

‘THE MASK OF NANCY PELOSI’

## The Force of Tragedy

by Lyndon H. LaRouche, Jr.

---

*Since the relevant summations by V.I. Vernadsky and Albert Einstein, combined, we now know of the partition of the known universe among four rigorously defined phase-spaces: the ordinary (non-biotic), the Biosphere, the Noösphere, and that still higher order of phase-space, which subsumes the Noösphere. The greatest among the challenges with which this present knowledge confronts us, is typified by the subject of Classical tragedy. Here, at the level of Classical tragedy, physical science, Classical artistic composition, and the subject of statecraft, as known to Aeschylus, Plato, Shakespeare, Lessing, and Schiller; are combined as a single subject-matter: a fourth general phase-space of reality, the true substance of the subject of history.*

---

The book *Roosevelt and Kennedy* has a number of interesting passages on Joe Kennedy’s fascism. One is from Harold Ickes’ diary in 1938, “Roosevelt related an astonishing exchange. Kennedy had remonstrated with him for criticizing fascism in his speeches. It was all right to attack Nazism—not fascism. Why? Kennedy had said that he frankly thought we would have to ‘come to some form of fascism here.’ ‘Joe Kennedy, if he were in power,’ the President went on, ‘would give us a fascist form of government. He would organize a small powerful committee under himself as chairman and this committee would run the country without much reference to the Congress.’”

On the subject of tragedy: since the U.S. general mid-term election of November 2006, when the U.S. Congress had an estimated 70% popularity with the U.S. population, until now, less than a full year later, the estimated popularity of the Congress has fallen below 11%, a fall largely due to the role of

Speaker of the House Nancy Pelosi. For similar causes, the U.S. dollar has also fallen, that at a presently accelerating rate. This threatened ruin of the prospects of the Democratic Party which Mrs. Pelosi’s misconduct has done much to produce, has now imperilled the continued existence of the original constitutional form of our republic.

This is, at this present moment, our present national tragedy, and, perhaps also an actually global tragedy. Shades of the fable of the horse-shoe nail: if our U.S. does not escape this self-inflicted tragedy which Pelosi’s case expresses, the U.S. will not be able to play its indispensable part in contributing to the recovery of the world from the onrushing, global breakdown-crisis now fully under way. On this account, civilization world-wide is also imperilled.

The most obvious factor behind the dismal pattern of policy-shaping in which Speaker Pelosi’s decadence has been a crucial instrument, can be traced from the beginning of 2006, but, as has been shown, more, and more flagrantly since the beginning of 2007, has been consistent with the policies of not only certain Kennedy circles (e.g., Mrs. Maria Kennedy Shriver Schwarzengger), but also with the convergence of Mrs. Pelosi’s practice with the economic and “permanent revolution, permanent war” policies of British (Fabian Society) spy Alexander Helphand, his dupe Leon Trotsky, Vice-President Dick Cheney, Samuel P. Huntington, George Shultz, and Felix Rohatyn.<sup>1</sup> The clear intention behind this recent and continuing, assigned role of Mrs. Pelosi’s image, like a

---

1. I.e., more recently, the “Parvus-Trotsky” doctrine of so-called “revolution in military affairs” is to be traced explicitly to Huntington’s *The Soldier and The State*, and to the spreading popularity, on secondary school and college campuses, of mass indoctrination in terrorist (“gladiatorial,” e.g., ideologically Romantic, fascist) models of so-called “computer games.”



PRNewsFoto

*Maria Kennedy Shriver cheers for hubby, California Gov. Arnold Schwarzenegger.*

*Joseph P. Kennedy, Sr. President Franklin Roosevelt said that if Kennedy were in power, he "would give us a fascist form of government."*



EIRNS/Joanne McAndrews

*Nancy Pelosi's decadence as Speaker of the House is consistent with the policies of such Kennedy circles as Maria Shriver Schwarzenegger, as well as Felix Rohatyn.*

Medusan mask of infamy, is to set up the situation for the election of a Republican candidate, such as an otherwise unelectable, presently leading prospect for this role, former New York Mayor Rudolph Giuliani, by default, in 2008.

To this effect, former Mayor Giuliani has acquired a circle of special advisors who, when their past performance is considered, represent, combined, a freakish right-wing political zoo, the virtual inhabitants of H.G. Wells' "Island of Dr. Moreau."<sup>2</sup>

Such cases are typical of the true processes of tragedies in real history, as in Classical drama. This point is illustrated by the ruin of Greece in the Peloponnesian War, as in the account of tragedy by Aeschylus, or, by Shakespeare, Friedrich Schil-

ler, and in relevant works, such as *The Bravo*, of high-ranking American intelligence operative James Fenimore Cooper.<sup>3</sup> Unfortunately, university education being as decadent as what it has become, generally speaking, over the course of the past century or so, our reigning, political class of today has never really understood the swindle used to dupe them in such a fashion, again, and again, and again.

The key to understanding how most of our leading politicians, and others, became dupes for that game in which Pelosi is being played, can be discovered by studying what must be

2. Norman Podhoretz, Bill ("Simple") Simon, Steve "Flat Earth" Forbes, Daniel Pipes, Grover Norquist, James Woolsey, and John Bolton.

3. James Fenimore Cooper was, like Edgar Allan Poe, a birth-right member, and high-ranking operative of the United States' intelligence organization, The Society of the Cincinnati, the Society which had been founded by George Washington, the Marquis de Lafayette, and Washington's second-in-command, Alexander Hamilton.

fairly described as nothing less bad than the stupidity which today's relevant university graduates have shown, in practice, as their certifiable political and scientific ignorance of the actual subject of real-life Classical tragedy.

Some definitions are essential at this juncture.

Contrary to induced popular belief, Classical tragedy since Aeschylus, has one clear, unchanging definition in the legacy of the best among the examples of leading poets, playwrights, and other relevant composers, such as Aeschylus, Shakespeare, and Friedrich Schiller. Typically incompetent, current academic views on this subject, have been sometimes associated with the teaching of the subjects of Shakespeare by Romantics such as Coleridge and Bradley. Crude, but relevant, nonetheless, is the witless and vulgar practice of attaching the rubric "tragedy" to almost any misfortunate occurrence. Contrary to popular illiteracy of today, the civilized use of the term, tragedy, has a precise, very important, and scientifically rigorous meaning, especially for those in the terrible grip of the threat to today's presently real-life consequences. This notion of tragedy, is the subject of a strategic-intelligence assessment which must now be considered by any seriously competent viewer of the present U.S. situation.

For purpose of this needed reflection, begin now with two excerpts from Act I, Scene 2 of Shakespeare's *Julius Caesar*. Shakespeare does come to the point quickly, in his fashion.

*First:* Cassius to Brutus: (answering Brutus' question concerning the influence of Julius Caesar):

Why, man, he doth bestride the narrow world  
Like a Colossus: and we petty men  
Walk under his huge legs, and peep about  
To find ourselves dishonourable graves.  
Men at some times are masters of their fates:  
The Fault, dear Brutus, is not in our stars,  
But in ourselves, that we are underlings....

*Second:* Cassius: Did Cicero say anything?

Casca: Ay, he spoke Greek.

Cassius: To what effect?

Casca: Nay, an I tell you that, I'll ne'er look you i'  
the face again: but those that understood him  
smiled at one another, and shook their heads; but,  
for mine own part, it was Greek to me....

There lies, well expressed, with the great perfection in economy, the essence of Shakespeare's genius.

This was no mere piece of literary fiction. Shakespeare captured what we know today as the real-life outcome of precisely that factor in our presently ongoing national history identified by that pair of references from Shakespeare's first scene of the drama.

In all Classical tragedy, some voiceless force of will, such as the ghost of Hamlet, grips the ensemble of the parts played by nearly all among the principal players in the drama. Those

characters can not free themselves from the grip of that encompassing destiny over their will. So, Shakespeare put the words of wisdom into the mouth of his spokesman from *Hamlet*, the character Horatio, speaking as the corpse of fallen Hamlet is then being carried from the scene:

...let me speak to the yet unknowing world  
How these things came about: so shall you hear  
Of carnal, bloody, and unnatural acts;  
Of accidental judgments, casual slaughters;  
Of deaths put on by cunning and forc'd cause;  
And, in this upshot, purposes mistook.  
...  
Of that I shall have also cause to speak  
And from his mouth whose voice will draw on no  
more:  
But let this same be presently performed,  
Even while men's mind are wild: lest more  
mischance  
On plots and errors happen.

With those words from the character Horatio, let the just concluded, but, thus, self-recurring dramatic tragedy of our own nation's present time be performed for us assembled here, today, word for word, action for action, before our assembled audience which has, once again, heard Horatio's words, this time in search of reflective understanding. So, Friedrich Schiller referred to the mind of the common member of the audience for the play, who leaves the performance of tragedy on stage a better citizen than he himself had been before he had entered the theater that time.

What is it which had gripped the characters played on stage, such that each performed as under the grip of an unseen wicked will, compelled to act as if by the whim of a higher, unseen, voiceless power? Why, similarly, did so many Democratic members of the Congress submit to Pelosi's scornful whips and lashes, when her folly and its consequences were so insistently, repeatedly transparent? What strange, eerie force of compulsion impelled them to submit, again, and again, and again? What is she, the bearer of this mask of anarchy, and in real life this mere, pathetic creature, that they, seemingly strong-willed men and women, should degrade themselves, and their nation's fate, so, again and again, as if by the whips of her errant will?

To illustrate this point, take the doubly ironical case from Aeschylus' *Prometheus Bound*.

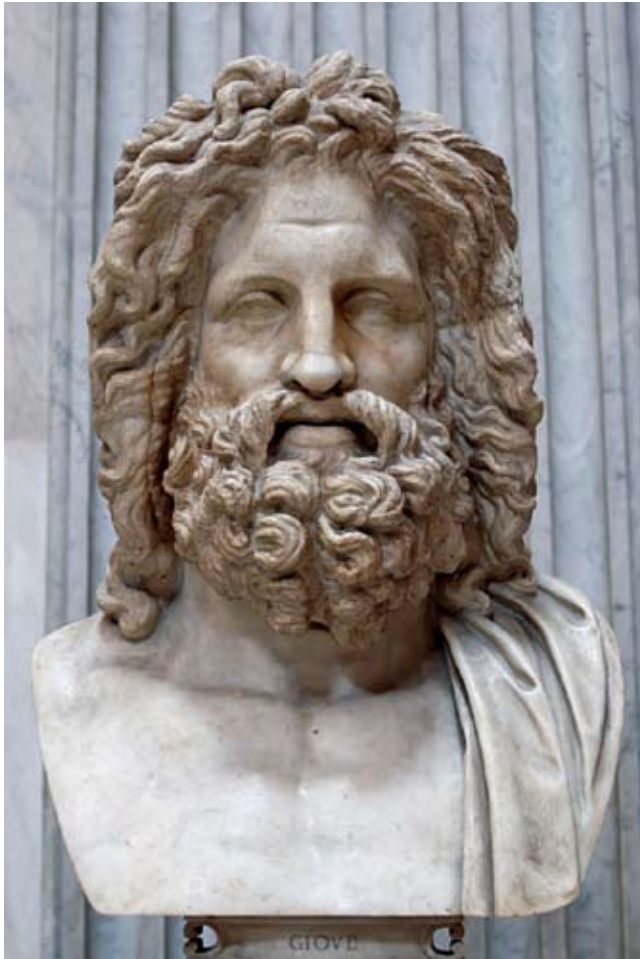
## Prometheus Bound

In Aeschylus' *Prometheus Bound*, Prometheus is condemned, by the Olympian Zeus, to a long period of torture: to be tortured while shackled for the alleged offense of making knowledge of the use of fire<sup>4</sup> available to mortal human be-

---

4. Or, nuclear fission.





*The Olympian Zeus banned the spread of the knowledge of the use of fire—i.e., scientific and technological progress—to mortals. Here, the Otricoli Zeus at the Vatican Museum.*

ings. The type of society which that Zeus represents, is what was known in ancient Classical Greek times by the name of “the oligarchical model” of societies, such as the Persian Empire, and the practice of helotry (slavery) by the Delphic tyranny of Lycurgus’ Sparta.

This still-persisting, European model of tyrannical (e.g., oligarchical) rule, is made clear by examining the practices of the Delphi cults, that of Gaea, Pythias-Pythia, and Apollo.<sup>5</sup> That is also the actually historical model of oligarchical tyrannies, including that of Caesarian Rome, and as a persisting pestilence in European culture from that period forward to the present day. This, which was known in ancient Greek times of Demosthenes as the “Persian,” or “oligarchical” model, has been the model for all the approximately global forms of imperial rule in European history since that time. These cases

5. The Apollo-Pythia relationship is identical to that of the Apollo-Dionysus cult of tragedy, as that was faithfully echoed by Friedrich Nietzsche’s cult of Apollonian/Dionysian tragedy.

include the Roman Empire, Byzantium, the Norman-Venetian medieval system of the Crusades, and Anglo-Dutch Liberal financier form of imperialism which menaces, and ravages our U.S. republic, and other nations, today.

The characteristic clearly exhibited by all such oligarchical models of tragedy, is the same expressed by the Olympian Zeus’ banning the spread of the knowledge of the use of fire to mortal persons. Thus, by such banning of scientific and technological progress, as by contemporary Liberalism’s empiricist and positivist cults, the majority of the population is degraded to the mental and social status of something like cattle: forbidden access to knowledge of forms of behavior outside the range of what is prescribed for them by their masters. Here, in this suppression of the scientific and related creative powers of the human minds of the mass of the population, lies the essence of *the principled force of tragedy*.

That, precisely that turn to so-called Liberal economic policies, has been the chief general cause of the downfall of our once-proud economy, and the increasingly savage loss of what were formerly the constitutional rights of the lower eighty percentile of our population’s income-brackets.

In all competently composed Classical tragedy, there is a silent, invisible power which herds the members of society, by force of will, into a restricted range of allowed choices of behavior. This is as reported, above, from the mouths of Cassius and Casca, or from the mouth of Shakespeare’s Hamlet, or reported there by the allusion of Horatio’s concluding remarks. The force of tragedy expressed, is of that “silent electric fence” quality of control which is of the type expressed, implicitly, on stage, by the devilishly fancied image of the phantom of Hamlet’s father.

So, as the victim of such control over his fears, or rages, is induced to destroy himself, or herself; so, an entire nation, like our own, may be driven, as recently, like a herd of maddened cattle, as by the crafted terror of “9/11,” or Hermann Göring’s earlier, Cheney-like role in orchestrating the 1933 burning of the Reichstag, into destroying itself, even its entire culture.

In the case of *Prometheus Bound*, the playwright has brought what must have been, in reality, the terribly silent, potent spirit, that Satan-like pagan god Zeus, with his Olympian lackeys, on stage, where the craft of the playwright has forced that Satanic Zeus and his lackeys to speak, and, by this device, thus permits the audience to hear a creature, such as Zeus, who was composed by the playwright as a talking substitute for the performance of the same kind of dramatic function as the silent ghost from *Hamlet*. In all great compositions of Classical tragedy, such as those works of Aeschylus, Shakespeare, or Schiller, the ghastly power appears on stage, as in the wars crafted by the lying Cheney and Tony Blair now, to reveal the awful truth of the tyranny which reigns over mortal mankind,

In real life, the force of great tragedy which may cast its shadow on stage, or in real history, is never actually seen or

heard directly by the audience. It is expressed as a silent force which moves, in drama, as might disembodied footprints across the stage of the theater, or, in real life, footprints of an unseen, awesome creature, or a dank, chill wisp of breeze cruelly touching living cheek. It is said to be “a spooky feeling.” Yet, on stage, or in real life, it is that sense of a ghastly prescience which often impels individuals, or entire societies, to destroy themselves, and one another, as did the doomed characters from Shakespeare’s *Julius Caesar*, or *Macbeth*, or *Hamlet*.<sup>6</sup>

Thus, the successful composition or performance of a great work of artistic tragedy, impels the author, director, and actors, to craft their movements and speech in such a way as to impart that sense of the potent, but unseen, unheard, awful presence of the force of tragic principle to the audience, to create, in the mind of the audience, belief in the eerie existence of the efficient presence: speaking, to chilling effect, as through the voice of the drunk from Eugene O’Neill’s *The Iceman Cometh*: “Hickey, you took the life out of the booze!” It is a belief which voicelessly bends the will, as if by an invisible physical principle. The mind of the audience for the drama must be compelled to feel that invisible, unheard presence, which the drama shows must necessarily exist in the guise of an invisible hand, like a silently whispered comma, which controls the action and fate of the characters on stage. Such are the requirements, and goal of the composition and performance of true Classical tragedy. The final, added requirement, is that that choice of unseen, efficient presence must not be merely fanciful, but true.

As on the Classical stage, so it is in the ongoing real life on the streets outside.

The source of the powerful effect which the able use of that device is sufficient to place in the hands of the capable Classical director and acting company, is no mere fantasy; it is an expression of the same principle we encounter in great and valid discoveries in physical science. Only the illiterate dolt would deny this reality. To wit:

## The Footprint of Science & Art

The principle toward which I have pointed, here, above, is not a phantom of the theatrical stage. Its power to produce a sensed effect, like that of physical blows, on stage, is the same ontological quality of power we meet in the role of efficient discovery of universal physical principles in experimental science. Here lies the key to understanding the same principle’s efficiency on the Classical stage, or a poem such as Keats’ *Ode to a Grecian Urn*, or as presented in the concluding

6. Here lies the crucial practical distinction between Classical or Romantic presentation of what was composed as a Classical drama on stage. The avoidance, as by vulgarization, of the playwright’s intended presentation of a virtually tangible, ghostly aura of evil on stage, as intended in Shakespeare’s *Richard III*, for example, is what separates the intended, Classical performance of the play from a Romantic, or, Brechtian perversion.

ing pages of Shelley’s *In Defence of Poetry*.<sup>7</sup>

It is, unfortunately, customary, these days, to presume, as empiricists do, that a principle of nature inheres in a mathematical formulation, or, in art, a crude display of emotion, or mere splatter.<sup>8</sup> Actually, a mathematical formulation is, at its best, a mere footprint; the principle is expressed, in actual physical science of such as the Pythagorean Archytas’ doubling of the cube physically, Theaetetus’ discovery of the Platonic solids, or Kepler’s uniquely original discovery of the principle of gravitation, as in Classical tragedy, which appears as if the uplifting experience of the action of the invisible foot. Kepler’s two principal discoveries of physical principle, of gravitation, each as an expression of the organization of the Solar system, are apt illustrations of this point for our purposes here.

In Classical drama, as in the modern Riemannian astrophysics of V.I. Vernadsky and Albert Einstein, the universe we inhabit is a finite, self-bounded universe. There are no visible external boundaries, but the self-boundedness of the relevant physical space-time is clearly demonstrated in action, nonetheless.<sup>9</sup> So it is with those ghosts of well-composed Classical tragedy which haunt the wills of the victims. It is those kinds of boundaries, as typified by the infinitesimal of the Leibniz-Bernoulli calculus, which are the silent and invisible, but efficient “footsteps” of Classical tragedy.<sup>10</sup>

This use of drama is not fantasy; it is the education of insight into the true, underlying nature of the crucial challenge of real life.

## The Case of the Diodorus Chronicle

On this matter of the use of drama to inform the practice of actually making history, the accounts of the Roman (Sicil-

7. See the concluding paragraphs of Percy Shelley’s *In Defence of Poetry*, on times in which there is an upsurge within a population, of the power of “imparting profound and impassioned conceptions respecting man and nature.” As in the conducting, “between the notes,” by Wilhelm Furtwängler, is an expression of the same principle required for the performance of a Classical drama on stage. It is this principle which defines all competent presentation of Classical art, as in Rembrandt, and that always for the same principle of reason.

8. The cruelest passion is an expression of dispassionately cruel cold-bloodedness, like that of Dostoevsky’s Grand Inquisitor.

9. The incompetence of the denial of the ontologically infinitesimal of the Leibniz calculus, by de Moivre, D’Alembert, Euler, Lagrange, Laplace, Cauchy, and assertions to the same effect respecting thermodynamics by Clausius, Grassmann, Kelvin, and the Machian Ludwig Boltzmann, or modern positivists such as Russell, von Neumann, and Norbert Wiener, typify the cases of those (in fact) neo-Cartesian of the denial of the ontological actuality of an experimentally proven existence of a universal physical principle. The same pathological error of the empiricists and positivists, is expressed as the inherent decadence of post-Classical poets, or musical composers or performing artists, whose concoctions contain no efficient principle, but only some sensuous, mechanistic sort of “gimmick,” or musical performers, or editors of publications, who invoke a cheap sort of *rubato* that they might avoid the comma.

10. As in Shelley, footnote 7.

ian) chronicler Diodorus Siculus, say that the Olympians were actually the sons of a victim of parricide, sons, who having murdered their father, set their mother, Olympia, no mere Speaker Pelosi, up as ruler. Diodorus identifies them as representatives of a transoceanic culture which had settled near what we call the Strait of Gibraltar, and imposed their rule on a sedentary race of Berbers. The account identifies the Olympians as, actually, a sea-going culture which preyed upon the coasts and islands of the Mediterranean, as part of those “Peoples of the Sea” whose residual coastal cities and factories haunted the locales of the Mediterranean coast during the several millennia preceding that approximately 700 B.C. emergence of Mediterranean civilization from a preceding dark age.<sup>11</sup>

Out from these ancient mists where the real and fancied intermingle, there had emerged a division within the ranks of those we today refer to as “ancient Greeks,” a division between the antecedents of the Olympian Delphic cult-faction and what emerged as the Classical Greeks of such as Thales, Heracleitus, Solon, the Pythagoreans, and the other circles of Socrates and Plato. As Plato defines this conflict, in his letters and part of his other locations, the essential struggle is two-fold. There is the conflict with the imperial, oligarchical forces of Babylon and later Mesopotamia, and also the conflict of the legacy of Solon of Athens marshalled against the oligarchical (Olympian) forces of Lycurgus’ Delphic Sparta. The summation of the issue of this conflict, between Prometheus and the Olympian Zeus, is presented by Aeschylus’ *Prometheus Bound*.

Since that period of European history, the most essential struggle within what we recognize as the history of European culture, has been that between Prometheus and the Olympian Zeus of Aeschylus’ *Prometheus* trilogy: a struggle between man as made in the image of the Creator (as in *Genesis* 1:26-31) and the contrary, pro-Satanic Olympian Zeus, who relegates men and women, as today’s oligarchs still do, to the rank of virtual cattle who live, as beasts do, steered through life less by intellect, than by sight, sound, touch, and smell.

The invisible, but nonetheless efficient force of tragedy in human existence generally, is that fear of something like Aeschylus’ Olympian Zeus, which bends the wills of men and women into avoiding the feared displeasure of the powerful, Satanic figure of the fictitious Zeus. It is the mechanism of that induced submission—“But, I have to!”—which is the fateful hand of tragedy, like the ghost from Hamlet, whose appearance impels foolish Hamlet, and the others, wildly, to their self-destruction, as the fools who crawl before the satanic whims of Cheney today.

11. The dating of “about 700 B.C.,” references a naval alliance, against rapacious Tyre and its Punic colonies, among the Egyptians (presumably of maritime Cyrenaica), Etruria, and Ionia. It was the same Cyrenaica, later famous for the role of the great Eratosthenes, which would be crucial in Alexander’s defeat of Tyre and of the forces of the Persian empire.

It is urgent that we stress, that the Zeus of the real-life stage does not exist in that form we put him on stage in a theater. Nor does the ghost which Hamlet seems to believe he sees as his father. They are false faces which the victim’s imagination places, like masks, upon a very real, and, in this case, evil force of destiny. These are, on the one side, phantoms of the stage; but, they are very real, in the sense that it is the manipulation of these phantoms of the stage which reflects the way in which the superstitious mind is controlled on the streets of real life, as in the U.S. Congress presently. So, by mastering those crucial fantasies placed upon the stage of our public life, we would be empowered to master ourselves.

Zeus, like the mask seen as Hamlet’s father, actually exists as a phantom of the mind, which one is imagined to hear speaking: “Do as I say, or else!” The entirety of the *Iliad* is permeated with such stuff. “The gods are displeased!” “You will have bad luck!” Sometimes the will of the victim is broken into submission in such ways; sometimes, evil prefers to tease the intended victim, by playing upon that victim’s superstitions, such that the victim himself, or herself, invents a terrible, magical, fancied judgment upon himself, such that he might be impelled to add the controlling force of a self-destructive delusion adopted as a way to gain “good luck,” as the tragic figure of Treasury Secretary Henry Paulsen seems to have chosen today. Real life experience is filled with instances of such pathetic behavior, even, as with Paulsen, among the highest ranks of government and kindred places.

Such is the *force of tragedy* in its real-life incarnations.

So, sometimes, the force of tragedy has been expressed by those members of the U.S. Congress who cringe into submission when the mask-likeness of Speaker Nancy Pelosi appears in their imaginations.

Yet, although Zeus, like Hamlet’s father, or Speaker Pelosi’s mask, are fantasies of the fearfully credulous, the controlling impulse which such phantoms evoke, is very real. Consider the way in which those who were the seemingly mighty are fallen before the present of such fears.

---

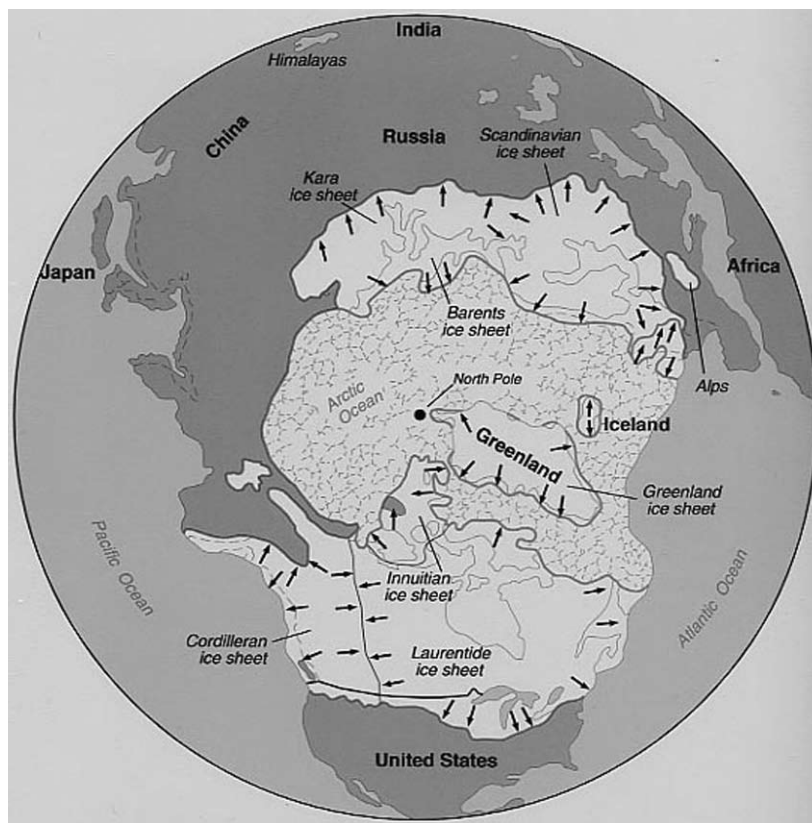
## 1. Sea-Power: An Interlude

---

As a working rule-of-thumb, we must allow the likelihood that human culture, in the form of a social form of culture, has possibly existed on this planet for as much as two millions years. Nonetheless, the presently known pattern of recent habitation of mankind on the planet, dates from less than 20,000 years ago, since, approximately, the onset of the general melting of the glaciation which had dominated the northern hemisphere’s land-areas for about 200,000 years. (Although archaeology has shown that well-defined human cultures, in the modern sense of cultures, had appeared in some exposed continental areas of Europe, for example, be-



FIGURE 1  
Extent of Glaciation During the Most Recent Ice Age



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

fore the great, more recent, net melt of the previous long cycle of glaciation had begun.<sup>12</sup>) Nonetheless, the pattern of human habitation (and climates) of the region of the land-mass north of the Equator, including some from earlier than 20,000 years ago, does show us some extremely important features of the way in which what has become modern world culture had evolved during the recent 10,000 or more years. There is no reasonable doubt, presently, of the validity of the portrait of pre-history presented in Plato's *Timaeus*.

For example: One among the crucial events in this recent history of planetary culture, was the massive breakthrough of sea-water, via the Mediterranean, into what had been a great fresh-water lake, now presented in the form of the Black Sea. Thus, the time between the assumption of the existence of a transoceanic, sea-going (maritime) culture, prior to the developments of (very roughly) approximately 20,000 to 8,000 years ago, and the development of colonization, upstream, of important rivers by branches of what had been maritime cul-

12. We are presently in the onset of a long wave, of subsumed exceptional intervals of as much as decades or longer, toward re-glaciation of the northern Hemisphere's land-areas.

tures, is now one of the most important areas of strategic investigation by anthropologists and historians. We are looking, thus, into the origins of certain cultural archetypes from such periods of relatively more accessible kinds of ancient traditions, the more accessible archetypes deeply embedded, like fossil history, in the roots of existing branches of cultures today.

There are some points of such investigations for which we do have good answers, or, better said, very useful ones, speaking pedagogically. The preceding references to certain matters of what is to be fairly understood as "pre-history," bring us around to the bearing of this interlude on the matter of tragedy. As follows:

### Dogs, Cats, People & Pre-History

The issue here, in this intermezzo, is now language, that of people as distinct from the utterances by domesticated household pets such as cats and, most emphatically, dogs. The subject might be better, and briefly, termed "irony," meaning "the pre-history of irony."

To wit:

MIT RLE's Chomsky and Minsky notwithstanding, there never was, and never will be a higher ape which is human.<sup>13</sup> What fellows of that persuasion have never accepted, and, probably, never will, is the fact that what we must distinguish as the mental life of the

human individual, and the social processes generated by that distinction, have no basis in the internal characteristics of any animal species. However, experience with the distinction of domesticated animals, especially dogs raised and kept as household pets, which I now reference in this interlude, is

13. Decades past, there were two professors, Noam Chomsky and Marvin Minsky, at "the works" of MIT's RLE, who undertook a project of torturing a laboratory chimpanzee, whom they named "Noam Chimpsky." Decades earlier, that project came into my area of interest in, and opposition to the work on "artificial intelligence" and related matters of RLE's specialty. They, prompted largely by the "Cybernetics" project, developed, under the coordination of the Josiah Macy, Jr. Foundation's Alex Bavelas et al., sought to define intelligence, and the steering of human behavior, in a mechanistic sort of bio-chemical way (e.g., "task-oriented, problem-solving group" theory), which I had studied intently, from early 1948, and then opposed as a fad which was clearly, and systemically anti-scientific in principle, that to the present time. The founding of that project of the Macy Foundation, MIT's RLE, and others, was steered significantly from London, along lines defined by British Brigadier John Rawlings Rees, virtually the modern pioneer in "brainwashing," and the leading figure. Rees was of outstanding influence in the founding and direction of the London Tavistock Clinic otherwise remembered for the work of Melanie Klein, and an outstanding figure in the field of "brainwashing" of targeted individuals and groups.

most useful for study of the way in which such pets do appear to attempt, and are, yet, unable to simulate actually human behavior. This brings the implications of the 200,000 or more recent years of the existence and activity of our human species to the time before the close of the last ice age, that in a way which is extremely relevant to the subject-matter within which the indicated, pathological case of Speaker Pelosi presents itself.

The background for this aspect of the report is, briefly, as follows.

Probably, the most significant single outcome of the work of that great Russian “polymath,” Academician V.I. Vernadsky, was his use of his discovery of the hard proof of the existence of the Biosphere, as a reference-point for the consequent, further discovery, of the Noösphere. The latter, principled distinction of man from beasts (Noösphere from Biosphere), forces our attention, ever more emphatically, to a particular aspect and implication of the same point which I have recently emphasized afresh, respecting Johannes Kepler’s discovery of the principle of organization of the orbital pathways of the Solar system.

I emphasize here, as in relevant other locations, that the effort to define the principles of the organization of the Solar system (in particular) from the standpoint of a reductionist mathematics, confronts us, as in the case of the harmonics of the Solar system, with the proof that neither vision, nor hearing, by itself, affords us a competent view of the universe which we experience.<sup>14</sup> The fact which I have emphasized, in those locations, is that our respective senses, taken each one at a time, do not provide us a reliable interpretation of the experience of each sense-organ. Rather, we must regard our sensory apparatus as akin, on this account, to the useful array of artificial instrumentation which we craft and employ to afford us a kind of “sensory” experience which is more or less unreachable with the same degree of usefulness through reliance on our native sensory apparatus alone. This, as I have emphasized in relevant published locations, is exhibited most dramatically in the case of the design of instruments required for investigations of the type of which Bernhard Riemann has warned us, into the so-called “sub-atomic” or astronomical domains.<sup>15</sup>

Experimental truth is accessed, in all cases, by the faculty of human judgment, which must interpret the meaning of sense-, or sense-like experience through cognitive powers specific to the development of the human mind, not a literal reading of the senses as such. This was shown, most dramatically, for all competent modern physical science, by Johannes Kepler’s uniquely original discovery of the nested principles of universal gravitation, and of the composition of the Solar

system, and related measurement of gravitation within it, as a whole.<sup>16</sup>

This experimentally premised judgment on the subject of human sense-perception’s role, must be coupled with a unique fact which sets the human species absolutely apart from all lower forms of life. This is the situation in which the relationship of pet dog to man comes in as a key to discovering the way in which that crucial distinction functions.<sup>17</sup>

The crucial statistical fact about the difference between beast and man, even between dogs and their putatively beloved-of-dog owners, is expressed by the categorical functional distinction of the relatively fixed, relative potential population-density of any animal species, as to be contrasted with the willful increase of societies’ relative potential population-density. Man, unlike the beasts, is capable of willfully increasing society’s culturally heritable relative potential population-density.

This difference between the characteristic determinations of the relative potential population-densities of all species of animals (e.g., the Biosphere), and that of mankind (the Noösphere), must be traced, as Academician Vernadsky’s work does, to cognitive processes typical of the human individual (the Noösphere), but categorically absent among all lower forms of life.

Look, very carefully, at the manner in which this distinction between man and beast is expressed within the loving relationship between human members of “the pack,” and those humans’ moments of sometimes gripping anguish over the short life-expectancies of their pet dogs.<sup>18</sup> That said, the relevant point of fact here, is the seeming expression of human habits among pet household dogs, and the characteristic distinctions between the members of the relationship’s respective species, especially when this comparison is traced over thousands of years of relevant evidence, especially in the crucial matter of language.

Many animal species present us with members of their type which perform what might appear to the suggestible among us as human traits, such as parrots, the talking crows with split tongues, and so on. This acquired behavior can be “trained,” that to the effect that circus animals, and others of certain species can appear to simulate elements of human behavior; observers of this induced behavior by animals tend,

14. Cf. Lyndon H. LaRouche, Jr. on “Sight & Sound,” in “Draft Platform of 2008,” *EIR*, Aug. 31, 2008; and, “How Space Is Organized,” *EIR*, Sept. 14, 2008.

15. Bernhard Riemann, 1854 habilitation dissertation.

16. See the LYM detailed reports on the crucial features of the uniquely original discoveries of Kepler, [www.wlym.com/~animations](http://www.wlym.com/~animations). As Albert Einstein emphasized, in particular, all competent modern physical science is derived from a course of development rooted in the original work of Kepler, as completed in an approximately formal sense, by the work of Bernhard Riemann.

17. Cat-lovers notwithstanding, cats are, as any dog, or pet-owner should know, not dogs. Purr as they might, cats are, relatively speaking, intrinsically feral, where domesticated dogs (especially) adapt readily into membership in what they respond to as family-like “dog-packs” within which the relevant “pet owner” with “top-dog” rank among them, usually has the last word.

18. Just at the time that the creature becomes most nearly a human companion in relevant behavioral respects, the old dog dies!



romantically, to project a human quality of intention behind the animal's imitation of what seems to be a typically human act. Those observers have blinded themselves to the most characteristic difference between human beings and all animal species.

Reflection on the adducible history of human cultures' development even during only the recent 20,000 years or longer, shows us something which should have been obvious to us about the essential difference between the actual mental powers of the typical human individual and what are projected, rather recklessly, as kindred mental powers of animal species.<sup>19</sup>

The pathological trait which I am attacking here, at this point, is those traits which are, implicitly, the effect of presuming that the images imparted to us, as opinions, by our particular sense-experiences, are literal images from the real world, rather than being, as they are, in fact, only "instrument readings." The best selection of evidence for this fact, is the case of Johannes Kepler's uniquely original discovery of the principle of general gravitation within our Solar System, by his contrasting the ironical juxtaposition of the faculty of vision to the harmonics associated with the sense of musical hearing.

*If we trace the actual way in which that unique discovery by Kepler was crafted, rather than the absurd, and frankly fraudulent myth imposed by Galileo's radiated influence on the silly Isaac Newton, we should have stumbled across the fundamental difference between the minds of dog and of man in that way.<sup>20</sup> That brings us back to the lessons to be learned, inclusively, from the emergence and development of European culture during the course of the post-Ice-Age developments of the recent, approximately 20,000 years.*

## Where Is Physical Space-Time?

The commonplace error of popular opinion about physical space-time, still today, is the assumption that matter, such as objects, are floating in a Euclidean-like, infinitely vast space. That ignorant, but popular opinion, is fostered by those who seek to interpret astronomical space as being self-evidently Euclidean space, whereas, in fact, no crucial, physical-experimental evidence has ever actually been presented for the existence of Euclidean space, or, Cartesian space-time. Rather, the idea of specifically Euclidean space was a piece



*Like the talking parrot, some animals can be trained to simulate certain aspects of human behavior; but anyone who thinks this projects a human quality of intention, is blinded to the essential difference between man and all animal species.*

of, literally, what is termed, technically, as Sophistry: as a Euclidean scheme concocted decades after the death of the leading scientific minds of ancient Greece, such as Plato. The argument of the Sophists was, that the set of definitions, axioms, and postulates upon which the entire edifice of Euclidean geometry was erected, was not only submitted without proof, but premised on the assumption that proof were neither required, nor desirable. Indeed! That swindle persists, available from some in leading academic circles, if at high prices to the student, still today.

As Johannes Kepler demonstrated, and as Albert Einstein emphasized, Euclidean-like, infinitely extended space-time, never actually existed. What we know, is that what we discover, experimentally, to be universal physical principles, such as universal gravitation, bound physical space-time, defining thus a finite, rather than an infinite space, a physical space-time which is self-bounded by what are discoverable, experimentally, as principles, as Kepler proved gravitation, without allowance for, or need of "external" spatial boundaries: presenting us, thus, with an implicitly expanding universe. This was already implicit in the discoveries of Kepler, discoveries which, essentially, echo ancient sources of scientific thought, such as the Pythagoreans and their Egyptian forerunners.

Not only do we know this today, but the root of such knowledge is traced to as far back as ancient calendars, from tens of thousands or more years ago, including calendars whose internal characteristic corresponds to the implied prac-

19. Our pet dogs are telling us something about all this, which we should be capable of recognizing, if we would only pay closer attention to reality, rather than "go to the dogs," so to speak, by indulging ourselves in relics of maudlin, childish, fairy-tale-like fantasies. Your dog is counting on you to supply human services, saying, in effect, "We dogs have short lives; please hurry up"; for that task, you must learn to behave like an actual human being, rather than going to the dogs!

20. Dogs of the world have spent recent centuries, attempting to deliver that pee-mail warning to Isaac Newton's dupes on every available lamp-post and fireplug, all to no avail. Perhaps it had been better delivered directly, perhaps by the famous dog of Samuel Johnson?

tice of ocean-going maritime cultures of a type which might be attributable to a time no later than the 200,000-year interval when massive glaciation dominated most of northern Eurasia and North America. That was a time which the oceans were about 400 feet lower than in modern times: a time of glaciation toward which long-term climactic trends are pointing, again, for today—unless we find some way to manage that long-term trend to our advantage.

These conceptions which I have just so summarized, are not accessible to the lower forms of life, nor to Sophists past or present, but only to those with honorable standing within mankind, and that only in the fashion which I have just indicated. As the case of the antiquity of the Zodiac attests most simply, mankind's increasing power of conception of the universe, is a product of specifically human characteristics, characteristics of the specifically human processes of cognition which are entirely absent in the lower forms of life.

### The Indispensable Thesis

The specifically characteristic increase of the relative potential population-density of the human species, when contrasted with the relatively fixed characteristic of the animal species, has the effective form of equivalence to a biologically-determined, characteristic up-shift of the characteristic "nature" of a non-human species, the equivalent of a change of species-nature in the evolution of among those lower forms of life which are the animal species. *The typical expression of this kind of up-shift within the bounds of a single human species, is not merely cultural in form, but also a distinction which is efficiently an expression of a fundamental physical principle, in effect.*

The most notable among the corollary facts of this matter, is that there are, in fact, no equivalents of human creative behavior to be found among the animal species. It were fair to suggest, that the best animal behavior, as among well-treated dogs as household pets, does resemble, outwardly, superficially, those aspects of human behavior which, apparently, have nothing to do, functionally, with the actually creative powers of the human individual mind. The distinction which must be enforced as a matter of definition, on this account, is that which is implicitly clear from Academician Vernadsky's distinction of the Noösphere from the Biosphere. *In other words, human creative powers have no discernible basis in the processes manifestly specific to the animal brain. History, as I have treated it here, points to the answer to the issues which I have, thereby, thus posed.*

That point which I have just made, might bestir a frenzy among some readers stricken with anxiety at this point, readers who will not have thought through the crucial facts which I present here. To assist such perplexed fellows, it were sufficient for the purposes of my account thus far, that one should think of the human individual's animal-like aspect as "plugged into," as if by resonance, a higher principle within what we may otherwise regard as the physical universe, and that it is

that "connection," so to speak, which supplies the "factor" of the manifest higher qualities distinguishing the human individual essentially from the beast.

On more familiar sorts of theological ground, we are dealing here with the subject referred to as "the human soul." The commonplace problem of conception arises when we attempt to equate a "human soul" with an "animal soul." The more appropriate way of approaching these issues, is to compare the difference between the human and the "animal soul," in terms of reference to the differences of phase-spaces, among the abiotic, Biosphere, and Noösphere, and to, thus, emphasize the point, for purposes of comparison, that, contrary to the wilder superstitions spawned in "Silicon Valley," "life" itself has never been shown to be an extension of the abiotic domain.

(I leave further treatment of that limited subject-matter to the theologians; the cognitive exercise itself should do them good, or plunge them into a frenzy.)

To restate that point with the relatively greatest economy of utterance, we can state that the mortal body of the human individual has manifestly predominant characteristics of an animal-like body, excepting that relatively immortal aspect of the human personality, such as discovery of universal physical principles, or comparable discoveries in Classical modes of artistic composition, which outlive *efficiently, as social principles*, the decease of the mortal vehicle which that creativity had formerly inhabited. *This creativity is not manifest in any species of animal life.*

This provided the physical-experimental basis for Academician Vernadsky's discovery of the Noösphere.<sup>21</sup>

To prepare, now, to present the indispensable thesis of this report, consider the following points, as restated here, made in my relevant earlier reports.

The relevant, general, leading achievement of Academician V.I. Vernadsky to be considered here, is that he defined a principle which stands out from his own, and his associates' study of that crucial distinction of universal physical principle, which separates the chemistry of living processes and their specific products from the chemistry of non-living processes.<sup>22</sup> This separation defined the Biosphere. On the foundations of the discovery of the Biosphere, Vernadsky achieved a second, comparable scientific revolution, the concept of the Noösphere.

The discovery of the Noösphere requires a brief explanation, as follows.

In defining the chemistry of the Biosphere, Vernadsky and his collaborators referenced the distinction of the special chemistry specific only to living processes and their products, from chemical products which are already specific to the work

21. Cf. Lyndon H. LaRouche, Jr., "Vernadsky & Dirichlet's Principle," *EIR*, June 3, 2005.

22. Lyndon H. LaRouche, Jr. "Vernadsky & Dirichlet's Principle," *passim*.



EIRNS/Elizabeth Mendel

*Members and friends of the LaRouche Youth Movement in Seattle study the science of Sphaerics, an introduction to the work of Kepler and Gauss.*

of non-living processes. Thus, the total mass of the Earth is divided, first, between the percentile of that mass which is termed as being ostensibly of pre-biotic origins, and that which is represented either by the mass of living processes, or peculiar to products of the chemistry specific to living processes. So, in a comparable way, Vernadsky also took into account the increasing percentile of the total mass of our planet represented by products which are only of specifically human noëtic actions, relative to biomass.

*This divided the total mass of the planet among a corresponding set of three preliminary categories: the abiotic, the biotic, and the noëtic. Among the three: biomass is never generated by abiotic processes as such; the mass of products of specifically human noëtic creation, has never been shown to be produced by any living process other than the human mind.*

This defines the universe as we know it empirically, as composed of three distinct, *component* phase-spaces. However, the noëtic principle of human reason, as distinct from the biological human individual, is also existent as, ontologically, a universal, *a fact whose emergence defines an ontologically fourth domain, that expressed as the higher order of phase-space, a universal, all-encompassing, anti-entropic principle, which subsumes that Noösphere to which the other three are subject.* Hence, from this universal anti-entropic ordering of the universe which our human experience inhabits, we have the obligatory notion of the *willful* personality of *The Creator*

as reported in *Genesis* 1.<sup>23</sup>

Therefore, as Nicholas of Cusa, Kepler, Fermat, and Leibniz show, we know that the belief in “universal entropy” is worse than merely absurd; that latter belief is inherent in empiricism and its derivatives, inhering, for example, in that intellectually and morally depraved, reductionist notion associated with the arguments of Euclid, Claudius Ptolemy, Galileo, de Moivre, D’Alembert, Euler, Lagrange, Laplace, Cauchy, Clausius. Grassmann, Kelvin, Maxwell, Ernst Mach, Boltzmann, Bertrand Russell, et al.

From these considerations, certain poetically dramatic conclusions of crucial historical importance for our nation’s, and the world’s political life, must be drawn. This brings us to the intended core of the subject of this report. *To wit:*

## 2. Oceans & the Heavens Above

The existence of tragedy, or, better said, of *The Tragic Principle*, is to be located, as to its source, in the essentially underlying features of those specific, pathological beliefs which have assumed the form of ostensibly traditional, axiomatic assumptions, assumptions respecting the underlying principles of organization of events in the universe generally, or of certain societies and cultures specifically. As I shall show

23. E.g., *Genesis* 1:26-31.



in this present, concluding chapter of this report, the origin of the existence of such paradoxical, even though customary states of mind, can be brought to the surface by putting our emphasis as we do here.

Therefore, here, we must emphasize the urgency of discovering the necessity, for sake of the progress of cultures, of precisely those inherently ambiguous features of Classical irony, such as the ironies of Dante Alighieri's *Commedia*, of the *Decameron*, of the life and works of François Rabelais, of Cervantes' *Don Quixote*, the histories and tragedies of Shakespeare, or works such as Jonathan Swift's *Gulliver's Travels*, Percy Shelley's *In Defence of Poetry*, and the work of Friedrich Schiller. These are cases which are inherent in the need for driving forward of what might be termed the "history" of the *principled features of the evolution* of cultures. There can be no truthful physical science without assigning the primary role to the principle of Classical poetry.

There is neither truth, nor progress without irony. Irony is the essence of creative genius, the essence of reason. A literal mind is a littering mind.

I repeat now: as a matter of contrasts, the case for physical science is presently a relatively simpler challenge than the remainder of society's intellectual tasks. A competent treatment of the subject of *The Tragic Principle* must begin with a more difficult challenge: attention to implications of what I have pointed out here earlier, as the essential differences between the characteristics of our pet dogs and the known characteristics of what is fairly termed the realities of human "cultural evolution."

The recommended, most efficient approach to this problematic, historical feature of cultural evolution in general, is that path of investigation which begins, typically, with the most essential implications of Plato's *Timaeus* and *Critias*. The choice of that approach to Plato's arguments on that account, here, is recommended for the specific reason of *Plato's implicit emphasis which I have also already placed, in the earlier chapters of this report, on the maritime-cultural origins of European civilization.*

It is important to emphasize, that in order to "get into" a culture's mental life, it is virtually indispensable that we find material evidence, comparable to the paradoxes which provoke fundamental discoveries of principle in experimental physical science, so-called. This approach lays open, and emphasizes the crucially significant cases among the ironies of communication, as in Classical poetry and drama, rather than the merely literal assertions of some desiccated literary and associated record. As has been said in other words, grammarians are often, essentially, embalmers of the creative mind.

Therefore, there is the essential role of irony in conveying the actual idea-content of important statements. The importance of irony in communication, is the determining consideration on which I am insisting here. Therefore, what may be fairly termed "European culture" for the purpose of this inves-

tigation, begins approximately, as I have indicated, at about 700 B.C. In other words, we choose a point of functional alliance, against the ancient maritime tyranny of Tyre, by the maritime cultures of Egypt (e.g., Cyrenaica), the Ionians, and the Etruscans. That is a period to be considered in the light of those fabulously ironical, standard bedside readings which are the Homeric *Iliad* and *Odyssey*.<sup>24</sup> However, although we must rely chiefly on the ancient European and related history following approximately 700 B.C., we must take into account certain special features of still more ancient evidence, chiefly evidence bearing on maritime cultures and the reflections of maritime cultures in astronomy.

To that end, we must rely in large degree on the authority located in the products of the greatest, most fertile ironical composers in the domain of both plastic and non-plastic forms of art, especially what is properly classed as Classical art. Pedants, on the other hand, miss the necessity of those ironies strewn in the wake of the creative faculty. When poets would speak truth with irony, pedants' truth is lies.

*Therefore, on the subject of European culture:*

Attention to the known astronomies, including the evidence embedded in calendars, as by Bal Gangadhar Tilak's *Orion*, affords us an excellent quality of hypothetical insights into the general pre-history of modern physical science and closely related topics, when that evidence is taken together with the development of physical science under the Pythagoreans and Plato's other circles. The subject of the principled features of artistic cultures, as viewed from the standpoint of attempts at an account of cultural evolution, is a more sophisticated challenge. Here, on the latter issue, what is crucial, is what I have emphasized, above, on the difference between a man's and a dog's view of culture.

On the matter of the important issue of linking what we can conclude, more readily, respecting the pattern of development of physical science leading into a Riemannian physics of Vernadsky and Einstein today, we should focus our investigation, clinically, on the case of the cultural evolution discernable in the evidence bearing upon the qualitative features of that evolution of ideas in European societies and their relatives. On that account, we are obliged to seek a common basis in reflections on one of the greatest sources of the wonderful ironies on which the rise of European civilization in its best aspects is to be located: the evolution of the maritime cultures from which crucially significant "genetic-like," modern European language-cultures are shown to be largely descended, as I will emphasize the relevance of those links here.

The rudiments of such an endeavor should be seen as follows.

---

24. Even in decent English translations, the *Iliad*, most emphatically, bestirs awed recognition of conceptions expressed there, which have awesome implications for insight into many of the conceptual follies of mankind experienced in modern European expression today.

## Man or Beast?

In any societies which are self-controlled by a practice tantamount to policies of “zero technological growth,” there is virtually no efficient recognition of crucially significant “ecological” difference, respecting the general characteristics of social practices of cultures, between essential humanity and human bestiality.<sup>25</sup> Among frankly beastly views on the matter of cultures, we should include those which we might recognize as defective in this respect: cultures with dominant “pro-malthusian” practical and ideological characteristics, such as that proposed currently by former U.S. Vice-President Al Gore. Intellectually and morally defective cases such as those, have converged, and would presently continue to tend to converge, as experience has shown repeatedly, on expressions of a value akin to such products as the practices of slavery, cannibalism, and Nazism.<sup>26</sup>

That decadence of “pro-malthusian” cultures inheres in their policy of practice itself. The physical reasons for such a degeneration should have been obvious to any thinking person of even modestly decent education. To get such ordinary issues out of the way now, consider the following, essential, scientific fact of the matter.

With the continuing development of the composition of our planet Earth, there are ongoing changes in the composition of the mass of the planet, the outer (“upper”) strata most notably, such as that the continuing action of the abiotic, biotic, and noëtic processes, which transforms the planet’s composition, that of its outer strata most immediately.

Therefore, it is impossible that any society’s intended, or merely habituated zero-growth social process could be continued without a resulting, quasi-“malthusian” deterioration, even a general collapse, of its potential relative population-density.<sup>27</sup> This would be more quickly evident for the case of



<http://speaker.house.gov>

*Nancy Pelosi visits Seattle Biodiesel’s manufacturing plant, 2007. Her enthusiasm for “biofoolery,” like Al Gore’s obsession with “man-induced global warming,” is the kind of malthusian anti-science that tends to converge with a fascist world view.*

a relatively dense population, but would be implicitly the case for any density of population. In the case of an increase of the human population above the level of the relatively few millions beyond the potentials in available habitats of the higher apes, there would be the kind of evident lowering of the potential relative population-density which animal ecology presumes, a “lid” on the relative potential population-density of that species, in principle, due to the changes in the environment this habitation would produce.

*The crucial fact respecting the intrinsic potential and consequent characteristics of human population, is that man is not merely an animal, but is able to make the kinds of exemplary kinds of principled changes in its own species’ behavior which we should associate with the effects of scientific and technological progress. It is notable that improvements in performance of this type correspond to, and supersede the upward evolution of species, as from marsupials to mammals, in*

25. This is typified by the so-called “oligarchical model” of society, as expressed by that Delphic cult of Olympus treated by Aeschylus’ *Prometheus Bound*, or by the successive forms of empires of Rome, Byzantium, the Venetian-Norman society of the medieval Crusades, or societies under the reach of the neo-Venetian, and the now London-orchestrated, Anglo-Dutch Liberal system of empire which has resumed its takeover of top-down control over the global economy since the savagely destructive influence of “Adam Smith” revolution launched under the implicitly treasonous U.S. Nixon Administration in 1971-1972.

26. Frankly, I can assure Al Gore not to worry, since I consider him not merely tasteless, but utterly unpalatable.

27. As Plato emphasizes, there are several options for crises of the planet harmful to existing populations of mankind: a.) Those which were inherent in

the non-man-made characteristics of our planet, or its situation, b.) those which become calamitous because of society’s negligent behavior, and, c.) those which are essentially man-made. Most of the collapses of civilizations of which we have same worthwhile knowledge, were calamities which an oligarchical culture akin to the oligarchical model of the Olympian Zeus, such as the role of the practice of actual or virtual serfdom, or outright slavery, in cases such as the decline and fall of the pre-Semitic “cuneiform” cultures of lower Mesopotamia, or the inherent breakdown of society built into the post-1820s promotion of slavery in those treasonously inclined, virtual British colonies known as the southern slave-holders’ states of the U.S., especially from the relevant Presidencies of Jackson, van Buren, Polk, Pierce, and Buchanan.



*The British Empire's Rupert "By Dingo" Murdoch's purchase of "MySpace" signifies his intent to return young people to the cultural level of marsupials.*

the animal kingdom.<sup>28</sup>

The primary source of increase of the potential relative population-density of a human culture (e.g., society, nation) is the adoption and implementation of those forms of principled changes in culture which generate a qualitative up-shift in the relative potential population-density (and the potential standard of living, including life-expectancy) in that society. This critical approach to the matter now before us here, brings us to the historically expressed actual distinction between man and dog.

My use of "relative potential population-density," since my strict adoption of that formulation in 1953, reflects my decision to define the specific potential of any immediately considered population-level in terms of a specifically Riemannian view of Leibniz's introduction of *dynamics*.

The specific difference between man and beast, is expressed in respect to the relatively fixed relative potential population-density of all lower forms of life. The human species retains the potential quality which distinguishes it from beasts; but, in the relevant cases, that quality has been often suppressed by the characteristics of certain dominant cultures, thus defining the current state of the society as degenerate (e.g., scientifically, technologically stagnant).<sup>29</sup> In all cas-

es in which an implicitly willful increase in the potential relative population-density of society is not occurring, we have a case in which the current characteristic of that society is, like that of the U.S.A. and most of Europe today, in a critical state of moral and species' degeneration.

The task, here and now, is to focus on that issue of principle, not only for principles of physical science, but art. Therefore, the subject now is *dynamics*.

## The Role of Dynamics

The principle of *dynamics*, which was introduced formally to modern European science by Gottfried Leibniz, during 1692-1695,<sup>30</sup> was already, in principle, the method of his modern predecessors, such as Cardinal Nicholas of Cusa (e.g., *De Docta Ignorantia*), of much of the work of Cusa's follower Leonardo da Vinci, of the collected work of Cusa's follower Johannes Kepler, and, implicitly, Fermat. However, dynamics was also the method of the leading scientific accomplishments of Classical Greece, implicitly including Thales and Heracleitus, but most emphatically the Pythagoreans and the circles of Plato. In ancient Classical Greece's science, what is appropriately distinguished as the forerunner of the best of modern physical science, was a branch of astrophysical motion, called *Sphaerics*, rather than what the customary illiteracy of the contemporary classroom would usually recognize only as geometry as such. The characteristic of action under *Sphaerics* was expressed by the term *dynamis*, which Leibniz translated into modern usage as *dynamics*.

The work of Sanskrit-Vedic scholar Tilak, as in his *Orion*, as examined for the manner in which he treats evidence from modern Nineteenth-Century European astronomy, is to be read in the light of Tilak's work on Vedic calendar material, that from central Asia during an interval dating probably between 6,000 and 4,000 B.C. Then, on that condition, we are to recognize a view of what is to be recognized, implicitly, as astrophysics (rather than mere astronomy), which is in a certain significant agreement with implications of the design of the Great Pyramid of Egypt and the Egyptian science of *Sphaerics*.

Strictly speaking, all competent approaches to physical science are premised on the same conceptions which the Pythagoreans, Plato's other circles, and their Egyptian predecessors, adopted as equivalent to the notions of *Sphaerics*. In other words, as I have emphasized within preceding sections of this present report, what is actually worthy of being held up as competence in the development of European science, is a product of a quality of ancient maritime cultures, cultures dominated by the influence of astrogating transoceanic navigators such as those from centuries within the last phase of the most recent general long period of glaciation. The notable

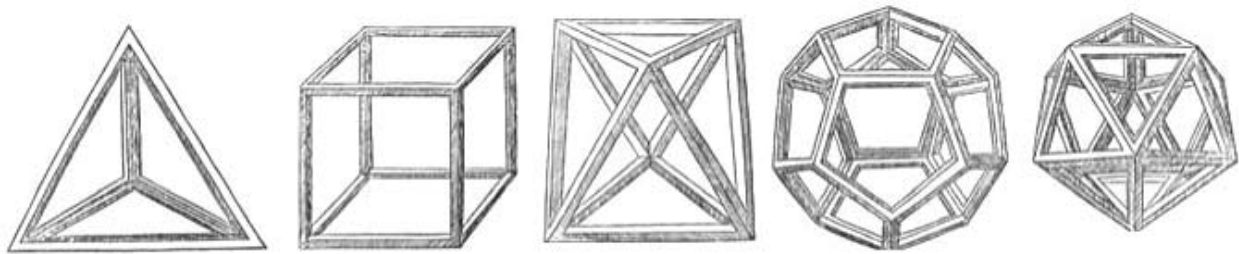
28. Were the proper development of the human culture of Australia not prevented, it could sustain a very much greater, and wealthier population than under the attempts of some, as perhaps Rupert "By Dingo" Murdoch, to suppress its cultural development back to marsupial, or even much poorer, "MySpace," preconditions, again, today.

29. As in the downward trend in culture and economy of U.S.A., in particular, since about 1968, but, also, actually, since the November 1963 assassination of President John F. Kennedy. The distinction between the December 1963 aftermath of the assassination, and 1968, was, essentially, that the Dionysian decadence expressed as a trend by the rise of the ideology of "zero technological growth" and related developments of 1964-1968, affirmed the potential trend of worsening decadence which has persisted as a trend, in North America and western and central Europe since the upsurge of the implicitly pro-Satanic, Dionysian rabble of 1968 and beyond.

30. G.W. Leibniz, "Critical Thoughts on the General Part of the Principles of Descartes" (1692), and *Specimen Dynamicum* (1695), Leroy E. Loemker, ed. (Netherlands: Kluwer Academic Publishers, 1989).



FIGURE 2  
The Platonic Solids



The Platonic solids, drawn here by Leonardo da Vinci, are the only regular solids that can be constructed within a sphere. The notion of the solids was produced by Plato's associate Theaetetus.

FIGURE 3



The Platonic solids on a sphere. *Sphaerics* defines physical science according to the outlook of Nicholas of Cusa, Johannes Kepler, and Gottfried Leibniz. By contrast, the arbitrary, Euclidean notions of modern Cartesian mathematics are incompetent.

characteristic of those transoceanic cultural roots is of very long, astronomical cycles which are nested, in turn, within long cycles of as long a span as, for example, 25,000 years, and still much greater. These are *not* simply perpetually repeating cycles, but are reflections of a direction of the astronomical scale of the anti-entropic evolution of the astrophysical domain (in particular).

On this account, the differences between the recent vogue in classroom doctrines, and the approach to physical science by the Pythagoreans and Plato, reflect problematic features which inhere, axiomatically, within what often passes for modern science instruction. The infamous hoax of the Roman Claudius Ptolemy, and the decadence of European science associated with the influence of the Philosophical Liberalism of Paolo Sarpi and his followers, are relevant illustrations of this fact.

Most notably, *Sphaerics* and its derivatives define physical science as in accord with a universe typified by *certain crucial contradictions within* the kind of notion of a spherical universality inherent in the notion of the "Platonic Solids" produced by Plato's associate Theaetetus. Euclidean geometry and its by-product, the arbitrary, axiomatically Euclidean notions of modern Liberal (Cartesian) mathematics, can then be recognized immediately for the inherent incompetence of both Euclidean and Cartesian geometries, and their modernist and neo-modernist offshoots. We are obliged, on that account,

to rely, instead, on the outlook of the great followers of Cusa: Kepler, Fermat, and Gottfried Leibniz. This confronts the thoughtful reader here with two profoundly interesting hypotheses which bear, directly and most forcefully, on the thesis-topic of this present report.

First, we must regard post-Ice Age civilization, notably the civilization of Europe, the Middle East, and North Africa, during the recent six thousand or more years, as a relatively recent outgrowth of a pre-existing civilization, which, for our purposes here, we must date from developments during a period of emphasis on the leading role of maritime cultures during the approximately 200,000-year term of the preceding great glaciation in most of the northern latitudes. We must compare that span of glaciation, with the presently oncoming new period of glaciation. We must also take into account the fact that the lapsed time since the closing phase of the last great period of glaciation, is about one-tenth of the interval of time of the immediately preceding glaciation itself.<sup>31</sup>

That reflection has many kinds of more or less important implications.

31. We must also consider the estimate of recurring "ice ages" over a previous span of about two millions years, and consider the likelihood that mankind was living, experiencing, and developing cultures during as much as 100 times the length of the interval of cultures since the close of the most recent ice age.

## History & Strategy Move Upstream

Foremost, once again, is the fact that the rise of European civilization within a period of cultural evolution over a span since about 20,000 years ago, has been dominated by the cultures derived from implicitly transoceanic maritime cultures. It was the establishment of coastal settlements by maritime cultures, which has dominated all credible surviving evidence of global development of cultures and economy since that time. This is, most emphatically, a time about 4,000-2,000 years ago when the post-glacial melt had begun to settle into approximately stable present sea-levels.

We must also point out the so-called “riparian” hoaxes, which trace the development of civilization downstream, in contrast to the reality that civilization proceeds upstream, as from the mouths of riparian sites, up the principal rivers adjoining those sites. The movement of cultures has been actually upstream, from transoceanic maritime cultures, into coastal settlements and upstream. The extraordinary importance of Cyrenaica in ancient Egyptian, Greek, Ptolemaic, and later Mediterranean culture, is an included type of feature of this history. Indeed, the advantage of maritime over land-based powers held during the entire sweep of European history prior to the victory of President Abraham Lincoln over London’s Confederacy puppet, and the hysterical “geopolitical” reaction of the British Empire to the eruption of transcontinental railways, still to the present geopolitical date.

These cited strategic features of known and implied history of the recent 20,000 and more years, put the emphasis on what I have written in the treatment of sea-power earlier in this present report.

However, in dealing with language, its uses, and its evolution, we must place the emphasis on what may be usefully described as a land-based language’s contrary sort of geopolitical directions of development, on both the oceanic and upstream progress, and the contrary, downstream-driven motion (e.g., the example of the land-driven Persian Empire versus the sea-driven, Mediterranean-centered, cultural flows).<sup>32</sup>

---

32. For example, the Atlantis account by Plato. Experts’ information says that there is no practical reason to doubt the feasibility of voyages of oared sailing ships of maritime cultures of the period of the last glaciation, or somewhat later, across the Atlantic, using the same routes along clockwise North Atlantic currents pioneered by Christopher Columbus, et al., during the late Fifteenth Century and the early Sixteenth, and that with approximately the same lapsed times experienced by Columbus. Or the case of Viking routes from Ireland, via Iceland and Greenland settlements, into Newfoundland, the St. Lawrence, and down the route defined, chiefly, by the Great Lakes: down the Mississippi. Indeed, there is some strong evidence pointing to relevant trans-Pacific journeys, from the Southeast Asia side of the Pacific, riding oceanic currents, to locations along the coasts of the Americas. In the case of trans-Pacific voyages, the same logic which blocked voyages along the South Atlantic coast of Africa would have applied. For example, the main flow of development of cultures along the western coasts of the Americas, takes us by the Asia-Alaska route, down and along the Pacific coasts of the Americas, and down-river to the South Atlantic side of South America. Notable, for the general thesis presented in this report, is the record of the ancient, internally driven cultural catastrophes, which are associated with the collapse of civiliza-

When we are intelligent enough to abandon that mechanistic method of shaping of world-outlook, typical of land-based ancient cultures, to adopt a dynamic outlook like that of the Pythagoreans and their relevant predecessors, instead, the internally driven impulses of cultures shift from a fixed cultural outlook, to emphasis on exploration and development as the driver of cultural impulses. The crucial role of both ancient Classical Greek culture’s emphasis on its character as a maritime culture, and the relationship of the maritime culture, in Egypt, centered in Cyrenaica, in effecting the fall of Tyre, and, thus, the collapse of the Persian empire, should reinforce our attention to the opposing vectors of an ancient maritime culture and an ancient land-based culture of, for example, the rather typical Asia type.

It is to be emphasized, that it was maritime culture which shaped, and vectored the principal currents of the history of Europe and the so-called “Middle East.” In the medieval period, it was chiefly the rise of the imperialist financier power of Venice, which shaped the history of Europe; the same Venetian drive was key, in modern times, to establishing an imperial form of Anglo-Dutch Liberal power in the Anglo-Dutch, maritime provinces of northern Europe, and the consequent leading power of the neo-Venetian empire of the heirs of Paolo Sarpi since most periods of modern history since the February 1763 Peace of Paris.

It was the establishment of the U.S. republic as a continental economy, with the introduction of development shaped by transcontinental railway systems, which has been the chief pivot of the challenge to the Anglo-Dutch Liberal imperialism, since the U.S. victory, under President Abraham Lincoln, over London’s Confederacy puppets. This U.S. development, has been, understandably, the British Empire’s chief concern since the failure of Lord Palmerston’s geo-political enterprises against the U.S. republic, through the time of the present threat of a “third world war” steered from former Prime Minister Tony Blair’s London presently.

Only a competent economist, such as one of my skills and inclinations, could clearly understand these matters of global grand strategy. Unfortunately, I have discovered no competent rivals in this section of the economics department, so those who wish to understand the present global strategic situation must, like it or not, make do with the assistance available from me.

The same considerations so summarized just now, are crucial for understanding culture as a subject of strategy, as I am treating that aspect of “geopolitical grand strategy” here.

---

zations on both sides of the Atlantic. The most important factor, in considering related voyages, is the presence or lack of the culturally determined inclinations to attempt the journeys, or not: which brings us back to the principal topic of this presentation. The present inclination for, and against space exploration, involves admittedly different, but somewhat similar psychological-cultural considerations.

## The Principle of Cultural Evolution

Therefore, competent grand strategy requires dumping the customary ideologies of the present universities and kindred locations, that for the purpose of adopting an approach to strategy and economy which is premised upon the implications of Gottfried Leibniz's re-introduction of emphasis on the ancient principle of *dynamics*.

Notably, I must say, once more, that, in dynamics, no *a priori* definitions, axioms, or postulates are tolerated. The modern term for *Sphaerics* would be Bernhard Riemann's physical hyperspace, the method of anti-Euclidean, *physical geometry* known to us as that which came to be adopted for competent physical science in general by both V.I. Vernadsky and Albert Einstein.

Against that background in respect to matters of physical-scientific evidence, our introduction of the essential principles of social cultural development, here, must place the emphasis on Heracleitus' (and Plato's) notion that there is nothing in the universe except change.<sup>33</sup> Now, that much said, think of a correlation between that Platonic concept of change and the implications of a transoceanic culture's view of the concept of "up-river." In general, all notable major developments in known cultures are never focussed on that "equal-sign-like" reading of the verb "is," which is the hallmark of a stagnant culture, a concept which seeks to send cultures to the dogs; but, rather, the transitive verb of the true pioneer, "become," which defines the essential distinction of man from beast. This has been the characteristic difference, in trends, between a self-developing human culture, up-river, so to speak, and a relatively stagnant, land-locked, or down-river one.

Look more closely at the case of the U.S.A.<sup>34</sup> The founding and development of what became the U.S.A., was a transoceanic maritime development, which was continued by the leading settlers as an up-inland process, in which up-river pioneering development was aimed at production of materials transported by waterways, development of highways, and railroads (chiefly). Even the mid-Eighteenth-Century development of industry in England was directed largely by Benjamin Franklin.<sup>35</sup>

Earlier, prior to the crucial Seven Years War and the February 1763 Peace of Paris which implicitly established the British Empire as that of Lord Shelburne's British (Anglo-Dutch Liberal) East India Company as a neo-Venetian style of empire-in-fact, the leading impulse for progress in Europe had been exemplified by the 1439 session of the great ecumenical Council of Florence, in which the role of Cardinal Nicholas of Cusa was crucial, in defining the principle of the

modern sovereign nation-state, and laying down the foundations of all competent currents in modern physical science. The characteristic of this insurgency of modern Europe against the tyrannies of the feudal and Venetian heritages, was what became known as the principle of progress. This notion of progress was an echo and continuation of the great maritime tradition associated with the notion of the Pythagorean-Platonic legacy of the Greek civilization of Solon of Athens.

The conflict including, on the one side, the quality of republicanism expressed by the 1439 session of the Council of Florence, and the birth of modern science and of the modern sovereign conception of a republican nation-state such as our U.S.A., has been the expression of a continuing conflict between the republican tradition of the development of what became our unique design of a U.S. constitutional republic, and the relics of feudalism in a Europe besieged internally by the legacy of Venetian financier usury and the dead hand of feudal aristocratic traditions, continued under such guises as parliamentary systems.

Over the period since the rise of Anglo-Dutch Liberal power over the interval 1688-1815, the driving intent for progress in civilization globally, has been expressed in sundry forms of imitation of the principles of the U.S. Federal Constitution, as Benjamin Franklin, George Washington, and Alexander Hamilton typify our American legacy. This was more clearly manifest during the 1865-1877 aftermath of the U.S. defeat, under President Lincoln, of Lord Palmerston's use of his tools, the Confederacy and also the New England-centered tradition of the British East India Company, in the effort to divide and destroy the U.S. republic. It was this defeat of British imperialism, under Lincoln's leadership, which excited continental Eurasia's efforts to bring the kinds of progress witnessed in the U.S. onto the continent of Eurasia. It was the development of transcontinental railway systems, that done in imitation of the U.S. industrialization unleashed by President Lincoln, which prompted the British Empire, under Lord Palmerston-trained Prince of Wales Edward Albert, to organize what became World Wars I and II, the so-called "Cold War," and the Blair government's use of lies and other fraud to draw a U.S. government, mentally sick in its head, into the presently raging threat of the greatest global catastrophe in all modern history.

That is to emphasize, that there is no inherent fault in land-based, as opposed to maritime society. The fact of the matter is, that, until recently, maritime cultures have expressed a more hospitable inclination toward innovative daring in development. However, this changed with the emergence of the commitment of leading nations to transcontinental railway systems, especially that impulse as unleashed by the effects of the victory led by U.S. President Lincoln over the British imperial effort, in concert with the governments of France and Spain, to destroy the existence of the republics in the U.S.A. and Mexico.

The world is currently gripped by the great, global suck-

33. Cf. Plato, *Parmenides*.

34. H. Graham Lowry, *How the Nation Was Won*, Vol. I (Washington, D.C.: Executive Intelligence Review, 1987).

35. Cf. Anton Chaitkin, "The Franklin Circle Starts Modern England," *EIR*, Feb. 9, 1996.



ing-sound of the presently, hyperbolically accelerating, greatest, global financial collapse in all known history of mankind. Now, the principles of global development are clearly posed as the intention on whose success the avoidance of an already onrushing, planetary “new dark age” now depends, and that rather immediately. Either the British empire, in its present form, is eliminated, or civilization is eliminated globally, that for a considerable period of time to come. There are alternatives. There are immediately accessible remedies; but the existence of some form of civilization for some time to come, depends upon scrapping present habits in favor of urgently required innovations of a type which the memory of the late U.S. President Franklin Roosevelt suggests for now.

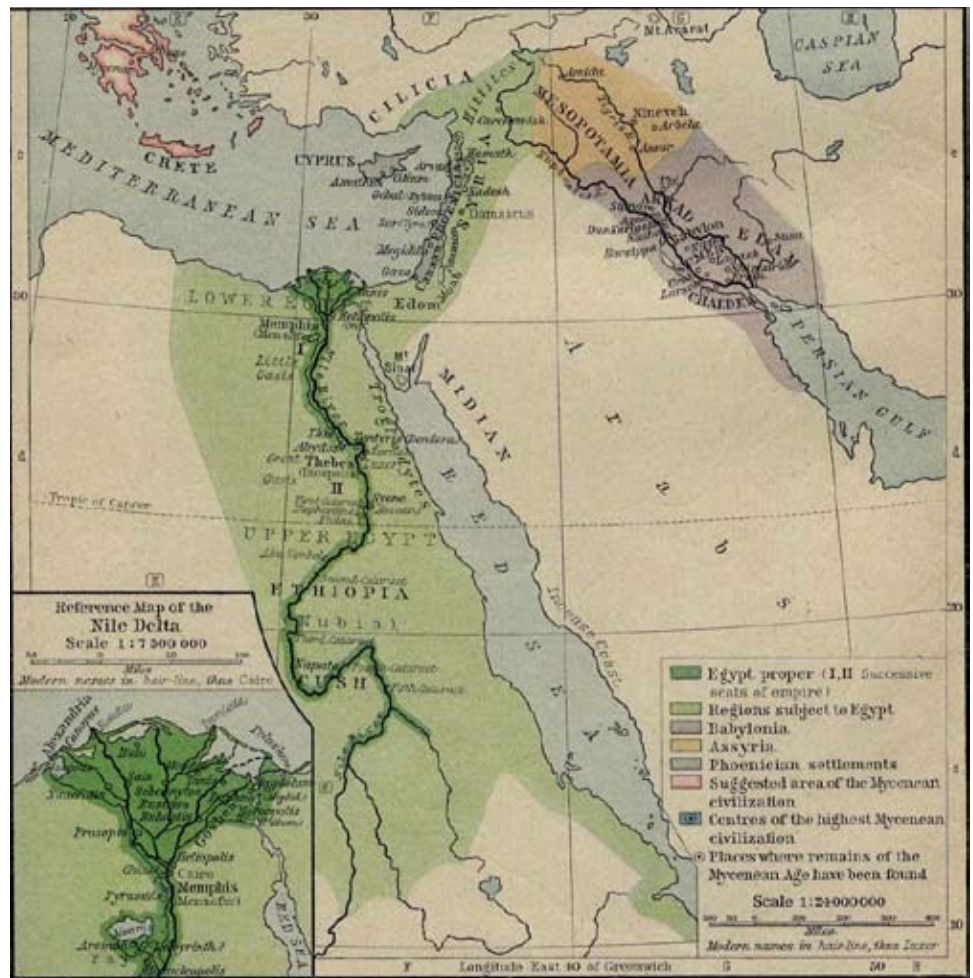
So far, here, I have posed the challenge before us. Now, I must clarify the historical basis in principles, for the remedies required. It should have been already obvious, in what I written here thus far. The distinction between the two, thus contrasted social outlooks, is as follows.

## The Human Equation

From the standpoint of those developments in science and technology available to us presently, we have passed over from a perspective of conquering the space between, and within continents, to the prospect of conquering the space among planets, and beyond. Indeed, the presently perilous world political-economic situation is such, that unless we make that available shift in emphasis for statecraft, the world were probably condemned to enjoy an already onrushing plunge into a generations-long, new dark age.

The penalty would be, not the failure to develop space-exploration sufficiently, as such. The penalty would be the effect of the attitude thus expressed. Failure to maintain the outward improvement of man’s knowledge and mastery of nature, would have a reverberating, destructive effect on the attitude of policy-shaping as that expressed attitude of hostility to outreach would affect the conditions of life back here, on Earth. Failure to move “upstream,” has always been a fac-

FIGURE 4  
The Nile Delta in 1450 B.C.



*Civilization historically proceeds “upstream,” from transoceanic maritime cultures, into coastal settlements, and up the principal rivers adjoining those sites.*

tor of ruinous decadence in relevant societies as far back as we can determine.

The only effective remedy for that threatened and already onrushing state of our planetary affairs, is to examine more carefully that principle of advantage which had been, for a very long time, the advantage of maritime over land-locked modes of culture. To this end, it is essential that we examine certain peculiarities of historical-clinical importance in the way certain conflicting uses of languages may be defined. This task can be considered in terms of the crippling effects which fixed-rule games, including the gaming habits of the traditionally fanatical “chess nut,” and the effect of including games such as computer “point-and-shoot” games, or those others considered by von Neumann and Morgenstern’s *The Theory of Games and Economic Behavior*, tend to produce in the “addict.”

Progressive cultures, such as cultures with a maritime

characteristic akin to *Sphaerics*, can be regarded as cultures whose use of language is more or less constantly producing the needed higher forms of grammatical structure which progress always demands, higher forms in which the most significant net emphasis is on conceptions associated with hypothesis employed in the manner typified by the Pythagoreans and Platonics.

So, progressive cultures of the type usually traceable to a maritime, upstream orientation, adapt themselves to the need to impart the communication of newly discovered hypotheti-

---

---

*The relationship of the waters of the oceans and seas to the flow of life in the upstream lands of the Biosphere, is the principal medium in which the struggle of mankind for self-development is principally situated, in a fundamental way.*

---

---

cal states. In the past history of the roots of European cultures, science and poetry are the typical channel of expression of these improvements in the powers of the individual human mind.

For example: there is a contrary direction, as typified by the kinds of downgrading of the customary uses of the English language under corrupting influences such as those associated with the exemplary *New York Times* style-book, and, a correlative of that, the mentally crippling restriction on the use of the comma. This and related tendencies to “popularize” (or, if you prefer, “vulgarize”) the use and form of language, as degeneration is typified by the popularization of “Mark Twain,” have usually appeared in the form of an attempt, as with the pseudo-language called “Esperanto,” to make the users of language and related practice of art, as relatively more and more stupid (i.e., “popular”), and the content of what passes generally for literate communication bent more and more to the trivial.

Take the clinically relevant experience of an organization which I had participated in founding and leading, the Fusion Energy Foundation (FEF).

During the interval of approximately a decade, between its founding and the suppression (by aid of corrupt U.S. government and other instrumentalities), FEF was a significant component of the U.S.A.’s and international science community’s activity. During that interval, FEF was a joint effort of two generations, my own and that of the Baby-Boomer age-group. By the close of the 1980s and the beginnings of the

1990s, the senior figures of science and related endeavors began to disappear through normal attrition of the aging process. A notable side-effect of this, was the virtual vanishing of scientific rigor among the same persons from the “Baby-Boomer” age-interval who had shown intellectual promise and fruitfulness during the course of the 1970s and 1980s. This change was essentially a reflection of the wave of intellectual decay which had overtaken most of that relatively younger generation.

In a large degree, this trend is the effect of the corrosive impact of the moral and intellectual decadence of the so-called “Baby-Boomer” generation—on both sides of the Atlantic. This should be recognized as a disease which must be checked and reversed, if we are to have a viable civilization again. However, my emphasis on this matter here, is not merely to lament the decadence of the presently reigning trans-Atlantic political class. My mission here is to put the emphasis on something we had lost, something we had lost, in part, because we had overlooked the crucial implication of this change: something we must regain.

That brings this report back to the matters with which the report began.

## Astrophysics & Culture

As I have emphasized at several crucial points in this account thus far, there is a special quality of relationship expressed by the mind which uses astrogation as a means for mastering the navigation of the seas. This is a connection which is congruent, not accidentally, with the role of water and its streams, lakes, and oceans, within the Biosphere as a whole. The relationship of the waters of the oceans and seas to the flow of life in the upstream lands of the Biosphere, is the principal medium in which the struggle of mankind for self-development is principally situated, in a fundamental way.

It is the challenge, as expressed in the discovery of principled conceptions of the relations of the oceans and the heavens above, which has always been the principal feature of the most forward and most effective thrust of the work of the creative powers of the human mind. This development coincides with the emergence of new degrees of freedom which are indispensable for mankind’s increased power in nature. This progress in the powers of the human species, occurs not only as an expression of the opportunity for such discoveries; it is a reflection of both increasing challenges which demand development, but when society responds to that challenge, the rate and extent of realization of potential progress is promoted, especially in societies which embrace that challenge as their destiny.

These challenges are expressed, chiefly, as, on the one side, the challenges to society’s members. On the other side, it is expressed as the challenge of need for those altered relations among the members of society on which the society’s categorical response to its challenge depends. Similarly, in the



NASA/Hubble Space Telescope

*Two galaxies colliding in the constellation Canis Major. "It is the challenge, as expressed in the discovery of principled conceptions of the relations of the oceans and the heavens above, which has always been the principal feature of the most forward and most effective thrust of the work of the creative powers of the human mind."*

matter of space exploration, the challenge itself is of greater immediate importance to our species than the successes themselves.

When we consider the twofold challenge so outlined, the development of the social forms of behavior within society which reflect such challenges, represents a relatively greater amount of the work of development of society than scientific progress as such.

On this account, hypothesis as such plays a greater role than successful discovery. The subjunctive and conditional, ideas expressed in the language of hypothesis, are more important than the indicative. Hence, the crucial importance of Classical poetry, and its expression in the form of the methods of musical composition traced from the impact of the work of Johann Sebastian Bach. This aspect of the creative functions of the individual mind within society, thus defines the essence of net progress in the way in which languages are developed for us.

The response to the challenges confronting the relevant capacities of the beasts to respond, are approximately fixed by the degree of development of which that species of beast is capable. With mankind, it is different. Our development, as I have emphasized that here, has the effect of transforming us, as if to become a higher species than we had been earlier. Thus, since the beast has no ability to create a language in this way, they could never develop a kind of use of language which is the general, characteristic tendency of the human species universally.

For reasons which I have indicated here, the process of development of human cultures has been the richest in effects where man lives among the oceans, reaching upstream. This process of development into relatively higher states of mind, as physical-scientific progress illustrates the point, finds its deepest roots in the oceans of maritime culture, and in the streams it must climb on that account.

The result of this process is changes in the composition of the human mind, changes which would be the result of emergence of a more advanced species in the animal kingdom. So, in place of the relatively fixed potential population-densities of the animal species, mankind is a self-evolving species, in which it is the mental life, rather than changes in the biological composition of the living individual person, which is the location within which progress and evolution of the power of the species occurs.

So, unlike the relatively fixed potential relative population-density of the beasts, it is from the evolutionary development of those specifically human mental powers, as in the upstream progress of a maritime culture, that each generation inherits the specific powers of its immediate predecessors.

We are creatures of the seas, striving upward toward the stars. We are creatures of the fourth and highest domain, above the abiotic, the merely living, and the merely individual. We are, by anointed destiny, not beasts, but, as *Genesis* 1:26-31 specifies, creatures in the willful likeness of the Creator.