the reader has recognized those dialogues as a form of Classical drama, my argument on this point becomes clear.

The first two of the three words which identify this absolute quality of moral superiority of those dialogues, are, in English, *the sublime*, and, in the *New Testament* Greek, as also in Plato’s dialogue, *agapē*. *The sublime* and *agapē* are congruent conceptions, but have slightly different forms of application; they are distinctly different facets of one and the same gem. Plato uses the term *agapē* to signify a quality of justice, which he contrasts, through the mouth of Socrates, to the opposing principles of the characters Thrasymachus and

Glaucon.<sup>31</sup> This Socratic principle of justice, called *agapē*, is inseparable from the principle identified by a third word, *truthfulness*, the notion of the existence of *cognitively discoverable truth*. Such a notion of *agapic* truthfulness, defines an absolutely higher authority than any government, than any court, than any tradition, than absolutely anyone’s mere opinion. It is the basis for what is rightly called *natural law*.

It is important, for understanding how to overcome the pathologies of U.S. popular behavior today, to see the equivalence of this notion of *agapē* to the notion of the sublime, and the coherence of both with the principle of the obligation of us all, to be governed by a cognitively knowable standard of truthfulness. This use of “cognitively knowable truthfulness,” ought to be recognized as nothing other than the only proper definition of “reason.”

The simplest way to explain this most crucial point of statecraft, is to identify the nature of Plato’s view of the moral failures of the Classical tragedians who preceded him.

All great Classical tragedies, including those of Shakespeare and Friedrich Schiller, are focussed upon the same problem which I identified by reference to the goldfish-bowl syndrome in the U.S.A. today. In the typical Classical tragedy of the tradition of Sophocles and Aeschylus, there is a potentially fatal, self-inflicted flaw in the culture, the flaw which is the subject of the drama. This flaw is represented by a leading figure, or figures, figures in the position of authority to make the changes in policy by which the tragedy is averted, but who, because the figure, or group of those figures, shares the fatal cultural flaw of the nation, he, or she fails to take the possible action by means of which the national disaster could have been averted.

Do not be deceived by foolish commentators on such plays, by moralizing critics and others who, through ignorance or malice, trivialize great artistic works, by demanding that you focus upon some alleged symbolic meaning, or the alleged “character flaw” of the leading character of a drama.<sup>32</sup>

31. I.e., *The Republic*

32. Put to one side those fools, who, in the tradition of Francis Bacon’s Thomas Hobbes, regard punning, falsely, as “the lowest form of humor.” Recognize that the use of the term “symbol-mindedness,” as applied to such critics, or theologians, and their admirers, is exemplary of the highest of all artistic principles, the same principle of metaphor which appears in the guise of a cognitive discovery of a valid universal principle in physical science. The same use of metaphor, as opposed to the use of symbolism, is the principle of Shakespeare’s compositions, which separates Classical poetry, such as that of Keats, Shelley, Goethe, Schiller, and Heine, from Romanticism. Puns, and related forms of irony, meet the standard otherwise set by *Analysis Situs* in physical scientific discovery. A good pun, like any form of strictly Classical artistic composition or scientific discovery, is a necessary way of straining the customary use of language, as a way of forcing the mind to recognize that a strictly customary use of language prevents one from communicating the most important classes of ideas, genuine discoveries. Of course, a pun which fails to meet the Classical standard of irony or metaphor, including the standard of Classical satire such as that of Rabelais or Cervantes, would be a frivolous exercise. The aspect of the good pun which offends the intellectually constipated pedant, is its obvious quality of playfulness, as Schiller

30. It is usually bad practice to suggest that Plato’s dialogues are intended for the silent reading of an individual. If the individual does not know the method in advance, he will almost certainly make a terrible mess of his efforts to follow the text. Most of the heralded English-language academic’s commentaries on Plato are worse than rubbish on this account, and the school of E. Cassirer as well. Like a great Classical drama, Plato’s dialogues are not to be “interpreted”; they are to be experienced. The experience of some of my associates has shown them, that this is more likely to be accomplished if a dedicated group of persons, advised by one with some expertise in the Greek, acts out the dialogues as they are plainly written: as Classical drama. As each actor works to represent the role he is playing, the tension of the dialogue is sensed in the conflict being acted out among the actors. In short, a Plato dialogue should be recognized as the actors re-enacting the discovery of principle which resolves the paradox presented.





*"All Classical tragedy deserving of the name of art, is historically specific. The drama is situated truthfully either within a real-life time and place in history, or in relative historical specificity of some legend, such as the Homeric epics." Left: A scene from Schiller's Don Carlos. Right: The blinded Earl of Gloucester and Edgar, in Shakespeare's King Lear.*



All Classical tragedy deserving of the name of art, is *historically specific*. The drama is situated truthfully either within a real-life time and place in history, or in relative historical specificity of some legend, such as the Homeric epics. The flaw which defines the tragedy, is historically specific, and can not be attributed to times and places other than that. The characteristics of the leading characters of a Classical tragedy are specific to that setting; therefore, they can not be freely transported to different historical settings.

The foolish commentators attempt to project an essentially symbolic significance to the characteristics they claim to recognize in the relevant characters of the play. In respect to Classical drama, they would mislead you into overlooking the fact, that the essential flaw is that of the culture, in which that character is in a leading position to avert the plunge into national disaster, but fails to do so. He fails because he, or she capitulates to the influence of the historical specificity of the tragic culture in which he is situated. Just so, has the putative leadership of the U.S.A. failed, during the specific interval of the recent thirty-five-odd years.

Thus, in Schiller's *Don Carlos*, all of the characters but the French-born queen are terribly flawed, and represent the same moral decadence of that Sixteenth-Century, *post-*

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defines his view of *Spieltrieb*. That quality of effervescent, cognitive expressions of playfulness, is a quality which ("Eureka!") distinguishes the creative personality, including all competent scientific discoverers, from the pedant and drudge. It is so-called "symbolic meanings" and "symbolic argument," which are the hoaxes from which a really good pun may often rescue us.

*Isabella I* Spain of the Inquisition, which Miguel Cervantes addresses by his use of the fictional figures of Don Quixote (the Spanish Hapsburg monarchy of the Carlist tradition) and Sancho Panza (a people corrupted into virtual stupidity by their hedonistic impulses). In *Don Carlos*, the queen serves as a figure, situated such that she, although queen, lacks the official authority to compel a change in the other principal characters, but who sees the tragedy. The assessment of Spain in that play conforms to the actual period of history to which the drama refers, just as Cervantes' *Don Quixote* addresses the same tragic quality of that nation during that same specific period of its history addressed by Schiller.

The same is true in Shakespeare's *Hamlet*. It is not some eccentric personal character flaw of Hamlet which is tragic; Hamlet's "flaw" is that he is typical of the whole pack of ruling institutions and circles of that kingdom. The character flaw is that of the kingdom, as the contrasted declarations of the characters Fortinbras and Horatio point toward the persistence of a folly, which continues to live in that condition of the Danish nation after the death of Hamlet removes him from the situation. The same folly which had taken over the nation prior to the opening scene of the play, continues to prevail after Hamlet's role has ended. That nation's problem is not Hamlet; Hamlet's problem is that he reflects the character of that nation, in that implied historically specific time and place.

Sometimes, the apparent exception proves the rule. Under pressure from the censor, Giuseppe Verdi transports the actual historical setting of one of his plays, *Un Ballo in Maschera*, from the drama's historically actual location, Sweden, to

Massachusetts. The censor's intervention thus weakens the resulting alteration of the opera. Despite that drawback, the authority of the opera as a Classical tragedy, lies in its historical specificity governing the composer's intention in crafting that composition, and is preserved in that fashion.<sup>33</sup>

Up to a point, learning from such Classical tragedy, and other valid expressions of Classical artistic composition, continues to be an integral part of the qualifications for the practice of statecraft, or writing of accounts of history. The tragedies of Sophocles and Aeschylus, for example, are indispensable requirements for the practice of law and other crucial elements of statecraft today; but, as it is said, "they left room for improvement." Plato, and Friedrich Schiller later, focussed attention upon the needed improvement.

Contrast such tragedy by Sophocles, Aeschylus, et al., with Schiller's notion of the *sublime*, as expressed in both real history and drama, alike, in that case of *Joan of Arc* which I have treated in an earlier location.

Joan is no tragic figure; exactly the contrary. In real life, and in Schiller's drama, she is a girl inspired to save the nation and people of France from Plantagenet (Anjou) predators,<sup>34</sup> by persuading her foolish king to become a real king. For that, in real life, as in the play, she is butchered by the corrupt Inquisition; but, she changes history, both by her effect on the processes leading into the mid-Fifteenth-Century Council of Florence, and making possible the establishment of the first sovereign nation-state, Louis XI's France, based on the principle of the general welfare. She gave her life to achieve a noble purpose for mankind; she was no tragic figure. She spent her life in a way which achieved a great fulfillment of her having lived. That is *sublime*.

We should not wish to be burned alive by the Inquisition, as she was, nor devoured by lions in Nero's arena, nor crucified for Christ's sake. Yet, that aside, it were the true purpose of any mortal human life, that it be lived as *sublime*, as Joan's was. We are going to die anyway; therefore, wisdom lies in choosing the way one spends the talent given to you, your mortal life. Choose the mission which is your part to play, for the benefit your living might contribute to your nation, and for historical humanity as a whole. *Be as you were an angel*. That is the sublime definition of the good individual person, and of the good nation. That is the quality of *agapē*.

In the drama which supersedes the tragic principle by the

sublime, the gripping tension of the well-performed Classical tragedy, is continued, and, as in the case of Joan, the crucial figure may suffer a brutal end. The difference is, that, as in Joan's case, in her actually heroic life, and in that same heroine's life and actions on stage, are not a waste.

Yet, as Schiller demonstrates this case, what may be called the mechanism of the composition of all great Classical tragedy, is retained. The situation presented has many of the same features; there is the threat of a tragic outcome. However, this time, the central figure does not fail to offset the tragic outcome, but is willing and able to accomplish this at whatever price the hero must pay to bring about this *sublime* result.

See the contrast between the Classical tragedies of Greece and Plato's dialogues, in that light.

Express that same principle, of the distinction between the merely tragic and the sublime, in another way. This time, I strike closer to home. Consider the following question: *Why is what is called morality, especially thunderously Bible-belt-ing morality, often the enemy of the good?*

If it is moral, not to kill, nor steal, nor lie, for example, does seemingly perfect observation of those rules, that repertoire of "single issues," make one good? Take the case of a publicly avowed admirer of the racist legacy of the Confederacy, such as Attorney General John Ashcroft; accept, provisionally, the claim of his supporters, that he does not intend to violate the Ten Commandments, *even when he kills*. Overlook, if only for a moment, his repeated lying sophistries. Is he to be assessed as "a good man," simply because his duped admirers consider him as wielding "a banner of Christian morality"? Absolutely not! Anyone who does not serve the principle, that all men and women are made equally in the image of the Creator, is no Christian! When you defame the image of man, as all racists do, you defame the image of God. "Hypocrite" were too gentle an epithet, in Ashcroft's case.

It is necessary to guide children, so that they do not step off cliffs, or into the front of oncoming automobiles, and so on. It is necessary to advise young persons similarly, for their own good, during that perilous journey near the outskirts of insanity, called adolescence. If it is also necessary to house-break and train pet cats and dogs, that should not be used as a pretext for degrading morality to the form of do's and don't's for household pets, or for persons whom you attempt to degrade to the status of trained human cattle. Put to one side, for a moment, the fact that Ashcroft is not exactly housebroken, even by four-footed standards for morality; were he less a hypocrite, that would still not qualify him as "a good person."

*The problem is, that he is not a person of good intentions.* Obeying a set of rules, or merely seeming to adhere to such rules, does not define a good person. All the single-issue prescriptions which might be imagined, provide no test of goodness. *As it was said of Adolf Hitler, Satan never lowers himself to commit little sins; he saves his energy for the really big ones.* He leaves the practice of lesser sins to little people.

Take, for example, the bi-polar, strictly church-going

33. Admittedly, of course, it were better had the identity of the original historical intention been allowed by the censor. Nonetheless, since the real-life assassination and its international implications were widely known in Verdi's time, the historical specificity of the pre-censored version, may have placated the censor, but did not deceive him.

34. Like Shakespeare's history, from Henry II through Richard III, the period from the Second Crusade, through the Fourth Crusade, and through the overthrow of Richard III, was a period in which the leading imperial maritime power of that interval, Venice's financier oligarchy, used the Plantagenet house, the House of Anjou notably, as its leading partner in crimes against the entirety of European civilization.

Bible-belter, who belts his wife and children religiously, at whim, on Saturday night, and then weeps over the bruises and broken bones he has successfully inflicted, even while he pontificates, "I'm sorry, but you made me do it." On Sunday, we find his sanctimonious self sitting upright, posing as a paragon of smug rectitude, in church.

Contrary to the enormous number of such and comparable cases, the fact remains, that man is naturally good. That spark of goodness is already in the newborn child, but it awaits development through infancy, childhood, and adolescence, into what should become true adulthood, approximately a quarter-century later. How could man fail, as he usually does, somewhere along the road between birth and biological maturity? Or, to restate that question, why does the individual fail, so awfully often, to reach the moral maturity which was his or her potential at birth?

Virtually all of us have come to understand, somewhere along the way between infancy and adulthood, that, as each of us is born, each of us will die, and that rather sooner than later. This fact should prompt any reasonably sane and intelligent individual to ask himself, "*What, then, will have been the meaning of my having lived?*"

In a famous fable, a monk asks a youthful woman to look into a mirror, and think of her aging and mortality. She accepts the monk's observation, and makes her decision accordingly, seeking pleasures while she might. The existentialist sees himself as Hannah Arendt's friend, the Nazi philosopher Martin Heidegger, did, as the individual "thrown into life in society," into a realm in which that individual not merely denies, but defies the existence of truth. The notion that life in society has some social purpose, some mission, is denied. Or, like the woman of the fable, she seeks a substitute for immortality in sensual diversions which die like Autumn leaves.

Heidegger, like his beloved Friedrich Nietzsche, and like his follower Jean-Paul Sartre, typify immorality in the extreme. Yet, it is the ugly reality of today's U.S. life, for example, that the individual who is asked to identify his or her self-interest, has tended, more and more over the recent decades, to locate self-interest in terms of "immediate self-interest" within a world ruled by pleasure and pain. In other words, such unfortunate people seek reality within the shadow-world of sense-perception, and they themselves thus come and go as shadows do. They seek in shadows, an identity which has no substance, and, so, if they succeed in that attempt, when they have passed, they leave nothing of real moral substance behind.

At the best, most of our citizens of earlier generations, defined their interest in the future prospects for their children and grandchildren, and defined their reciprocal relations to their own parents' and those of their parents' generation, accordingly. Willingness to put one's life at risk, whether in war, for the sake of the future, or simply to act for the good when that challenge is set before you, typify those symptoms of goodness many of my generation had come to expect of

one another. Yet, that is not enough to make a society, or a religious body a moral one.

Try to answer my question from the standpoint of what I have described as the implications of the Classical humanist method in education. If we are decently educated and experienced, who are we, really? If our relation to the past is defined in terms of our re-enacting the original discoveries of principle, by persons from earlier generations, even millennia earlier, we know that we embody that re-enacted experience from their lives within ourselves. If the re-experiencing of such creative moments in science and Classical artistic composition, is the core of our educational development, then our intimate relationship with the sovereign cognitive processes of persons long deceased, defines our moral sense of conscience.

So, a child thinks of a departed grandparent looking down upon, smiling, from somewhere beyond. That is a simple expression of the essence of goodness. It is a sense of the sublime, a sense that the quality of the sublime is the essence of true beauty in art, and in life.

Thus, on the basis of the points which I have just developed here, there are two leading clues to the stubbornness with which the goldfish-bowl syndrome persists in, for example, the U.S. population today. First, the individual's lack of the benefits of a Classical humanist policy in education. Secondly, the specific effects of social pressures associated with the dominant role of an anti-cognitive world-outlook in the institutions which have the relatively greatest impact on the daily social experiences of the individual. We shall examine these factors and their implications for the U.S. population of my lifetime.

## The Cognitive Identity

As Jesus Christ establishes what theologians call a New Dispensation for all mankind, obedience to easily understood rules, might prevent bad incidents from occurring, but adherence to such rules will never qualify a person as good. Goodness lies in a higher place, within the realm of the sovereign quality of the human individual's cognitive potential. Goodness is not a quality of isolated actions, or mere patterns of such actions. As *I Corinthians* 13 defines goodness, it is expressed as the quality of *agapē*. It is expressed, so, as an efficient form of *intention*, as Kepler employs the notion of *intention* in his *New Astronomy*.

An efficient good intention, is a commitment to actions which are both *agapic* in impulse, and which are aimed toward the sublime. How do we make that notion concrete for the practice of and among nations?

If it is immoral to suggest that positive law, or equivalent prescriptions, might be apotheosized as a standard of goodness, how must a nation define the standard by which its actions, and its character, may be good, or not? On what authority, do we have the right to say that the Presidencies of Polk, Pierce, Buchanan, Cleveland, Theodore Roosevelt,



*President Franklin D. Roosevelt's coffin, in a procession through Washington, D.C., April 14, 1945. Right: Mourners bid farewell to the beloved President. Roosevelt's death "suddenly took away the guidon planted upon the hill, around which so many had rallied to the mighty effort of the Roosevelt Presidency's years."*

Wilson, Coolidge, Nixon, Carter, and the "Emperor" Bush I, were morally bad, as they were in fact, and those of such as Monroe, Quincy Adams, Lincoln, and Roosevelt were more or less good? How shall we express the notion of goodness as an efficient form of intention, as the basis for defining the kinds of pathologies expressed by the goldfish-bowl syndrome?

Weighing a few examples will help to clarify that question.

It is good, to intend that one's living shall be a blessing to one's grandchildren, to the community, to the nation, and to the betterment of the world in which we live. However, putting to one side momentous acts of heroism, the highest choice of profession is that of a philosopher-scientist such as Plato, to be one of the Apostles of Christ, a prolific master of Classical artistic composition, such as Johann Sebastian Bach, or a prolific universal scientific mind, such as Kepler, Leibniz, Gauss, and Riemann.

Next to such great artists and scientists, are those great teachers and physicians, either famous or relatively obscure, who, day by day, brought young minds to re-enact the discovery of many of the most precious principles of scientific and artistic composition, or, as physicians, maintained the continuity of the development and practice of care for the health of the people. Whether famous, or little known, each of these figures is a world-historical personality in fact.

Each of these are implicitly world-historical personalities, because of, first of all, the subject-matter of their professional intention is universal. Since it is a profession rooted in the transmission of knowledge of principles, deep into the past, and far into the future, it is historical as well as universal.

By virtue of their profession, all such persons reach toward the sublime. Such world-historical personalities have thus achieved a somewhat greater or lesser degree of efficient personal, cognitive sovereignty.

From such examples, we should recognize the manner in which the quality of goodness is typically expressed within society.

The true self-interest of each persons, is his or her personal identity, as that is located primarily in the cognitive process of history as a whole. Consider that true self-interest against the contrasting relative moral decay I have witnessed among members of my own, World War II generation.

President Franklin Roosevelt had lifted a nation up out of the decadent pessimism of the Coolidge legacy. His death suddenly took away the guidon planted upon the hill, around which so many had rallied to the mighty effort of the Roosevelt Presidency's years. The shock which struck most returning veterans, can be compared to the demoralizing effects, in the history of modern Germany, of the successive experiences of the 1789-1794 Jacobin Terror, Bonaparte's emergence as the model for all fascist governments after his imperial rule, the Congress of Vienna, and the Metternichean Carlsbad Decrees.

In my own experience, the most typical expression of moral decadence erupting among returning young veterans, showed itself in the way in which U.S. mass higher education proceeded during the post-war decades. Most among these fellows were in such a hurry to get their sheepskin, that they rarely stopped to actually think. Granted, the universities were bad and becoming worse on this account, but, generally, the majority among the students were no better, or were even

much more corrupted.

For example, consider the case of the place of Kepler in the curriculum of our leading universities during the 1946-2001 interval. The evidence of Kepler's discovery of universal gravitation, among many other things, is, objectively, one of the best-documented facts in the record of scientific discovery, especially when re-examined from the standpoint of the related work of Carl Gauss.

Anyone who had not swallowed a textbook, but had actually investigated the mass of factual evidence showing how the discovery of a principle of universal gravitation actually occurred, or, similarly, investigated the ample evidence detailing how Leibniz originated the existence of the calculus in response to Kepler's discovery, would not defend the Isaac Newton myth against the reality of the work of a Kepler or Leibniz.

Among the majority of those students, while as students and later, they, instead of knowing what they were talking about, became parroters of that Newton myth, which they had swallowed whole, as a condition for passing the course. They parroted the formulas in a way which, in fact, increased my appreciation of mynah birds, while smiling smugly to one another in mutual admiration of their common folly. They would be very proud of themselves for having done such things as that. I know; I was part of that generation.

Such students may have acquired certain useful kinds of professional competencies, but, they, of course, knew virtually nothing of that portion of their education which they had merely learned. What they had merely learned, occupied more and more of their claims to knowledge, as the decay of our educational institutions has continued over the decades to date, all the way down. Chiefly, in their education, they had failed to re-enact the relevant original act of discovery. They had not experienced the essential elements of the cognitive history of science.

Then, after slightly more than a decade of the post-war years had passed, came "programmed learning," "the new math," and, in the course of time, "looking it up on the Internet." Amidst this, the teacher's function was subverted by the Orwellian social worker who controls more and more of the schools' functions, and the students' minds, today.<sup>35</sup> *How could there be meaningful education, when the schools and their pupils are regimented by such controllers, all done according to the pro-satanic dogma of Theodor Adorno and Hannah Arendt, the dogma, that there is no truth, but only opinion?*

There was a nasty complement within the sort of behavior I observed among members of my own generation. This involved my encounters among the ranks of engineering stu-

dents. These offenders, more or less a majority, despised "liberal arts." Granted, much of the university liberal arts instruction was bad in its own way; sometimes, it was even worse than the effect of the drill-and-grill methods used by the all-too-typical engineering faculty. The typical engineering student's expressed opinions concerning political-economy, for example, were about as intellectual as a Ku Klux Klan rally. Speak of a bowl of pottage? Many of such ambitious engineering graduates would have sold their soul for a piece of sheepskin.

To estimate how scientific such engineering students were, take the case of a typical reaction to the teaching of economics. Most university graduates were taught to believe, as Karl Marx was, that modern economy first appeared under the British monarchy, and that Bernard Mandeville and the British East India Company's Haileybury School of Adam Smith, Jeremy Bentham, Thomas Malthus, David Ricardo, et al., were the founders of political-economy.

In fact, any responsible study of available sources, would have shown any honest student, that modern economy was born in Fifteenth-Century Italy, whence it was established in Louis XI's France, and then copied in England under Henry VII.<sup>36</sup> It was developed as the mercantile school of the Sixteenth and Seventeenth centuries; but the beginning of a scientific notion of political economy, was discovered and developed by Leibniz, during the interval 1671-1716. The industrial revolution was brought to England itself by the visiting Benjamin Franklin, who sent Watt to France to develop a new model of the steam-engine under the advice of Lavoisier. In the young United States, the productivity and income of the average farmer and worker was approximately twice that in the British Isles under George III.

Even more embarrassing for those among the engineering students duped into admiring the British empiricists, is the fact, that the most successful design of modern economy ever developed, was what U.S. Treasury Secretary Alexander Hamilton defined as "The American System of political-economy," an elaboration of economic principles best represented otherwise by the two leading economists of the world during the Nineteenth Century, Friedrich List and Henry C. Carey. Did it not occur to these ostensibly science-oriented engineering students, that the U.S. wars against Britain in 1776-1783 and 1812-1815, were a defense of the superior economic policy of the U.S.A. against the drug-pushing and other predatory practices of the ever-morally-decadent British system?

Since those students were taught nonsense, bread-and-

35. The dispensing of Ritalin and similar druggings of pupils, are to be assessed as fulfilling the methods of social control, aided by drugging and other stupefying measures, to be remembered from Aldous Huxley's utopian *Brave New World* (New York: Harper and Row, 1989).

36. This revolution unfolded within the troubled framework of Sixteenth-Century England. Sir Thomas More and William Shakespeare typify the great impact which the Italy-centered Fifteenth-Century Renaissance made upon the transformation of England from a brutish to a highly civilized nation during the course of that century. All that is good in English-language culture today, flows chiefly from that impact of the Renaissance upon pre-James I England.

butter motives prompted most of them to believe steadfastly in the nonsense they had been taught. Later generations of students were, as a whole, much worse than those of the World War II veterans. The decadence expressed in the design and relative unreliability of products manufactured under the influence of the cult of “benchmarking,” illustrates the outcome to which that corruption within my generation has led during the recent decade.

Take the related case, of the introduction of the so-called “new math,” which was being popularized during the late 1950s and early 1960s. There could have been no possible outcome of this but significant, virtual brain-damage of two generations of secondary and university students.

Since the beginning of the Nineteenth Century, Carl Gauss’s *Disquisitiones Arithmeticae*,<sup>37</sup> inspired by his teacher, the great founder of anti-Euclidean geometry, Abraham Kästner,<sup>38</sup> had been the standard for competent mathematics instruction. This masterpiece should be the recognized standard, even today, for basic secondary and higher education in mathematics. The result of replacing that standard with “the new math” program, should have reminded any literate professional of Jonathan Swift’s famous description of education as practiced on the allegorical floating island of Laputa.<sup>39</sup>

In all sorts of academic specialties, much of what was being peddled was, with increasing frequency, not only rubbish, but transparently so. No intelligent student would swallow such stuff, had he or she not been in such a terrible hurry to pass the courses, that there was no time to consider the possibility that what was being taught was a hoax, often of the ideologically motivated variety.

The introduction of the “new math” was not a mistake; the implications of the inherent incompetence of that system were already very well established, and widely known.<sup>40</sup> The relevant literature leaves no margin to doubt, that this was a deliberate act of mass-brainwashing of what is now two generations, designed to cripple the potential of students for competent thinking about such matters as physical science, and economics. It was the calculated ruse of the circles of the radical positivists Ernst Mach and Bertrand Russell.

The result has been, that most among the generations drilled in that “new math” approach introduced during the

late 1950s, have not only been crippled in their capacity for scientific thinking, but many of those popular policies which have led the U.S. economy down the road to self-destruction, since the mid-1960s, have found a growing basis for acceptance of such destructive policies, in the accumulated effects of “new math” indoctrination upon generations passing through schools and universities during the recent forty-odd years. The proliferation of pseudo-scientific fads in not only statistical argument today, but also in enacted statutes and international treaty-agreements, typify the natural product of this pathology.

Notably, as more and more of the top positions in public and private institutions have been taken over by persons born after the nuclear bombing of Hiroshima, the effects of the spread of radical-positivist trends in education, have produced a crisis of national leadership. Most of the persons of those generations, leading the public and private sectors today, have virtually no comprehension of how successful economies of the pre-1966 period actually worked. The current crop of corporate industrial and bank management, is a disaster. The role of the “new math” has been only a leading part of that loss of ability to think effectively about economic policies, but an extremely important part. Once again, the cult of “benchmarking,” is to be recognized as a reflection of the factor of scientific-technological imbecility already embedded axiomatically in the “new math” and “programmed learning” curricula of the late 1950s and 1960s.

This is typical, with rare exceptions, of the trend in higher education which most of those returning veterans, and others, experienced in universities during the immediate post-war decades.

Go back to the late 1940s and 1950s, as if to ask them, then: “What are you doing with your life?”

The answer would often be to the effect: “I am going to be a success, move into the suburbs, have nice children, a fast car, a pretty wife, and leave guys like you way behind.” In the end, there were many personal tragedies, beginning the mass layoffs unleashed during the 1957-1958 recession, when pink-slipped executives who had had \$40,000-level salaries,<sup>41</sup> were trying to peddle their resumés to employers who were not buying at the time.

Some of those university-educated veterans did some good work, despite all that. A few did excellent work, although not without flaws they should not have incurred. People are naturally born good, and some of that can be brought out in them under the right conditions. Nonetheless, from the standpoint of the direction of relative motion, that is the way it was.

All of these and related problems attributable to most of those returning veterans and their families over the recent fifty-odd years, must take into account a crucial extenuating

37. Carl Gauss, “Disquisitiones Arithmeticae,” in *Untersuchungen über höhere Arithmetik*, H. Maser, trans. (New York: Chelsea Publishing Co., 1981).

38. Abraham Kästner, *Geschichte der Mathematik* (Hildesheim and New York: Georg Olms Verlag, 1970). For Gauss’s discussion of his reluctance to identify his youthful adoption of an anti-Euclidean standpoint in geometry, see also Lyndon H. LaRouche, Jr., “Is Western Europe Doomed?” *EIR*, Nov. 27, 1998, footnote 20.

39. Jonathan Swift, *Gulliver’s Travels* (New York: St. Martin’s Press, 1994).

40. Kurt Gödel, “On Formally Undecidable Propositions of *Principia Mathematica* and Related Systems” and *Discussion on Providing a Foundation for Mathematics*, *Collected Works*, Vol. I, (New York: Oxford University Press, 1986).

41. Fairly estimated as more than five times the value of the same nominal income of today.



*Sailors and Waves celebrate at the Naval base in Norfolk, Virginia, 1945. "Most of the American veterans returning from war, gave up their weapons, but also their personal cognitive sovereignty. I know; I sadly watched it happen. I wish that they, and their children, would reclaim what most of my generation lost during that time."*

circumstance. Grant the fact, that the overwhelming majority of the returning veterans capitulated to the kinds of conditioning I have outlined here. Why should they have capitulated in that manner and degree? Grant, that the generation of those World War II veterans produced suburbia's "Baby Boomer" generation, who were educated to become victims of the victimization of their parents' generation, and to make their own generation a, similarly, even more victimized one.

It should be obvious, that their problem was lack of a sufficiently clear sense of personal cognitive identity, a lack of that sense of identity needed to supply them an efficient impulse to resist. They should have cried out: "Stop telling me! Walk me through the process of making the discovery for myself!" Why did they not do that? I know, I can still hear the voices from my childhood and youth: "Once you have learned what your teachers and textbooks tell you, then the time will come when you will be permitted to judge for yourself."

"Let us brainwash you for twelve to twenty years, until you graduate, and then 'think for myself?' " "If you wish to get ahead, you must learn to go along, to get along."

The principle such brutal slogans express, is the same used to establish the dictatorship known as the Roman Empire. There was the ruling class, and a mass of virtual human cattle which the Romans named the *populati* (English: predators), and the system which the Nazi regime, like the British monarchy and the late Walter Lippmann, adopted from the Romans, *popular opinion*. In the typical case from the veterans' youth, it was considered shameful not to be "popular."

"Popular opinion," as defined by the Romans, the Nazis, and the prevalent culture of the U.S.A. today, is the method by which a ruling oligarchy induces its subjects to discipline themselves into playing the part the ruling oligarchs assign to that mass of human cattle, which they consider most of you to be.

"I should learn how to become more popular, or, at least, less unpopular." Let some poor fellow adopt that imperative as a virtual axiom of his habit-making. There is no more efficient way to brainwash the susceptible, especially those passing through the emotionally perilous time of adolescence, than to torment them with the challenge of trying to gain a bit of popularity in an intrinsically capricious social climate.<sup>42</sup>

So, most of the American veterans returning from war, gave up their weapons, but also their personal cognitive sovereignty. I know; I sadly watched it happen. I wish that they, and their children, would reclaim what most of my generation lost during that time.

42. Typical, from the 1930s U.S., was the wide influence of Dale Carnegie's *How to Win Friends and Influence People* (New York: Simon and Schuster, 1936), which acquired some of the characteristics of mass-based cult-worship, then and into the following decades. Today, a more vicious expression of the same psychopathology, the cult of "sensitivity training," spreads the same moral sickness in an even more aggressively pathological form. The morally permissible way to influence people, is to practice Platonic truthfulness, as the practice of Classical humanist education provides a working model for this. The only morally proper influence, is to do good, and spread its benefits.



*The sublime is the essence of true beauty in art, and in life. Rev. Martin Luther King, Jr. was such a sublime figure, a truly sovereign individual, who dared to ask, "What do I do, in the case that what I know to be true, puts me into direct conflict with popular opinion?"*

## The Roots of the Pathology

To become a truly sovereign individual, you must muster the courage to insist on clear answers to certain crucial questions. For example, "What do I do, in the case that what I know to be true, puts me into direct conflict with popular opinion?" "What if my policy of 'going along to get along,' compels me to commit, or even merely condone, a brutal sort of injustice?"

I am certainly not proposing that you, for example, should burn down the courthouse, because the judge is corrupt. For reasons stated clearly enough in such locations as *I Corinthians* 13, I join the Apostle in despising the sophistry of such "single issue" adventurism, both then and among the circles of Mont Pelerin Society asset and penetration-agent Paul Weyrich today. I do imply, as I shall explain here, that you should take some form of action appropriate to your position in society, to bring an efficient remedy into play within the social process. This implies a preference for the use of the method of persuasion represented by that sublime figure, the Reverend Martin Luther King.

By taking an appropriate stand, as Martin did, against falseness and other wrongs, you are, at a minimum, maintaining your personal sovereignty. If you do not take a stand for truth and justice, you have thereby lost a corresponding degree of your own personal integrity, your sovereignty over yourself. If you continue that opportunistic submissiveness long enough, and far enough, you will degenerate into something which you, in your better days, would have abhorred, as Oscar Wilde portrays a case of induced self-destruction, in his *The Picture of Dorian Gray*.<sup>43</sup>

43. Oscar Wilde, *The Picture of Dorian Gray* (New York: Modern Library, 1992).

Being good, should never be understood to signify the consequence of not violating some fixed set of rules. You should never be rewarded for *not* spitting into someone else's face, or for *not* stealing. Showing the number of so-called single issues which you have *not* violated, gains you no merit in an honest court of judgment. Goodness, which is a synonym for *agapē*, for the sublime, and for grace,<sup>44</sup> is not a matter of discrete individual acts; it exists only as a quality of efficiently continuing intention.

Tell them, over there, to bring to a close their weeping over their own personal problems, or, over those of their local community. Let them weep for their nation; but, above all else, weep for the lack of measures taken to remedy the perils threatening humanity generally. To identify the specific nature of those pathological assumptions which underlie the goldfish-bowl syndrome, you, and they, must first define your own personal sense of identity in a sane way.

"Sane way" signifies, that you must take all mankind, your own nation most immediately, as it is said, "into your heart," and judge how the behavior of your society accords with that society's responsibilities for mankind as a whole, or does not.

That, in first, rough cut, is the standpoint from which the distinction of "pathological" is to be attributed to any habitual response from within that population. From that world-historical standpoint, you must then judge, what characteristics of a society's behavior do, or do not correspond to the goldfish-bowl syndrome.

Look at the problems of society today from the vantage-point of the Classical humanist method of education.

44. Grace is typified by Mozart's opera *La Clemenza di Tito*, underscoring the same principle which Mozart applied to reworking the libretto, in his *The Abduction from the Seraglio*.



Imagine, as much as your own educational experience allows, that you have been educated in the cognitive mode I described here earlier. Reflect upon the effect those experiences had upon your memory.<sup>45</sup> You may, thus, recall the cognitive voice of Archimedes speaking to you across 2,200 years. There are many other cognitive faces assembled within your memory, each from his or her own time. The moments of their cognitive discovery of a valid hypothesis, live afresh within you. You are, therefore, your sovereign self, but they also live within you, in that way. You are, in that respect, all of them you know in that way, all dwelling in the same simultaneity of eternity, and also dwelling, in the same fashion, within the memory of your own sovereign cognitive processes.

You, now being one among them, in sharing your own memory, remembering your past, and anticipating your future prospects as if from memory. Thus, so reminded, you are looking at the past and future of mankind. It is with a mind's eye so informed, that you now focus upon the historical time and place in which so many influential and other Americans are making fools of themselves, while pushing their nation to the nearing brink of destruction. Now, in this moment, look at who you are. You are, or can and should be, a world-historical personality, feet planted in the present, local time and place, but with a mind encompassing a large expanse of past and future alike.

You see many terrible things.<sup>46</sup> You wish you might fix each; but, you come to your senses, and realize that that simple reaction is not the solution. The problem is not the bad things which happen; the problem is, as all great Classical tragedy illustrates the point, the system which causes them to happen. Do not kick the automobile, as if to beat it into willingness to repair its own flat tire or exhausted battery. You must fix the system which generates important problems. You must find the tools to grasp, and the method for using them, not to change the accomplished act, but to be able to repair that system itself.

Now, once you have accepted that advice, you are your sovereign self again. You are once more seeing things histori-

cally. You are studying the past and the present, to discover the action needed to ensure the future, as did those giants, associated with Benjamin Franklin, who created the Declaration of Independence and Federal Constitution, to create the future, as Lincoln said the same in his Gettysburg address.

Indeed, when you consider the state of the nation and world in terms of those references, you are thinking as a great national statesmen should think, the way in which his, or her development qualifies a person as a prospective statesman. All great statesmen look at their nation's future, and the world, as I do; that is one of the essential qualifications of a true statesman. He or she can not fix every problem of the nation's people, one at a time; he, or she, must correct the policies which cause such problems, or which allow them to persist.

It is from that point of view, from the standpoint of that world-historical self-conception, that you must view the problem of the goldfish-bowl syndrome, today.

From my point of view, you are no longer viewing the universe as if you were a tiny figure, desperately attempting to cope with the sundry great and lesser powers affecting your personal and family circumstances. Instead of that predicament, you are together with the friends from many times and places, who share the dwelling-place which is your memory of the cognitive simultaneity of eternity. From this higher vantage-point, as if in Paradise, you are looking toward the "little you's" time and place, a time and place which, under your memory's eyes, is but a small village within your overview of a great span of past, future, and present history of not only our planet, but our Solar System.

You, your friends in memory at your side, are looking at this span of not merely history, but a great historical process in ongoing development. You find your "little you" at a point midstream in that development.

Some of you, at least, will recognize that as the standpoint from which I have portrayed important, historically situated events and issues, in numerous among my earlier published writings. I wish you to consider the goldfish-bowl syndrome from that vantage-point. To do this, you must draw upon relevant aspects of your own personal cognitive experience, and to attempt, thus, to replicate in your own mind the conception which I am projecting from mine.

The result of such a shift in viewpoint, is that, instead of looking at social processes as a kind of connect-the-dots way of relating particular observations of conditions and incidents, as the astronomical schemes of Ptolemy, Copernicus, and Brahe did, that you look at social processes as Kepler came to view the Solar System. For you, as for not only Kepler, but Leibniz, Kästner, Gauss, Riemann, and others like them, you then view the historical process as the primary fact, and particular conditions and incidents, as Kepler et al. defined the position and velocity of a planet, as a reflection of the orbit as such. As in Leibniz' calculus, where you see the existence of the differential as a product of the integral, not the other way around, so you, if you are competently educated, see the exis-

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45. You may recognize that you retain concepts you have developed in a Classical humanist mode of cognitive action, much longer, and with much greater fidelity, than so-called "facts" or other images acquired through mere learning or pleasure-pain conditioned tendencies for response. You should be able to recognize, from inspecting the behavior of your own mind, that memory based on cognitive action, is of an entirely different quality, represents a qualitatively different kind of functional process, than memory based on learning or Kantian-like "negation of the negation." Your recognizing those distinctions, may be indispensable for grasping fully the argument I develop here.

46. These include "terrible things" from the past, present, and prospective future. They strike you with a sense of a simultaneity of eternity, in which time is condensed, but the primary order is preserved. In this domain, you can not change the past, but you can change the outcome of the past, as we do each time to bring to life an honorable effort which seemed to have been crushed into nothingness in past time.

tence of conditions and events as products of the historical processes ("the orbits") which determine their existence.

## Certain Eerie Sensations

This shift in viewpoint, from a naive, to a cognitive standpoint, provokes certain eerie sensations in the person, especially during the early stages of practicing to think scientifically, rather than deductively. At this point, I should explain several crucial points at some length, to assist the reader in dealing with such sensations as they may be experienced in the ensuing outline of the manner in which I define the kinds of pathologies associated with the goldfish-bowl syndrome.

The famous Dr. Sigmund Freud and others, have responded to certain aspects of such eerie sensations. The Freud steeped in the influence of the radical positivist Ernst Mach, would not concede even the existence of self-knowable cognitive processes, but he could not ignore the evidence, that "behind" certain eerie states expressed within consciousness, "there is something there." He gave what are called, euphemistically, explanations, or called, in the current English-language vernacular, "spin." That he would misinterpret the phenomena in a systemically erroneous way, should be obvious to anyone who knows Freud's pro-Machian background.<sup>47</sup>

More than a quarter-century ago, I delivered what became a somewhat celebrated series of lectures and featured writings, under the title of "Beyond Psychoanalysis," on how to deal with the predominantly negative aspects of Freud's theses, while taking into account the fact that he had, in fact, stumbled into certain discoveries.<sup>48</sup> Those of his discoveries to

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47. On the subject of the epistemological features of Freud's principal writings, as one who had wrestled against the empiricists and Kantians since adolescence, I could not ignore that Freud, like the existentialists of the so-called Frankfurt School, is to be recognized chiefly as a "neo-Kantian," like the Nazi philosopher Martin Heidegger, Heidegger's friend Hannah Arendt, Theodor Adorno, Karl Jaspers, et al. Although Freud's training was in the positivist school of Mach et al., it was almost inevitable, that the result of Freud's applying that sort of positivist mind-set to the social phenomena of the human mind and its disorders, would produce a neo-Kantian view of individual social behavior.

48. At this point, I should supply an answer to what will be implied questions from some readers. "Why, back during 1973-1975, did I, a political figure, choose to attack Freud as I did, rather than simply present my conceptions in their own terms?" From my experience with my fellow-Americans, in particular, that since childhood, I had soon come to recognize that the notion of "objective ideas" is a sick sort of delusion, which leads to such noxious mental disorders as "utopianism" and "single-issuism." It is change which must be made; but, change *from what*? We must always change what exists. This means relying upon the method of *historical specificity*, taking our fellow-creature as we find him, and thinking of how to change *that*. In dealing with both Marxism and Freud, as I did, I was intersecting the U.S. population, in particular, as I knew it. The combined direct and indirect influence of Freud upon the post-war U.S. generation confronted me with a "Baby Boomer" generation, especially those passing through university campuses, which had been saturated with the impact of indoctrination in Freudian and related pathological influences. The principle of *Analysis Situs*, requires that we define change with reference to devastating contradictions between reality and pre-existing current belief.

which I refer here, were clinically real, but his interpretations were dubious, usually destructive, sometimes even dangerous. I now touch on some of the issues of that series of my lectures and writings, limiting myself to those issues which pertain to the subject which is presently immediately at hand.

There can be no doubt of the existence of phenomena corresponding to a distinction among "conscious," "preconscious," and "unconscious" behavior. In reality, one can provide a rational notion of those classifications only from the standpoint of the cognitive process. I introduce the needed clarification by supplying a few rough, but relevant rule-of-thumb definitions.

The significance of the word "conscious" is broadly obvious, if not notably profound. As the term is commonly used, "conscious activity" is manifest to us as a bundle of either actual or imagined sense-perceptions, or some combination of both, in which the visual aspect is dominant, and hearing second. In fair approximation, these are shadows of an actual, or imagined sense-perception, with one's perception of emotion included among sense-perceptions. Within today's globally extended European culture, what might be termed the "structural" form of conscious states, or quasi-conscious dream states, approximates a Euclidean imagery.

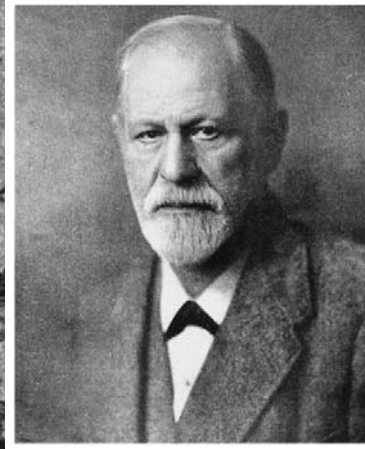
The term, "preconscious," is meaningful, in referring to the phenomenon of a prescience of words or ideas "on the tip of my tongue." However, conceding that clinical fact, begs more questions than it answers.

All interpretations of the term "unconscious," as used by Freud and his rivals, should be discarded. There is, admittedly, "something there"; but, to discover what that something "is," one must first clear away the rubble of much of the Twentieth Century's psychoanalytical tradition on this topic. This is the area in which only a mastery of the notion of cognition from the standpoint typified by Plato's dialogues, will lead to fruitful understanding.

What, that stated, is the alternate meaning of the "unconscious," as I employ that term here? How can we know the functionally definable characteristics of the relations among the psychological phenomena called, respectively, the "conscious," "preconscious," and "unconscious"?

For a first approximation, think of the relationship between the set of definitions, axioms, and postulates of a Euclidean geometry, and the theorems generated under the control of those *a priori* assumptions. The customary classroom definition of definitions and axioms, is that their authority is derived from the presumption that they are "self-evidently true." Those statements are usually expressed in symbolic and deductive terms; that is to say, that the speaker uses the imagery of sense-perception. However, from the standpoint of cognitive processes, we know that the imagery of sense-perception, is never better than a shadow of reality. I shall make that point respecting various mental states, and its significance, clearer, a short space ahead.

There lies the key to the goldfish-bowl syndrome. Situate



Freud's (above) discoveries with respect to the unconscious were "clinically real, but his interpretations were dubious, usually destructive, sometimes even dangerous." Left: "The sleep of reason produces monsters," from *Los Caprichos* by Francisco Goya.

That fact, provides you the means to access, consciously, a meaningful notion of what may be termed *unconscious* mental processes.

To make that point clearer, illustrate the point in the following terms.

In the simplest illustration of that fact, *the ability of two or more persons to share in common, knowledge that a validated discovery of a universal physical principle is a socially communicable act of cognition, makes the existence of that experience an object of conscious thought*. Thus, the discovery of any principle so defined, even though it have no sense-perceptual form, introduces a conscious idea of something which existed previously only outside the domain of the thinker's ordinary notions of conscious thought and communication. That is the only meaningful use of the term "unconscious" to denote a functionally significant quality of the human mental processes.

There is one qualification to be added to that description of

the case.

It is notable that the characters of Plato's Socratic dialogues bear, at least often, the names of notable figures from that part of history. I have no information which shows me, whether these were written as recollections of actual conversations, in whole or part, or, are synthetic history, in which case the best indications are, that the positions of the named notable characters were faithfully incorporated in composing the dialogue. We may observe from study of good Classical drama which adheres to the principle of historical specificity, that the individual author was able to create the drama, involving various characters, in an imitation of a true dialogue. We sometimes include a relatively poorer quality of written compositions, or plays of indifferent qualities as worth examining for the real-life clinical interest. Also, in general, we are able to organize synthetic dramas which are more or less good approximations of Classical art, within our cognitive memory-processes, that to the included purpose of adducing a principle in the form of a recognizable idea, as if we had created two or more personalities within that memory-process, who would be engaged in the process of transmission of

the preceding section's discussion of Euclidean systems in the context of this discussion of functionally definable mental states. What, thinking of Plato's allegory of the cave, or the "as in a mirror darkly," of *I Corinthians* 13, is the real object which corresponds to the shadow of the Euclidean's definitions and axioms? What underlies the sense-perceptual imagery, the mere shadows, used for the Euclidean definitions and axioms?

From the standpoint of the Classical humanist method of education, as I have summarized it in earlier portions of this report, we know the following. In the case of an experimentally validated universal physical principle, we know, and have been able to prove that the behavior of relevant sense-perceived objects, is governed by knowable principles which are impossible to visualize in terms of sense-perception. Yet, as I have described this process, the ability of the sovereign cognitive powers of the individual mind to transmit knowledge of universal principle, by provoking re-enactment of that discovery within the cognitive processes of another mind, enables society to recognize, and efficiently employ a class of ideas for which no literal sense-perceptual image exists.

cognitive ideas among two or more perfectly sovereign personalities.

The Classical drama, most emphatically, is a device for adding the part of individual members of the audience to the *dramatis personae* on stage.

To restate the kernel of that point. In all successful Classical artistic compositions, and in the successful performance of the intention expressed by the composer, the composition becomes a medium of cognitive communication among composer, performer, and audience. The ability to compose such art, and to perform it competently, requires the quality of mind which is able to synthesize the communication of a cognitive idea, as on stage, to an audience. If all of those requirements are satisfied, the public or quasi-public performance transports the individual members of the audience from where they sit, into the domain of their cognitive memory.

Ah! But, is it not possible, that even absurd notions of principle, in addition to valid ones, can inhabit that same domain of “the unconscious”?

In the case of valid discoveries of universal principle, we have uncovered a principle, a valid hypothesis, which is characteristic of the universe, but which is contrary to previously prevalent conscious assumptions, and also contrary to that location’s previously existing unconscious assumptions. Usually, this discovery contradicts, systemically, a mixture of both conscious and unconscious “axiomatic” assumptions. Through cognition, thus, the previously unexplored regions of the unconscious are brought into the surface as ideas, otherwise known as social ideas. *The act of communication* of such discoveries, by what I have identified as the Classical humanist mode, produces a conscious idea within consciousness, but one which has intruded from the unconscious, into the conscious domain: a Platonic idea.

For example, all of the pivotal discoveries of principle of modern mathematical-physical science, have come into knowledge, as Platonic ideas, in this way. The founding work of modern experimental science, Nicholas of Cusa’s *De Docta Ignorantia*, is filled with such products of the cognitive processes. The work of Leonardo da Vinci, Gilbert, Kepler, Fermat, Huyghens, Leibniz, et al. is typical. Also, William Shakespeare’s dramas, including the entirety of his English history series, are also typical. All strictly Classical poetry, such as that of Goethe, Schiller, Keats, Shelley, and Heine, is typical. In music, the development of the well-tempered system of *bel canto* tempered vocal polyphony, and the strictly Classical method of polyphonic composition, of Mozart, Haydn, Beethoven, Schubert, Mendelssohn, Schubert, and Brahms, illustrates the same principle.

The Classical humanist method, as studied from the standpoint of the equivalence of *Analysis Situs* to Classical artistic forms of irony and metaphor, especially metaphor, illustrate in a powerful way, how the previously unconscious is made conscious, through successful cognitive action, this equally in physical science so-called, in Classical artistic composition

and its successful performance, and in Classical modes of statecraft.

These considerations are also the key to the goldfish-bowl syndrome! Here lies the significance of Plato’s use of Socrates to introduce the notion of *agapē* into the dialogue with Thrasymachus and Glaucon. Here lies the message of *I Corinthians* 13.

## The Legacy of Thrasymachus

What Socrates proves for today’s world, is that not only both Thrasymachus and Glaucon, but also U.S. Associate Supreme Court Justice Antonin Scalia, or such Heritage Foundation-linked ideologues as Paul Weyrich, for example, are morally insane. Their moral insanity lies within certain among their underlying axiomatic assumptions of belief.

Here we have a clear case of the pathological implications of a goldfish-bowl syndrome. Here we have a representative case of a superficial, arbitrary assertion, which reveals itself, by its practical implications, its “natural products,” as reflecting an unconscious motive whose quality is specifically evil.

In the cases of Scalia and Weyrich, their upholding the notion of “shareholder value,” whether called “Thatcherism,” or by any other name, is a form of moral insanity. Their crime is to insist upon introducing into what I have qualified as the actual “unconscious domain,” notions which are not merely purely arbitrary notions.

These pathologies are not products of the processes by which legitimate hypotheses are generated for experimental validation, but are asserted in militant defiance of the principle of that real justice which exists only in the submission of the irrational to the Socratic principle of cognitive truthfulness, that by the rulers and ruled alike. They reject that remedial Socratic action, which represents the process of bringing of the domain of arbitrary unconscious assumptions under the self-control of individual cognitive reason.

I have selected the radical-empiricist absurdities of Scalia and Weyrich as illustration, because of the relevance of these selected cases to the discussion of the most relevant forms of homicidal mass-insanity in the U.S.A. today, the hideously destructive features of U.S. economic policy-making during the past thirty-five-odd years. I mean the thirty-five years since Richard Nixon and his campaign made their 1966-1968 pact with the Ku Klux Klan and kindred elements of the Confederacy tradition.

To complete with the matter of the distinctions among empirically identifiable conscious, preconscious,<sup>49</sup> and un-

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49. There is an interesting distinction in the quality of the states which may be justly recognized as “preconscious.” Sometimes, it signifies simply searching memory; this state is as encountered in the attempt to generate an hypothesis which implicitly solves a contradiction or ambiguity in *Analysis Situs*. The most functionally efficient form of remembering is that in which recognition of a previously known term occurs in the same way in which one’s prior original knowledge had been generated. In this latter case, preconscious activity has the character of selecting the well-defined map in which earlier

conscious states, consider that which I have just written on that subject here, from the standpoint of experimental scientific method.

## Noösphere and Consciousness

In several previously published reports, I have laid fresh emphasis upon the significance of the work of Vladimir Vernadsky's definition of biosphere and noösphere.<sup>50</sup> The most crucial feature of his argument on that account, is the manner in which he underscores and employs the elementary principle of experimental physical science. As I have stressed this point in those earlier locations, Vernadsky's working conception of the universality of the concept of *natural products*, is crucial. The definitions of a rational use of the notion of distinctions made by me among conscious, preconscious, and unconscious thinking, are efficiently approached from the standpoint of that same notion of *natural products* emphasized by Vernadsky.<sup>51</sup>

In the statistical side of experimental phenomena, the competent investigator places great emphasis on accuracy in data and method, as Kepler did, but, once the statistical material has been cleaned up in those respects, he has only secondary interest in the merely possible usefulness of further attempts at deductive extrapolations from statistical evidence. *Science begins each time we recognize that the evidence at hand compels us to overthrow simply deductive methods of statistical extrapolation.*

That is characteristic of Kepler's founding of modern comprehensive mathematical physics. That is Vernadsky's treatment of biosphere and noösphere; it applies equally to the matter of defining a rational use of the terms conscious, preconscious, and unconscious.

As I have stressed in the previous section of this report, it is through discovering the systemic contradictions produced by applying empirical evidence to a previously established, fixed system, that we define an axiomatic quality of contradiction within the referenced mathematical-physical system, or its equivalent, thus posing a problem in *Analysis Situs*.

Similarly, the existence of a meaningful metaphor in Classical poetry, occurs only when the relevant contradiction, or

ambiguity in meaning of terms, corresponds to the existence of an actually existent idea lying between the cracks of two valid applications of a term or phrase. This also defines a problem in *Analysis Situs*. The solution for the contradiction posed by the problem in *Analysis Situs*, whether in mathematical physics, or in Classical poetry, is of the same general nature. These notions are the same which appear in Vernadsky's application of the notion of *natural products* to the distinction among ostensibly non-living, living, and cognitive processes.

So, we have the distinction of the natural products of deductive method from those of cognition's expression as the Classical humanist method. Thus, we have both the categorical distinction of conscious from unconscious states, but also the multiple-connectedness of the two. The distinctness of these states is as absolute, physically, as the difference between animal and human life. Similarly, Vernadsky emphasizes that human cognitive action (discovery of universal physical principle) introduces what is, from the standpoint of physical science, an absolute difference between man in the biosphere, man acting as merely another animal, and man making the noösphere, cognitive man.

It is our ability, through cognition, to generate new, *qualitatively* higher states in the noösphere, which defines the characteristic feature of what I have identified as unconscious human behavior. It is this action of changing the otherwise unconscious, which renders the notions of universal physical principle, so-called Platonic ideas, an object of willful conscious behavior. Thus, man changes himself, as no lower species can do this.

Pathologies of the type exemplified by the goldfish-bowl syndrome, fall thus within the category of mankind bestializing himself, as the pro-Mont Pelerin Society doctrines of Scalia and Paul Weyrich do precisely that. The fight between the *agapic* authority of the cognitive principle, and the bestiality of the unimproved unconscious processes, are expressed as a struggle between good and evil, with Scalia and Weyrich self-defined as on the side of evil. The doctrine of "shareholder value," as expressed by Scalia and Newt Gingrich's classically fascistic version of the "conservative revolution," a form of fascism expressed in the radical right, populist doctrine of "Contract on America." That is the white-sheeted "Critic Company" riding again. This is not man as a beast, but man degenerated into a caricature of a beast.

Pathologies of the goldfish-bowl type, fall into two relatively distinct psychopathological categories. Simply, first, there is mankind which refuses to rise above the *relatively bestial* level of unconscious motivations. Secondly, there is mankind which has added a new quality of bestiality, that to the effect of reversing the process of upward cognitive development of culture, by means of an artificial principle which acts as an efficient innovation within the unconscious processes, which is relatively novel, but pushes mankind back in the direction of becoming a beast. Hence, the fascistic qual-

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encounter with the desired term had been made. The solving of a problem of discovery, or of memory, by going to sleep and then awakening with the idea in the middle of the night, is an example of this.

50. Vladimir I. Vernadsky, "On the Fundamental Material-Energetic Difference Between Living and Non-Living Natural Bodies in the Biosphere" (1938), Jonathan Tennenbaum and Rachel Douglas, trans., *21st Century Science & Technology*, Winter 2000-2001. I introduced Vernadsky's work as a policy of our association in an advisory presented in March 1973. This advisory led to the subsequent formation of the Fusion Energy Foundation as a science foundation.

51. I first made these distinctions among conscious, preconscious, and unconscious processes during the late 1940s, in the course of attacking the absurdity of Norbert Wiener's reductionist misconception of "information." Over the intervening years, my conception on these matters has been refined, but not overturned in the process.

The so-called Southern Strategy began with the 1966-1968 election campaign of Richard Nixon, and continues today with the fascist doctrine of “shareholder value,” as expressed by Supreme Court Justice Antonin Scalia and Newt Gingrich’s populist “Contract on America.” That is the white-sheeted “Crittter Company” riding again: man degenerated into a caricature of a beast. Clockwise from upper right: Nixon in Georgia, 1973; Gingrich; a Ku Klux Klan demonstration during the battles of the civil rights movement; Scalia.



ity of fanaticism of the Southern Strategy and such expressions of that as the “shareholder value” rules-of-thumb of a Scalia and Weyrich.

As the relevant clinical quality of evidence shows us, the political success of reactionary ideologues such as Scalia and Weyrich, lies chiefly in their appeal to what Armin Mohler, among other notables, has defined as “the conservative revolution.”<sup>52</sup> Typical is the case of the first modern fascist state, that of Napoleon Bonaparte. Napoleonic France’s original form of fascism, like all fascist states since, is based upon the effort to revive a modern equivalent of the ancient Roman Empire, as Napoleon’s pretensions to be Caesar, Pontifex Maximus, and upholder of Roman law (the *Code Napoléon*) typify the precedent, defined by G.W.F. Hegel and Carl Schmitt, upon which Mussolini and Adolf Hitler modelled their fascist movements and intentionally imperial states.

The modern “conservative revolution” of Mussolini, Hitler, Gingrich, Weyrich, Scalia, et al. is also a continuation of modern Romanticism in law, religion, and art. It looks back

to ancient pagan Rome in a way which is historically specific to today’s globally extended, modern European civilization. Today’s “conservative revolutionaries,” like the Holy Alliance’s Clement Prince Metternich, and his predecessor, the ultra-reactionary Chancellor von Kaunitz, look back to the long struggle against the rise of the modern nation-state, during the medieval history of Europe. It is feudal institutions, such as those typified by the alliance of Venice to the Plantagenet pestilence, during the interval from England’s Henry II through Richard III, which are the historically proximate models for the characteristic forms of the modern “conservative reaction.”

The launching of fascism by Bonaparte, already implicit in the London-orchestrated Jacobin Terror of Marat, Robespierre, and Danton, launched on July 14, 1789, is a phenomenon specific to the strategic conditions produced by the 1776-1787 success of the U.S.A., in securing its victory over the British monarchy, and in formulating its draft Federal Constitution. All fascist movements of strategic significance, including the Confederacy and the modern Carlist cult, have been crafted as proposed antidotes to the specific threat which the feudalist tradition views as rooted in the model of the U.S.

52. Dr. Armin Mohler, *Die Konservative Revolution in Deutschland: 1918-1932* (Darmstadt: 1972).

Federal Constitution, especially the principle of the general welfare embedded in the Preamble of that Constitution.

Otherwise, just as Napoleon modelled his imperial role upon the Romantic precedent of “Sun King” Louis XIV’s apotheosis of himself as Pontifex Maximus, so the typical conservative revolutionary of the Twentieth Century, has adopted the forms of feudalism associated with either the Venetian, financier-oligarchical model of the British and Dutch monarchies, or the Habsburg-dominated Holy Roman Empire and its sequelae, as the myth-ridden model of society to which they seek to return society, away from the legacy of the 1776 U.S. Declaration of Independence and Preamble of the 1789 Federal Constitution. In the U.S. itself, the “conservative revolution” usually adopts the model of the Confederacy, as the Nashville Agrarians have done, as the premise for launching a U.S. form of fascism to match Hitler’s.

The more general, underlying characteristic of the conservative revolution, is that it always idealizes some social order extant prior to the emergence of the modern sovereign nation-state republic, even to the extreme of idealizing “primitive society,” or “perpetuating an allegedly ‘natural state’ of man’s relationship to nature.” The theme is, “progress has been a terrible sin,” which we must uproot, as the “conservative revolutionaries” associated with the Presidency of George W. Bush, have made a foolish fetish of virtually eliminating taxation, in order to replace the authority of the state by private financier oligarchies ruling a “globalized world,” as ex-President George H.W. Bush’s interest in Barrick Gold’s holding in Congo, in Argentina, and elsewhere, typifies the caricature of Plantagenet feudalism which attempts to carry civilization all the way back to the Bushes.

The same obscene, conservative-revolutionary lust, is to be seen in a fascination with titles of nobility, or the same thing in effect, the sordid Nashville Agrarian cult of Henry A. Kissinger’s mentor, the late William Yandell Elliott. It is against this background that the goldfish-bowl syndrome of Gingrich, Weyrich, Scalia, et al., is to be assessed today. The same is to be said of Ayn Rand devotee and Federal Reserve Chairman Alan Greenspan, better known of late as “Greenspin.”

This necessary background now provided, we shall return to look at the goldfish-bowl syndrome from the standpoint of the science of physical economy.

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### 3. Economics and Sanity

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The precondition for defining a pathology in any system, is to define the function which a healthy process of that species performs. Once that point of reference is established, the meaning of dysfunctions in that process can be established, as a matter of contrasting distinguishable species of “natural products.”

The best method used in applying that approach, is the

referenced method of *Analysis Situs*. Vernadsky’s use of the conception of *natural products*, to distinguish among non-living, living, and cognitive processes, is a useful conceptual model of the way in which an investigation should best proceed. Thus, relatively healthy and sick varieties of the same type of system can be compared, and the discrepancy addressed in terms of identifying the pathological element through seeking out the relevant “natural product.” Either a single pathology, or a range of pathologies may be specifically identified as types, in this way.<sup>53</sup>

By applying that standard, one, or both of two general classes of dysfunctions may be identified. The first type is usefully termed “episodic”; the second type, to which the “goldfish-bowl syndrome” belongs, is strictly termed “systemic.”

The function to be used as a standard for reference, for examining a systemic pathology of the “goldfish-bowl syndrome” type, is a general economic function, as defined in terms of a physical economy, rather than an economy as commonly misdefined in predominantly monetary terms. The only sane premise for the usual argument against examining society from the standpoint of economy, is the incompetence of what is, usually, mistakenly considered to be economics.

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53. A word of caution must be interpolated. While what I have just written is true, as far as explicit claims are made for this point, there are important, implicit qualifications to be considered, lest the reader over-interpret what I have just stated explicitly on this point, in applying what Vernadsky chose to term his concept of the observable, measurable distinction, of an efficient existence adumbrated for the observer by its “natural product.” For example, in defining the pitch of a tone of the scale in a well-tempered, *bel canto*-based system of musical counterpoint, the application of algebraic values breaks down, that for reasons understood by J.S. Bach, and all of the best Classical performing artists. The value of the pitch of a tone varies, but within a well-defined interval of the system as a whole. Thus, there is no exact value to be assigned to the note on the printed score, but a range of values. Which part of that range is used is precise for each specific case, although a slightly different value must be chosen, even within the same composition, according to precisely defined rules of counterpoint. This is the same, too little understood basis for Leibniz’s notion of a monadology. Leibniz’s monadology carries his development of a perfectly non-linear notion of the calculus to a still higher level, in which there is a distinction between a quality of an existent entity or condition, and the precise mathematical values to be assigned to that entity under what may be defined functionally as different states of that existence. Thus, for the case at hand, above, a specific pathology is a distinct type of existence, which may assume different expressions in different settings, but whose quality of existence is independent of the difference in settings. This notion of a distinction between provable existence and the precise value expressed by that existence, is a matter related to the principle of the way in which the sovereignty of the individual’s cognitive process, is expressed, by the way in which the discovery and communication of a discovery of universal physical principle occurs. This point may be tricky for those lacking the relevant education and experience, but the point is of extreme importance for practice, nonetheless. This monadology-cued method underlies the method, as reported in detail by Planck himself, expressed in Max Planck’s discovery of the quantum, and is key for understanding that incompetence of such enemies of Planck as the rabid followers of the radical positivists Ernst Mach and Bertrand Russell, an incompetence which has haunted physics since then, to the present day.

Notions of economies as essentially monetary or even merely financial-accounting systems, is a typical expression of such academic and related incompetence. That incompetence is among the most significant, and pervasive of the fish-bowl-syndrome pathologies to be considered.

First, however, I must describe the functioning of the economy as a social process. Then, against that background, we shall examine the typical pathologies of today's popular and other beliefs about economy.

As I have already indicated here, the uniqueness of the human species, in contrast to all other living creatures, is that the individual person has those cognitive powers on which his species depends. It depends, absolutely, for its continued survival as society, upon the improvement of the potential relative population-density of the human species in general, and also of particular societies. This uniqueness of the human species is expressed by the indispensable role of cognition-generated discoveries of universal physical principle, in generating man's increase of his species' potential relative population-density.

This introduces the difficulty, which I have already identified. We can not define man's relationship to the universe, unless we go beyond an individual's knowledge of valid universal principles and their subsumed technologies, to recognize that the relationship of scientific and technological principles to productivity, depends upon organized cooperation in support of the application of that knowledge to social practice. It is within the context, that the relevant pathologies to be considered, are to be located.

From the vantage-point of political-economy, the needed combination of individual discovery of principle and technology, and cooperative application of those potential advances in the potential relative population-density, there are principally two general categories of application to be considered: 1.) basic economic infrastructure, and 2.) private enterprise. These two categories of application, are situated within the context of the population as a whole. The connection between the two categories of application and of the population, is expressed by what is fairly termed "the function of changes induced in the structural composition of employment of the total labor-force."

By "structural composition of employment of the labor-force" (including unemployment, for this purpose, as a category of employment), we are pointing to changes in ratios within the economy as a whole. For example, to reformulate a point presented by Alexander Hamilton, the provision of both improvements in basic economic infrastructure and products of industry, increase the productivity of agriculture, per capita, and per square kilometer.<sup>54</sup> This should, normally, result in a smaller percentile of the total labor-force required for the nation's agricultural requirements, and, if the govern-

ment maintains rational forms of regulation of international and interstate commerce, a higher physical standard of living for the farmer's household, and also further increases in the productivity of the farms. The associated effect, is then a shift in composition of the national labor-force, into industry and relevant professions. This shift, if based upon scientific and technological process in both general education, and in the design of products and productive processes, transforms a growing ration of the industrial labor-force into the principal driving force for the subsequent round of progress in raising the physical-economic productivity of the population as a whole. The study of the change to this effect, for all categories, over the interval 1790 to the present, is a relevant area of study on this point.

The results of such latter studies, are, on the one side, a demonstration of how well the American System of political-economy, as defined by Hamilton, List, and the Careys, works, and, on the contrary side, points to the inevitably destructive effects of the policy-tendencies of the tradition of the Confederacy and its Wall Street accomplices. Thus, the validity of the American System is clarified, by its "natural products"; but, in the same way, the pathological character of the contrary policies, such as the trends of the recent thirty-five years, is also demonstrated.

To repeat what I wrote here earlier, the relationship among all three of these components of a political-economy, is defined in terms of the three input-output categories: a.) per capita of labor-force, b.) per square kilometer of surface area, and c.) rate of long-term improvement of the demographic characteristics of a growing population as a whole. The rate of increase of the relative ratio of output to input in all three combined categories, implicitly defines a function.

As for planetary orbits, this function can not be determined by simplistic statistical projections. We can measure apparent changes in performance after the fact; but, while we can project improvements, we can not arrive at the exact amount of those improvements by statistical accounting, or related, methods. We can know what to do to obtain a significant benefit, but we can not know in advance, by any presently conventional statistical methods, what the amount of that benefit should be.

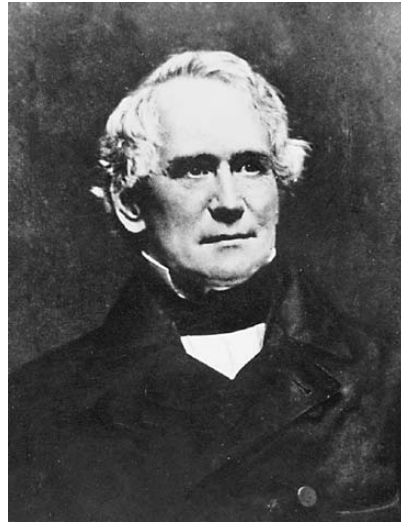
Indeed, if we might imagine, arbitrarily, that all the other difficulties of making an exact projection were solved, we will still be faced with the fact that the driving-force of long-term progress, is the sovereign, and willful cognitive powers of each among the members of that society. No deterministic solutions for this forecasting problem exist; *only voluntaristic ones could succeed in addressing this challenge*. That would not occur according to deterministic standards. *The principal function of the economist, is not to predict exact efficiencies achieved, but to advise on selection of choices of route of travel.*

In everything important in history, in the life of nations, and so on, the decisive factor of change is willfulness, efficient

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54. Op. cit.





*Alexander Hamilton (left) laid out a combined development of agriculture, infrastructure, and urban production, which he identified as integral features of the American System of political-economy. This concept was developed further by the world's greatest economist of the Nineteenth Century, Henry C. Carey (center), and by the German-American economist Friedrich List (right).*

intention. Don't ask your accountant to tell you what the result will be, choose the efficient intention which will permit your appropriate degree of determination of what are relatively good, better, bad, or worse choices of route of action. The best choice should achieve reasonable success in reaching assigned goals.

Think like a scientific discoverer, not an accountant. It is usually despite a mistaken, shareholder-interest type of accounting practice, that, ironically, national economies have achieved their relatively greatest degree of progress in technology and output, under conditions of warfare or threat of warfare. This is not because warfare is productive, quite the contrary. It is that when the imperatives are powerful enough, progress occurs despite the advice inherent in current, shareholder-oriented methods of accounting practice.

The cannibalistic self-destruction of the U.S. economy, since the 1966-1968 Southern Strategy-based election-campaign of President Richard Nixon, illustrates the point. The same can be said of the world under the reign of the IMF's inherently parasitical, "floating exchange-rate" monetary system, since mid-August 1971, illustrates the point. The same is to be said of the tax-reduction policies of President George W. Bush et al., which are destroying the U.S. economy, in order to privatize it, which is, in other words, to cannibalize

it: to loot it into an even more catastrophic condition than has been already reached through such national economic calamities as the Presidencies of Nixon and Carter.

I shall now put together the pieces of the economy which I have identified. I have slightly amplified those elements. To make the readers' task easier, I shall now construct the relevant picture of the economic process in two phases. First, I present the structure of the economic process in cross-section. Secondly, I describe the changes in that cross-section as a process. This process I represent as comparable to Kepler's development of the relationship among the principles which determine the structure of the Solar System.

### **Viewed in Cross-Section**

The first component of an economy to be considered, is what is best classed under the heading of "basic economic infrastructure." In political economy, which first came into existence as a by-product of the first modern sovereign nation-states, during the Fifteenth-Century European Renaissance, the proper functional definition of "basic economic infrastructure," is the nation-state government's unique responsibility for *all of the people* and *all of the nation's area*.

Thus, in matters which affect the functional condition of the area as a whole, or the people as a whole, the state has

duties and authorities which it may delegate conditionally, but the state retains the unshirkable, full responsibility for the general welfare of the nation, its area, and its people, each considered as an indivisible whole interest.

As detailed in earlier published locations authored by me, and in an important historical study by my wife Helga Zepp-LaRouche, although the effort to establish sovereign nation-states may be traced from the famous Peter Abelard, through the struggle by the Emperor Frederick II, in Italy and Sicily, Alfonso Sabio of Spain, and the work of Dante Alighieri, the first successful prescription of the form of sovereign nation-state republic was by Nicholas of Cusa, in his influential *Concordantia Catholica*, in which he defined the essential, principled conditions for replacing the feudal system, by the establishment of a community of principle among distinctly defined nation-states, states which were each perfectly sovereign, and must remain so.

This led, through that century's great ecumenical Council of Florence, to the establishing of a reformed France under Louis XI, and, with the overthrow of the tyrant Richard III, the continuation of the example set by Louis' France in the England of Henry VII. However, for complicated reasons, including the Venice-orchestrated, ruinous religious wars which plagued Europe during the 1511-1648 interval, the first true sovereign nation-state republic was founded, by backing from the leading promoters of the general-welfare principle from throughout Europe, in the U.S.A., during the interval 1776-1789.

The uniqueness of the sovereign nation-state, lies not in its form, but rather its coming into existence as *a fundamental change in principle of government as such*. Prior to the Fifteenth-Century Renaissance, all known society was based on systems in which a relatively small number of families constituted a ruling caste, which hunted, herded, used, and culled the greater mass of their subjects, subjects they treated, in practice of law and custom, as virtually, or even actually human cattle or wild animals to be hunted, and either killed, or turned into domesticated human cattle.

In the history of the region around the Mediterranean, those forms of European culture which subjected the many to the actual or virtual condition of human cattle, were of the type known as the "Babylonian," "Persian," or "oligarchical model," the latter so named for the role of formal oligarchies, including that of Sparta. This was also the model of ancient pagan Rome, and of the Roman Empire, and the Byzantine Empire as well. It was also the model of the European feudal system, and the model expressed as the rise to imperial maritime power of the Venetian financier-oligarchy.

The crucial feature of the Fifteenth-Century revolution in statecraft, was the adoption, as a principle of natural law, of the principle known in Christian theology as "the common good," as not only a principle to be observed by government, but as a condition on which the moral right of government to

exist depends absolutely. This principle of statecraft, has been described, since the Fifteenth Century, as "the general welfare." Under the principle of the general welfare, no government has the moral authority to rule, except as it remains efficiently committed to promote the general welfare of all of the people and their posterity.

In other words, the Confederate States of America ("the Confederacy") never had the moral right to exist. A government which condones chattel slavery, or otherwise subjugates large portions of its own people to the status of virtual human cattle, as approximately 80% of the U.S. population has been so degraded under the legacy of Richard Nixon's 1966-1968 "Southern Strategy" campaign, has abandoned its moral claims to rule. Unless it repudiates such a policy of practice, that society is in the process of bringing its ultimate destruction upon itself, either in the short term, as the U.S. is self-threatened today, or over several or more generations, as the ancient Babylonian, Achaemenid, Roman, Byzantine, Dutch, Portuguese, Spanish, Austro-Hungarian, British, and other empires, have either been destroyed, or are now foredoomed to that outcome. Such, as Aeschylus' Prometheus trilogy argues, are "The Twilights of the Gods."

Earlier forms of society, like the Eighteenth-Century Physiocrat, and virtual Bogomil,<sup>55</sup> Dr. François Quesnay of *laissez-faire* notoriety, deemed the landlord's serfs to be merely human cattle, as making no more economic contribution in excess of their bare subsistence, than mere cattle do. Societies constituted according to the oligarchical model, considered the state and its people, as the personal property of the emperor, or some functionary or caste which held that kind of power. Thus, under those conditions, political-economy as we know it since the close of the Fifteenth Century, did not, and could not have come into existence.

From this principle of natural law, the principle of the general welfare, came such including leading features as the notion of basic economic infrastructure, Roman military roads and aqueducts notwithstanding. The difference between the infrastructure-building practice of civilized society and Roman road-building, will be made clear in the following pages.

Today, the required amount of the total investment in basic economic infrastructure of society, as required for sustaining the growth of the U.S. economy as a whole, runs toward, or sometimes above half of the total investment in the economy. Franklin Roosevelt's mobilization of the U.S.

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55. In the history of Anglo-Dutch liberal doctrines, Quesnay, like Bernard Mandeville, and their follower Adam Smith, based the entirety of their doctrine on the pure superstition, which they copied from the Bogomil cult's tradition, that the successful outcome of a political economy, depends upon an unknown agency operating magically, like an "Invisible Hand," as from under the floorboards. This was the conception of Mandeville and his Mont Pelerin Society followers today, just as Adam Smith plagiarized the same notion, as *laissez-faire*, from the French Physiocrat Dr. François Quesnay.

economic recovery from Calvin Coolidge's terrible 1929-1933 economic depression, required relative levels of investment in about those proportions.

If the level of investment falls significantly below that or a similar required level, the economy as a whole will either simply stop progressing, or will even collapse, in much the way the collapse of the net level of investment in infrastructure has collapsed, in the order of many trillions of dollars, since the depredations caused by the successive, radical policy-changes by the Nixon and Carter administrations.

The fraudulent claims to prosperity, by the U.S. government, during the recent thirty years, have created the spectacle of a man who proudly fills his stomach by dining upon his own legs. The pillaging of earlier capital investments in such infrastructure, and the casting-off of responsibilities for previously established infrastructural responsibilities of government, are typical of the methods of what the French have named *autogestion*, in which abandoning the maintenance of an actually incurred essential cost, even entire, essential elements of industries, appeared as a contribution to profit-levels in some parts of the economy. One does not need to resort to a stock-market forecaster's statistical charts, to know where that kind of "consumer economy" is headed.

The leading "hard" components of basic economic infrastructure, include the categories of general water management of the territory as a whole, development and maintenance of transportation systems for the area as a whole, development of the land-area, and, increasingly, the development of a system of production and delivery of power, in increasing quantities and effective energy-flux densities. The management and development of forests and the land-area generally, are integral and urgently required components of basic economic infrastructure.

Similarly, the state has the responsibility for ensuring the provision, maintenance, and development of health-care and educational systems. The special feature of these two professions, is notable here.

Both latter professions, when competently practiced, place their emphasis upon the sovereign character of the individual's cognitive functions. The role of the educator and working scientist, within the setting of a Classical humanist method of both education and collaboration with colleagues and others, typifies this. In health, the education and work of the individual physician is exemplary of the same principle, just as the relationship to the sovereign personality of the patient defines the role of cognitive functions in the work of physician.

In an educational system consistent with Classical humanist principles of education, that system, when integrated with its proper leading role in fostering the production of the advances of science and technology, produces a benefit which spills over into the economy as a whole, and serves as the principal driver of the national and world economies.

Thus, even on this account alone, the decrease of the

teacher-pupil ratio, to about fifteen to twenty in a class, is essential for a high rate of intellectual productivity, and is therefore indispensable for effecting a high rate of increase of productivity in the economy as a whole. Without a high rate of cognitive participation of each and all among the students, with the teacher, and among each other, a high quality of Classical humanist education, and future scientific and related productivity of the pupils will not be generally possible. At the same time, the increase of the ration of this sector of national infrastructure, relative to other categories of employment, is the mark of a growing and progressive economy and the standard of living enjoyed by its households.

In addition, basic economic infrastructure includes the essential functions of the government itself, without which a nation would lack the efficient capability to meet its general welfare responsibilities.

In all these matters, the state has the lawful option of delegating the conduct of at least some of these infrastructure functions to either local government, or to regulated private entrepreneurs. Where none else will, or could step in to perform the function effectively, the state must.

Without these functions of national government — with a "withering away of the state," as utopian socialist and anarchist orators used to howl their rhetoric — there would be no means for efficient defense of the general welfare of the people. "Globalization," as it is called euphemistically today, would mean a rapidly emerging financier-oligarchy-controlled world empire, under whose reign the greatest genocide in history would be unleashed in a rapidly escalating pattern. It is the modern form of sovereign nation-state, upon which the defense and maintenance of the general welfare depends absolutely.

No national political-economy operating under the rule of universal "free trade," ever succeeded in maintaining itself, except by enjoying and using the power to loot other nations, as the British monarchy has done for about three centuries to date.

As we see in the way in which President Bush's personal financial cronies are looting the energy systems and health-care systems of the nation, the results oblige us to describe these circles as best named "privateers," since their existence depends upon enjoying the same legalized authority to loot and pillage as the legalized pirates, set upon the seas under such colors of legitimacy as "letters of marque." They are modern buccaneers, those multi-national corporate interests, who, with aid of private armies of mercenaries, have been looting Africa, and playing a leading direct as well as indirect role in literal genocide unleashed upon populations such as those in the Great Lakes and eastern Congo area, and who are preparing, together with presently leading forces in Australia, to pick the body of distressed Indonesia, after the customary practice of packs of hyenas.

Apart from basic economic infrastructure, there is chiefly private entrepreneurship. This is represented, chiefly, by two

cornerstone categories, agriculture and goods-producing industry.

The performance of the technologically progressive family, or intra-family farm, of several hundred acres for a crop farm, and perhaps a few thousand for a ranch, proved itself, until President Jimmy Carter, the most effective food-supplying machine imaginable. As long as this type of highly productive farmer could obtain a fair price for the farm's product, the educated modern family farmer would not only produce food, but would also supply a great part of the maintenance of woodlots and idle land-areas, on which the general defense of the environment depended. Cut farmer's food-prices far below the total net incurred cost of maintaining the farm in production, and with continued rate of improvements, especially since the 1977-1981 interval, and you have the wind-swept, desolation across what used to be the great farm-belt of the U.S.A. before that time.

There are areas of the world today, which were once prosperous, areas such as Iraq, which supported a far larger population in ancient or medieval times, than they could support today. The root of that painful discrepancy, is degraded economic policies toward agriculture and infrastructure, such as the practices of usury introduced by the predators who usurped control of the great Caliphate of Baghdad. Travelling a short distance up the Euphrates, during April 1975, I saw with my own eyes, what I had come to know of the history and ancient medieval Mesopotamia from my exemplary 1950s studies of the physical-economic history of the region. What the predatory, usurious successors of the great Caliphs had done to ruin what had been one of the most advanced cultures, during the reign of Charlemagne, and predators who followed, has never been truly repaired to the present day, and, if the faction of Margaret Thatcher and the George Bushes have their way, never will.

That tragedy of Mesopotamia should be taken as a warning of something similar set into motion in the U.S.A., under both Nixon and Carter during the 1970s. Just as the Coolidge Administration acted during the 1920s, to accelerate the spread of what became the dust-bowls of the 1930s, the kinds of economic policies toward agriculture, and rural and semi-rural America generally, today, are modern mimics of the follies which caused the genocidal collapse of regions of the ancient and medieval world.

In his celebrated 1791 Report to the U.S. Congress, *On the Subject of Manufactures*, Treasury Secretary Alexander Hamilton laid out, prophetically, a combined development of agriculture, infrastructure, and urban production, which he identified as integral features of the *American System of political-economy*. This concept was developed further by the German-American economist Friedrich List, and by the world's greatest economist of the Nineteenth Century, Henry C. Carey.

Carey was no arm-chair economist. The 1861-1876 economic mobilization of the U.S.A., was conducted under

American System policies pushed by Carey, which guided President Abraham Lincoln to unleash the great mobilization which made the U.S. the world's leading model of an agro-industrial economy by 1876, a model which inspired much of Eurasia, including Japan, Germany, and Russia, to adopt the American model as their newly adopted policy. The great Nineteenth-Century upsurge of economic progress among nations of Central and South America, were also fruits of the impact of the 1861-1876 program of Carey.

Such are the principal elements of the basic structure of a viable modern agro-industrial economy. Infrastructure, agriculture, physical-goods-producing industry. They are the basic, essential elements, but not the truly crucial element which actually drives economic growth.

That sets the stage for the more crucial elements of the discussion. Now consider the features of an economy which drive it upward.

## Whence Growth

Put all monetary theory aside for the moment, so that our attention may be fully concentrated on reality, on physical economy. The question, so situated, is: How are we able to increase physical productivity of the national labor-force as a whole, such that the standard of living of households is constantly improved over the course of the span of a generation, yet the ration of the total output devoted to new investment increases per capita and per unit-area? Thus, we have returned to the subject of science and technology. Consider the relevant essentials of the matter.

First, all increases in the *potential* productive powers of labor, are derived from the combined effects of, first, the discovery of validated universal physical principles, and, second, from the technologies which are defined as included features of successful test-of-principle experiments. This includes tests of new combinations of technologies.

Second, all realizations of the potential increases in the productive powers of labor, are made possible solely through the cognitive aspects of cooperation among the members of the society. *This is the area in which the principal systemic pathologies of national economies are located.*

Now, think like Kepler! Put it this way. Given knowledge of past trends in performance of a physical economy, on what premises can we presume that those trends show us what the future will bring? Take as an example of the problem, one of Karl Marx's most famous blunders, his doctrine of the decennial depression-cycle.

## The Pathology of 'Free Trade'

Was there a basis for reporting the existence of a past pattern of decennial cycles by Marx and his orthodox followers? Yes, there was. Was there, allowing a certain degree of fair approximation, a significant continuation of that pattern? Yes, to some degree. Was there some adducible scientific basis for such patterns? Yes, there was. Did Marx understand

such patterns? Excepting the great blunder on this point featured in what Frederick Engels organized as Volume III of Marx's *Capital*, Marx did recognize a cyclical trend built into a pattern of a greater rate of appreciation of financial capital than actual output; but, his proposed theoretical explanation for the appreciation of the financial capital, was wrong.<sup>56</sup> The root of his blunder on this account, was his adoption, under such influences as Frederick Engels and the veteran British Foreign Office agent Urquhart, of the official British mythologies concerning the origins of political-economy.

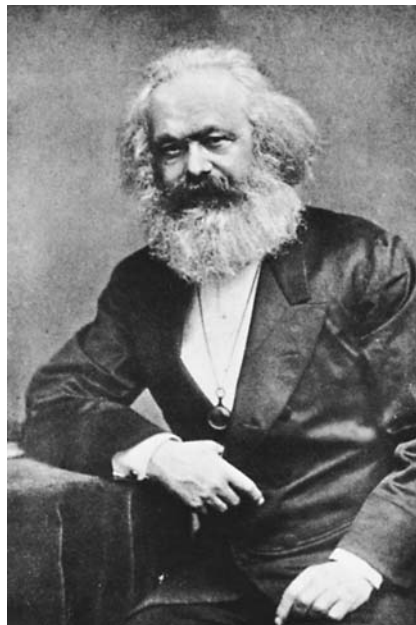
Marx's blunder, on this account, was identical in form to that of Claudius Ptolemy: his, and Engels' failure to grasp the rudiments of scientific method. Except for the fact, that the antics of Margaret Thatcher, the two President Bushes, and their like, might be bringing Marx's name back into vogue again, we need consider Marx's mistakes only as a way of putting that issue to one side. The importance of Marx's error, is that he borrowed it from, chiefly, British subjects and their agents, such as Giuseppe Mazzini.<sup>57</sup> The deadly problem threatening humanity today, is principally the wild-eyed follies embedded within philosophically liberal British political-economy.

The folly of British liberal political-economy, should remind us of Copernicus' qualified success in reviving the ancient Greek astronomer's insistence, and also the insistence of the Fifteenth-Century Cardinal Nicholas of Cusa, that, contrary to Ptolemy, the Earth orbited the Sun. Was Copernicus' approach to astrophysics reliable? No, it was systemically incompetent. Marx and Copernicus failed similarly on this point. They both committed the same fundamental, reductionist's error of method, the error pointed out by Kepler.

The point I am emphasizing at this location in my report, is that, contrary to Marx, *there was never any political-economic necessity that a modern agro-industrial, entrepreneurially-driven economy should be subject to boom-bust cycles*. Similarly, it was never guaranteed that a marriage would produce children, unless one added the proper, efficient *intention* to the arrangement, as Kepler pointed out the crucial significance of *intention*, in his rebuke of both Copernicus and Tycho Brahe. Even putative accidents are usually a reflection

56. On this matter, Marx's *Capital* contradicts itself frequently, as, implicitly, certain of the treatment of the notions of productivity in Volume I, as against related notions of "contradictions" in capital accumulation in Volume III.

57. Not only had Marx been associated with British Lord Palmerston's asset Giuseppe Mazzini since Berlin days. It was Mazzini personally, who convened the London meeting at which the International Workingmen's Association was founded, the meeting at which Mazzini publicly designated Marx as Secretary of the Association. Urquhart's function at the British "Museum" was as intelligence controller of the network of Mazzini's far-flung "Young Europe" and "Young America" associations. It was the "Young America" branch which launched the drive for the Confederacy from South Carolina. Obviously, Marx abhorred the Confederacy, an abhorrence which, among other ironical items, demonstrates his ingenuousness on relevant points of life in the days of Bentham's protégé and successor, Lord Palmerston.



*Contrary to Karl Marx, there was never any political-economic necessity that a modern agro-industrial, entrepreneurially-driven economy should be subject to boom-bust cycles.*

of an intention lurking somewhere among the bushes. What should we conclude from this?

Address this question from the standpoint of my unmatched success, at least according to the published written record of my forecasts, as the most successful economic forecaster among all known during more than three decades. That has never been factually contested, except in cases in which what is attributed to me for that purpose is contrary to fact. This permits me to make certain blanket statements, as an expert, on the condition that I then show the evidence proving that proposition.

Looking at the present state of globally extended contemporary European models of economy, the principal fallacy in all these cases, has been the adoption of the religious superstition of the Bogomil cult, the so-called "free trade" principle of Mandeville, Quesnay, Smith, Bentham, et al. The contrary principle is typified by that American System of political-economy, which was founded largely on the basis of the Americans' study of the argument which Leibniz made, under the formulation "life, liberty, and the pursuit of happiness," against the follies of the dogma of John Locke's *Essays on Human Understanding*.<sup>58</sup> Here, in this contrast, we meet, yet once again, the same issue of science versus reductionist statistics, which Kepler addressed and proved in his treatment of the erroneous method of Ptolemy, Copernicus, and Brahe. The issue is, once again, reductionist forms of statistical determinism, versus science.

The crucial issue of economic processes, is, "What is the

58. See, Philip Valenti, "The Anti-Newtonian Roots of the American Revolution," *EIR*, Dec. 1, 1995; and Robert Trout, "Life, Liberty, and the Pursuit of Happiness," *Fidelio*, Spring 1997.

*intention* of the state?” Here is where Marx’s quasi-Hobbesian notion of a state defined by molecular-interest modes of conflicts among private and class interest, fails axiomatically. The founders of the U.S. republic were wiser. The secret of choice between successful and failed economies, lies within the choice of *intention* of the state, the intention adopted as the efficient will of the nation as an indivisible sovereignty.

In the case of the U.S., the overriding intention is that set forth in the opening paragraphs of the 1776 Declaration of Independence and the 1789 Preamble of the U.S. Federal Constitution. That is the primary constitutional intention of the U.S. economy under the American System of political-economy. That intention is implicitly sufficient, on the condition that we must, from time to time, supplement that with specific medium-term to long-term policy-objectives, as, for example, in the case of the mobilization of a war to defend the Preamble of our Constitution.

That issue of the *intention* of the indivisible sovereignty of a republic, an intention premised upon Socratic forms of cognitive reason, has been the life-and-death issue of internal political and social conflict within what became the U.S.A. since the English crisis of 1688-1689. It has been the continuing, legendary conflict between the two great factions which have divided our republic internally, from that time to the present day. It has been known over more than two centuries as the conflict between the American patriotic tradition, which I represent in this report, and the American Tory tradition of all of my notable classes of political enemies.

The latter enemy, the enemy of the legacy of President Franklin Roosevelt, and of what I represent today, is typified by the Southern Strategy launched, as a virtual coup d’état, under the banner of the Nixon election-campaign of 1966-1968, the banner carried by ex-President Bush and President Bush today. The Southern Strategy form of the American Tory faction, is typified by an alliance between the type of Wall Street interest once represented by the “shareholder” interest expressed by the Bank of Manhattan’s, and the British Foreign Office’s Aaron Burr then,<sup>59</sup> and the southern slaveholder interests, and so-called Nashville Agrarian tradition today.

From the late 1770s, the conflict between the American patriots and the influence of the American Tory currents, was expressed as a conflict between two classes of general economic policy, a patriotic policy known as “protectionism,” and a Tory policy known as “free trade.” The quarrels which have erupted around those two policies, have taken many forms, some crucial, some merely secondary, or even trivial. The issues addressed by this report limit our attention to the primary, constitutional implications of the opposing policies.

The function of protectionism, is to give preferential treatment to those activities which promote the general welfare,

and to place a relatively greater burden on those which do not. Traditionally, this application of the general welfare has been expressed, chiefly, in the following several ways.

1. Regulate the development and maintenance of projected requirements in basic economic infrastructure, including all aspects of the general welfare of the population at large, and provide for the national defense.
2. Control the issue, adequate issue, and circulation of a national monopoly over the national currency, including the frustrating of all speculation against it by either domestic or foreign agencies. An efficient prohibition of the practice of usury in all forms, with efficient measures to accomplish this.
3. Create a regulated system of credit and banking, and regulate practices in both, that according to both the principled national interest in promoting the general welfare, and on behalf of medium- to long-term policies which have been adopted as in the current national interest.
4. Regulate foreign and interstate commerce, as the principle of the general welfare and current national interest, combined, may require.
5. Give preferential treatment to those categories of investment and other activities, to those private undertakings which should be given higher priority according to the current determination of the national interest.

*All these and related measures are aimed, inclusively, at preventing the influence of monetarism over the economy. If that is done efficiently, no business cycle would exist.*

The business cycle, is a product of the toleration of the practices associated with so-called “shareholder value.” Under the latter toleration, unless interrupted, financial bubbles leading to either cyclical or even breakdown crises, such as the presently globalized general financial collapse, are inevitable. Such bubbles, such as the present U.S. financial bubble, assume the form of investment in the expected rate of monetary yield on a financial holding, rather than investment in increasing both the physical productive powers of labor, and the quantity and quality of the total product. In other words, promoting the three objectives I have summarized earlier: a.) increase the physical productive powers of labor, per capita; b.) increase the net rate of output, in quantity and quality, per square kilometer of area; c.) defend and improve the demographic characteristics of the households.

Government must use its rightful, constitutional monopolies of power, to ensure that the flows work to those in-

59. Anton Chaitkin, *Treason in America: From Aaron Burr to Averell Harriman* (Washington: Executive Intelligence Review, 1999).

tended effects.

The significance of those prescriptions of any well-ordered sovereign nation-state economy become clearer, when we consider the American System's only strategically significant rival, the British model of political-economy.

## Where It Came From

Taking into account all the faults of the U.S. government's policies during the post-Franklin Roosevelt, 1945-1961 interval, that economy was still a net success, as measured by the criteria I listed above. The downturn began during the fiscal year 1966-1967. If we take into account the often-overlooked capital losses to the U.S. physical economy through what I have described in the French style as *autogestion*, the U.S. economy has been in an uninterrupted down-slide, since the substantial, abortive cut-backs in the Kennedy space program, during 1966-1967. We did reach the Moon in grand style, but have not been able to return, since that initial series of landings.

The shift in policies causing this downturn, were introduced about 1964-1966, about the time the Beatles appeared on the Ed Sullivan Show. A British-inspired cultural-paradigm down-shift, accelerated by the impact of the U.S. war in Indo-China, spearheaded the anti-industrial, anti-science shifts in policy, which have been the characteristic feature of the 1967-2001 decline of the U.S. physical economy, and real standard of living of the lower 80% of family-income brackets, to date. The most notable correlative of these factors, was the role of the Nixon Southern Strategy campaign of 1966-1968. The crescendo of "free trade" mania and "shareholder value," since, is the characteristic feature of the degeneration of U.S. economic policy during the period since, especially August 1971, and even more emphatically, since the 1977 inauguration of President Jimmy Carter.

In other words, the U.S.A. which had emerged at the close of Franklin Roosevelt's Presidency, was predominantly an American System economy, although with an increasing influence of American Tory influences under Presidents Truman and Eisenhower. President Kennedy represented a credible threat to return the U.S. to the American System, but his assassination, especially after McGeorge Bundy's immediately clearing the way for the war in Indo-China, brought the Kennedy economic policies to a close by 1966-1967. With Nixon and Carter, the American Tories took over. The Mont Pelerin Society version of the British model, otherwise sometimes known as the Thatcher model, took over in the domain of economic policy increasingly, all the way up to the currently ongoing crash of the system that has ruled and ruined us under the preponderance of influence of the Southern Strategy.

What, then, is this pesky British liberal model?

It is the Venetian model, a model developed during the period of Venice's replacing Byzantium as the dominant imperial maritime power of the Mediterranean. This imperial maritime power reigned through its practice of usury, initially

as the "loan shark" of feudal Europe. Venice's policies were typified by that so-called Lombard banking system, which, together with the state of warfare orchestrated by Venice in concert with the Plantagenets, plunged mid-Fourteenth-Century Europe into what historians have named "The New Dark Age," during which more than 30% of the level of population of Europe, and half its parishes vanished, within but a few decades.

The Fifteenth-Century Renaissance, which launched the institution of the sovereign nation-state, threatened to end Venice's power. Venice, after defeating the League of Cambrai at the beginning of the Sixteenth Century, struck back, unleashing the persisting pattern of massive religious warfare of the 1511-1648 interval. As part of this process, a Venetian, Zorzi, appeared as the marriage-counsellor to England's Henry VIII. Zorzi was flanked by a Venice asset and Plantagenet heir, Cardinal Pole, by the most notable agent of Venice, Thomas Cromwell, and sundry others. The bastion of the Renaissance in England, Sir Thomas More, was beheaded. With developments of 1588-1589, including the rise to power of such agents of Venice's Paolo Sarpi as Francis Bacon and Thomas Hobbes, the Renaissance was almost uprooted in England; the empiricism concocted and spewed by Sarpi took over the official culture of England.

Courageous and insightful representatives of the tradition of Thomas More, William Gilbert, and William Shakespeare, backed the establishment of those American colonies founded in the spirit of the Renaissance. With the later coup d'état by the bloody tyrant, William of Orange, the Venetian Party of Europe had seized nearly total control of England. There was an heroic counter-effort by English patriots, such as Jonathan Swift, but, with the banning of the potential Prime Minister, Leibniz, and the death of Queen Anne, the Venetians, their economic power centered in the Dutch and British East India companies, gained dictatorial power with the accession of Orange's former protégé, George I.

Meanwhile, in the aftermath of the 1648 Treaty of Westphalia, the religious warfare in Europe brought under control, the imperial maritime power of Venice was tottering strategically. Under these circumstances, the Venetian financier-oligarchy aimed to create a new "Venice" in its own image, to the north, in those countries, England and the Netherlands, best suited strategically to emerge as a new imperial maritime power, to operate globally, rather than with the limits of what had been feudal Europe and its Mediterranean and Black Sea flanks. England and the Netherlands became the clones of Venice. During the sweep of the Eighteenth Century, when Venice was drifting into the background, the Venetian Party, so-called, dominated Europe. Venetians deployed from Italy turned up playing a strategic role as influentials from inside the capitals and governments of the nations of Europe.

In this circumstance, the heirs of the Renaissance, gathered around the hope of establishing a true sovereign nation-state republic in English-speaking North America, banded together, using the American cause as a common rallying-

point of resistance to the influence of Venice and its financier and royalist assets throughout Europe. Thus, when one rips off the masks, the only significant division within the entire sweep of the post-1511, globally extended European civilization, is the continuing conflict between those principal political forces, the Renaissance tradition, represented, on the one side, by the American System of political-economy, and, on the other, the Venetian tradition whose leading expression today is the British liberal model of economy. The emblematic expression of this conflict, is the conflict between production and usury.

## A Riemannian View

We must learn from the experience of the most typical, separate and combined follies of “free trade,” “out-sourcing,” and “globalization.” See why only a reckless incompetent, or worse, in economics, would ever endorse the idea of gaining an advantage from “cheap labor,” and “less burden of maintaining infrastructure” in less developed regions. The principle subsuming these and related cases, is that *productivity is not located within the activity of an individual, nor of a particular private enterprise*. A few examples will be sufficient for our purposes here.

Consider the case of infrastructure, first.

Given, two virtually identical industrial plants, committed to producing products of identical design and specifications, one in an infrastructure-rich region, the other in an infrastructure-poor region. Even assume that the skills of the operatives are equal, the plant situated within an adequate, or improved infrastructure of its nation and region, will have a significantly higher productivity. Bernhard Riemann would explain it to you very well.

Before reaching his conclusion, Riemann, as a highly skilled experimental physicist, trained in the school of Carl Gauss, Wilhelm Weber, and Lejeune Dirichlet, would demand that the relevant data be “normalized,” that in the same sense a qualified astrophysicist, such as Kepler, would do in dealing with a series of observations to be made in the setting of a multi-body function. So, in economics, one must define the system in which one’s measurements are to be located; otherwise, you are incompetent, as most contemporary academically trained economists are. You must always define the functional relationship of the subjects of the observations to the context in which they are situated. You must also define the cycles, such as physical-economic half-life of a capital investment, of each subject and the distinct functional aspects of its context.<sup>60</sup>

60. Never allow ideology, such as mere popular opinion, to substitute itself for science. Typical of the kinds of errors generated by ignoring such basic principles of experimental science, are the false assumptions underlying the Kyoto agreement on the subject of so-called “global warming.” Any competent study of global warming and cooling patterns, must begin by setting forth the two dominant factors in determining the cooling and warming trends in the Earth’s atmosphere: the recurring long-term cycles of glaciation, and cycles of Sun-spot and related action by the Sun itself. The recent warming

Although the principal determinant of potential productivity is cooperation in the application of discovered universal physical principles, the relative impact of the application of such principles, and their associated technologies, to production, depends upon four factors: 1.) the quality of cultural development of the labor-force employed; 2.) the level of intensity of physical-capital investment in the development and use of the means of production; 3.) the development of basic economic infrastructure; and, 4.) the effect of the environment, including its improvement or depletion, on the other three.

1. For example, a family household which must work the equivalent of more than one-hundred-twenty hours a week, or more, especially if the commuting-time for each working person exceeds four hours per working day, can not sustain the cultural quality of life in the household to raise children effectively. If the household income per capita is relatively low, the destructive pressures tend to be enormous. If the educational system and related cultural environment, are not pro-physical science (rather than formal-mathematical) and do not approximate the principles of a Classical humanistic education, the quality of potential productivity, and capacity for rational behavior, and ability to assimilate challenging productive skills, of the next generation’s labor-force will be significantly inferior to that of the current generation, falling repeatedly over successive generations.
2. Even under the relatively best family-household conditions, and formal education, the lack of sufficient well-maintained intensity of capital investment in means of production, will depress the productivity of the labor-force significantly below its human potential. Depletion of historical physical-capital investments, will lower productivity, even bringing it down to catastrophically poor levels, as we witness the reaching or verging upon such breaking-points in the U.S.A. and Europe today.
3. If the environmental conditions are kept relatively constant, the most decisive factor in determining relative productivity is basic economic infrastructure, as I have described this above. On this point, the importance of employing the standpoint of Riemann is made most emphatically clear.
4. The so-called “environment,” including climate, is increasingly subject to improvements, as the level

patterns documented, coincide almost exactly with Sun-spot cycles. Overall, the world is in a long-range cooling phase, since about a thousand years ago, leading toward a new ice age a few millennia or so down the line.



of accumulated knowing of universal physical principles increases, and as higher levels of productivity and of applicable energy-flux density emerge. Furthermore, as science and technology progress, even the definition of natural resources changes.

For example, with the presently foreseeable development of large-scale power-generating complexes of very high energy-flux densities, the use of so-called fossil fuels will shrink as if toward the vanishing-point. Petroleum and natural gas, like coal, for example, will be used, more prudently, as feed-stocks for the chemical industries, while synthetic fuels for heating, automobiles, and aircraft, for example, will be generated more or less locally.

Also, had the U.S. space-program not been aborted increasingly, since nearly thirty-five years ago, we would, today, have established automated production on the Moon, would have a functioning geostationary space-station in operation, and would be combining Moon-built large-scale components with relatively light-weight essentials lifted, by aid of a Sanger-type system, to be combined with the product constructed on the Moon. Under those conditions, sending flotillas of such space-craft, under continuously powered flight, to the orbit of Mars, as Wernher von Braun proposed during the 1950s, would have occurred, or have been in sight, and the building of a pilot “science city” under the surface of Mars, would have come within reach.

Under the kinds of conditions of ongoing change in the Solar System, that implies, the benefit to life on Earth would not be, generally, raw materials shipped back to Earth, but, rather, changes in the way we live and work on Earth. Under those conditions, the functional definition of terms such as “climate” and “environment” will undergo significant changes. The conclusion to be reached from such considerations, is simply, that it is man’s interest and duty to improve, not ruin our environments, and, by relying upon scientific progress, we shall always be in reach of doing what must be done next.

The immediate issue to be stressed here, is that “out-sourcing,” “free trade,” “privatization,” “deregulation,” and “globalization,” are violating every principle of sound economic practice. These are more in the nature of diseases of the mind, than deserving the dignity of being called “policies” or “legislation.” These are typical of the deluded axiomatic assumptions, which induce fishbowl-syndrome-like folly in the mass behavior of much of our present population.

That should be generally obvious, even without introducing the implications of Riemann’s discoveries. However, in defining the long-term view needed to guide us in rebuilding our much-ruined planet and its national economies over the span of a coming generation (about twenty-five years), the introduction of that Riemannian standpoint becomes essential for long-range policy-planning.

What “out-sourcing” has done, is to loot the pre-existing

potential of the nations to our South, for example, while destroying the productive potential and productivity of both the U.S. economy, and also of the members of its labor-force. In the latter case, we have, over a period of approximately thirty-five years, followed the prescription of the “Triple Revolution” manifesto of 1964.<sup>61</sup> The emphasis, especially since the 1979 institution of the so-called “Volcker measures” of “controlled disintegration of the economy,” has been on dumping U.S. industries and industrial employment, and substituting cheap labor from poorer nations. We have either shipped jobs into overseas cheap-labor markets, or imported the cheap labor to replace the presently employed, and have forced our citizens to meet the competitive standard of cheap foreign goods, and imported cheap labor, thus crashing our family incomes, and also the real, non-fictitious component of our national income. As a matter of government and corporate policy, the U.S. has collapsed its investment in basic industry and employment of its productive labor-force, ruined the U.S. agricultural system which was once capable of feeding much of the world, and created a vast increase in otherwise unemployed people in readily dispensable forms of labor-intensive employment, in categories which are of doubtful usefulness, and which are, at best, purely overhead, easily discarded “when the time comes.”

Thus, by applying the rules of “free trade” and “globalization,” the nations participating in such exports to the U.S. (for example) are looted, by paying the employed labor far less than the cost to the physical economy of the exporting nation. Thus, like the British Empire, the U.S. has been living lately not on what it produces, but, instead, on a growing margin of “invisible earnings,” scraped off the backs of the nation used as an “out-source.” By “globalizing” the world market, the nations used as out-sources are both more and more cannibalized themselves, but they, the victims of this arrangement, now engage in cannibalizing one another in a similar way.

Thus, the margins represented, cumulatively, by buying way below the actually incurred physical cost of production, by adding the unpaid margin of the U.S. current accounts deficit to the nominal income of the U.S., and by a multi-trillion-dollar sucking of the monetary flows of the world into U.S. financial markets, the situation has been now produced, in which the collapse of the U.S. as an importer of last resort, sets forth a self-feeding spiral of collapse of the financial and physical economies in all parts of the world sucked into the “globalized free-trade” system, including the U.S. itself.

Now, look at the picture I have just described from the vantage-point of a Riemannian view of the impact of basic economic infrastructure.

In Riemannian mathematical physics, *the characteristic feature of any physical action, is the product of both the rela-*

61. March 1964 memorandum to Lyndon B. Johnson from the Ad Hoc Committee on the Triple Revolution, “The Triple Revolution” (Santa Barbara, California: 1964). [www.pa.msu.edu/people/mulhall/mist/Triple.html](http://www.pa.msu.edu/people/mulhall/mist/Triple.html).

*tive value of the local action itself and the characteristic value of action of the system as a whole.* This latter value can not be determined mathematically “at the blackboard.” As Riemann says in the concluding sentence of his dissertation, it can not be determined in the department of mathematics, but in the department of physics. It must be measured experimentally, as Max Planck understood, and described his own work in addressing the challenge of Wien’s displacement principle.<sup>62</sup>

In economics, the most significant macro-economic influence on determining the net productivity of production, is the level of development and maintenance of the basic economic infrastructure of the economy as a whole. In other words, on condition that we measure relative productivity, in hard, physical terms, rather than the soft, and usually misleading, financial-accounting terms, it is apparent, that two virtually identical enterprises, situated in respectively different national-economic infrastructures, will vary in their expressed net productivity, that according to the general characteristic implicit in the national-economic infrastructure.

This applies both to so-called hard infrastructure, and to the impact of quality of development and performance of education and health-care systems. For example, the existence or non-existence of a Classical humanist educational system, will have an enormous impact on the long-term rate of change of productivity of the national economy as a whole.

## The Eurasian Land-Bridge

In retrospect, today, one of the most important, and technically successful long-range economic forecasts which I have made, was first uttered in mid-February 1983, in a Washington, D.C. hotel-room, during a continuation of back-channel negotiations between the Reagan Administration and the Soviet government. The subject of the negotiations was what President Reagan, a month later, announced as what he had named “A Strategic Defense Initiative.” During my February discussions, I had stated a two-part warning to the Soviet government, that: a.) if President Reagan were to adopt, and announce the policy of cooperation which I outlined, and b.) if the Soviet government were to reject that publicly announced offer, and pursue the Soviet alternative course indicated, the already fragile Soviet economy would be faced with a general political collapse within about five years.

As in the President’s words on March 23, 1983, what the President proposed, publicly, to the Soviet government then, had no similarity to the silly “High Frontier” proposals of my publicly self-avowed personal adversary, the Heritage Foundation’s double-dipping Lt.-Gen. (ret.) Daniel Graham, or to the folly proposed by the present Bush Administration.

A few months after that address, the Bush faction, the

*Washington Post* gang, and a corrupt element in the Justice Department had my role sidelined. In the meantime, I had stated publicly what I had said to the Soviet government in the February meeting. It took six years, not five, for the Warsaw Pact to begin crumbling. Such are the perils of even the most competent medium-range and long-range forecasting.

That, was not the end of the matter. I continued my proposed policy. On Oct. 12, 1988, Columbus Day, I delivered a press-conference statement in Berlin, in which I forecast the likelihood of, a.) the early collapse of the Warsaw Pact system, probably to begin in Poland, and, b.) the prospect of the early subsequent reunification of Germany, with Berlin designated to become, once again, the national capital. In the same statement delivered on that date, later rebroadcast in a nationally televised feature in the U.S.A., I indicated the policy which the next U.S. government should adopt in response to those developments.

The crack in Poland came as I had forecast its more immediate likelihood. A chain-reaction spread through eastern Europe, culminating in a fateful moment in Leipzig. So, that November and December, under heavy pressure from both Britain’s Prime Minister Margaret Thatcher and France’s President François Mitterrand, a foolish President George H.W. Bush, did almost exactly the opposite to what I had proposed. To his credit, or, perhaps that of U.S. Ambassador Vernon Walters, he did not block German reunification, as the savage Thatcher and Mitterrand had demanded, nor did he take steps to prevent Berlin’s designation as the future capital; but, typical of Bush as I have known him over about a quarter-century, about everything else he did in this matter, was terribly wrong.

I stuck to the policy I had promised in my Oct. 12, 1988 Berlin address. I defined what became known as the Paris-Vienna-Berlin Productive Triangle for rebuilding the combined economies of what had been western and eastern Europe; during 1991-1992, I proposed, and my associates elaborated what is now known as the Eurasian Land-Bridge policy.<sup>63</sup> It now appears, that a process now under way could make that Land-Bridge policy a reality. What it is important to stress, as an example of crucial value here, is the distinction between what is thought of merely as a “new Silk Road,” and a system of *economic-development corridors* criss-crossing continental Europe, including direct rail connections from the Eurasian mainland into Japan, and, also across the Bering Strait into the Americas.

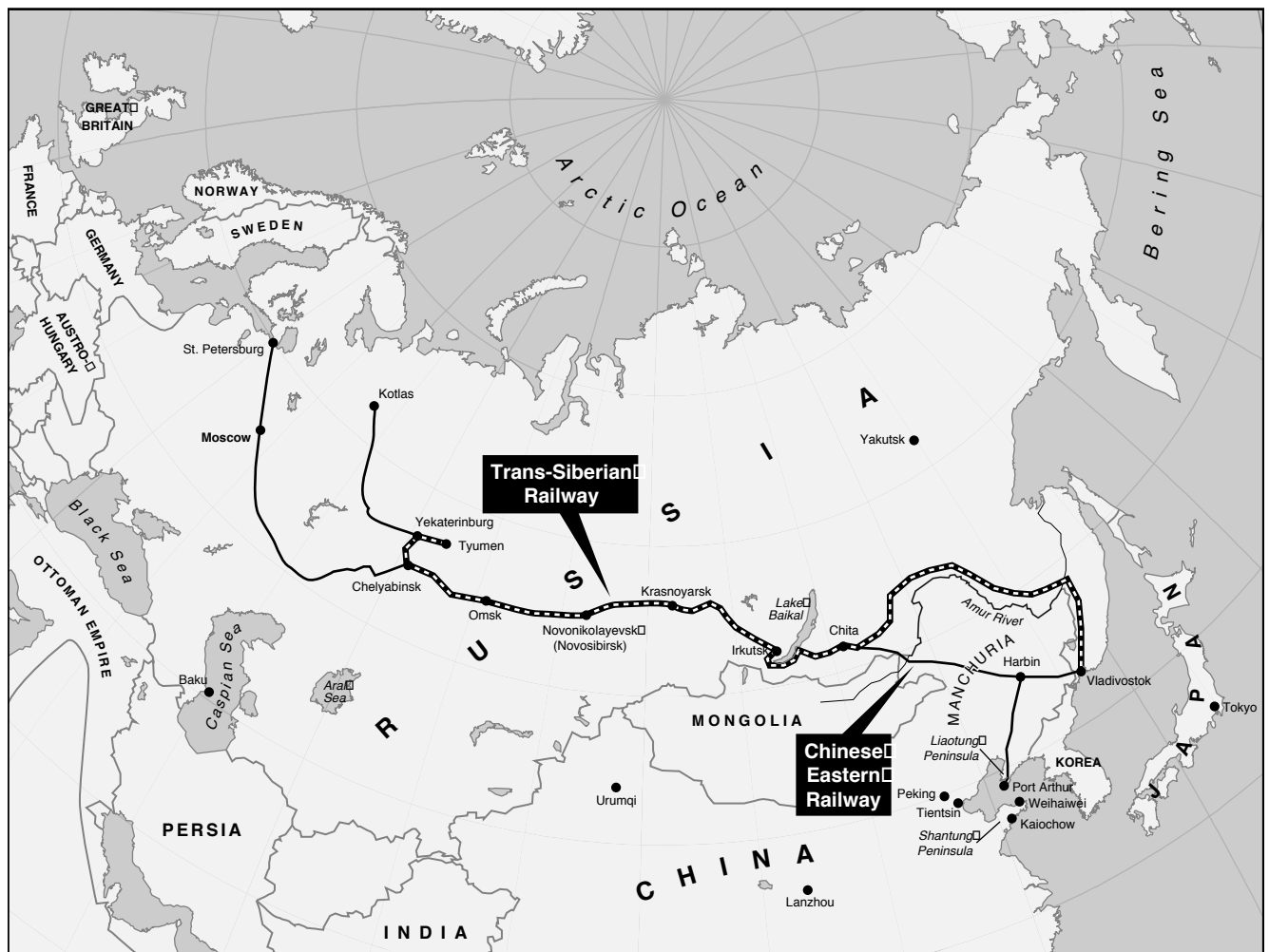
The intention of using transportation trunk-routes as “development corridors” originated, largely through the radiated influence of Leibniz, into the young United States. As Graham Lowry has documented crucial aspects of this history, the idea

62. Op. cit. Planck’s result has a significant parallel in Weber’s experimental demonstration of the existence, and microphysical value, of the Ampère “angular force” of electrodynamics.

63. Jonathan Tennenbaum et al., *The Eurasian Land-Bridge: The ‘New Silk Road’—Locomotive for Worldwide Economic Development* (Washington, D.C.: EIR News Service, Inc., January 1997).

FIGURE 1D

## Route of the Trans-Siberian Railway and the Chinese Eastern Railway, 1890s



*Dmitri Mendeleyev's plans for the Trans-Siberian Railway had in mind the development, not simply of railway routes, but of development corridors, in the same general sense proposed by LaRouche for the Productive Triangle and Eurasian Land-Bridge (see Figure 2).*

of using railways as development corridors, was an extension of the persisting impulse of the American patriots even during colonial times, to develop water and highway routes into the western regions. The development of the first general economic plan for railway development, is usually traced by historians to the work of the German-American economist Friedrich List.

This policy was carried forward into the form of the U.S. building of economic-development corridors across the U.S.A., as the transcontinental railway system. During and immediately following the Philadelphia Centennial celebration, Germany, Russia, and other nations adopted the success of the Lincoln-Carey 1861-1876 upsurge of the U.S. economy as the model for their own nations. Mendeleyev's leading role, and the policies of Count Sergei Witte, typify the direct

U.S. influence behind the Trans-Siberian Railway. Studying some of the work of Mendeleyev, shows that what he had in mind was the development, not of simply railway routes, but development corridors in the same general sense I have proposed in initiating both the Productive Triangle and Eurasian Land-Bridge policies.

My proposals, and the view which underlies my making them, are to be understood from the vantage-point of the Riemannian view of the mathematical-physical form of functional relationship between basic economic infrastructure and productivity of individual farms and industrial firms.

President Franklin Roosevelt mobilized the recovery of the U.S. economy from the Depression wreaked under Coolidge's reign, by foremost priority on public investment in basic economic infrastructure. The case of the Tennessee Val-

FIGURE 20

## Eurasia: Main Routes and Selected Secondary Routes of the Eurasian Land-Bridge



ley Authority typifies this in the simplest and clearest way. Roosevelt required nearly eight years of economic recovery measures dominated by infrastructure development, to produce the national economic machine capable of dealing with the war made virtually inevitable by the 1933-1934 consolidation of Adolf Hitler's dictatorship, a war which Roosevelt saw coming, no later than 1936, and for which he prepared the U.S. economy.

Today, in a ruined world, a world ruined by about thirty-five years of reigning folly among most of the world's nations, we can recover, but not easily: the ruin has been allowed to go on too long for quick fixes. We face, world-wide, an economic situation worse than that of the early 1930s, but it is a situation we can begin to master immediately, if we choose. Even if we have the sense to make the needed sweeping changes in international monetary, financial, and economic policies, the road upward will be a hard one. About a generation will pass before the world will reach the plateau we must reach, if civilization is to avoid a global demographic catastrophe.

There, as Shakespeare wrote, "is the rub." Are you, personally, willing to make those changes in your opinions, your outlook, your intentions, which most of us, at least,

must make, if we are to come safely out of the presently perilous situation now coming down upon the world as a whole? That is where the delusions really show themselves most clearly.

Are you willing to discontinue the goldfish-bowl syndrome of popular opinion until now? Are you going to continue to insist, "I don't go there," when you are asked to give up foolish beliefs such as "free trade," "new economy," "deregulation is here to stay," "you can't put the toothpaste back in the tube," or "no one I know is going to go for it," or, "you could be right, but since I have to go along, to get along, I have to oppose what you suggest"? Every man his own Shakespeare's tragedy of Hamlet!

If you were to visit some early New England graveyards, such as the famous one on Tremont Street in Boston, you would see some interesting comments inscribed on the tombstones. If our nation is buried, it could be that on our nation's tombstone, some witting craftsman would carve the following inscription: U.S.A. b. 1776, d. 2002. "It Had To Go Along, To Get Along."

Were that to happen, would we not be obliged to say, that the prevailing opinion of the U.S.A. today, is not merely a goldfish-bowl syndrome, but, that it was, frankly, insane?