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**By what means might human beings have the capability to know
with certainty whether God exists? What aspect of human
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knowledge? What relevant form of scientific incompetence,
commonplace among academicians, has Dawkins exhibited?**



The Metropolitan Museum of Art, Purchased with special funds and gifts of friends of the Musuem, 1961. (61.198)

Rembrandt van Rijn, "Aristotle with a Bust of Homer," 1653.

On the Subject of God

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According to the daily London *Independent* of the most recent April 16, the preceding evening's participants in an Edinburgh (Scotland) international science festival had heard an Oxford University professor of biology describe belief in God as a disorder of the brain analogous explicitly to a transmittable "computer virus." Oxford's Richard Dawkins' address had included the formulation: "These are arbitrary, hereditary beliefs which people are told at a critical age, passed on from your parents rather like a virus." He had added: "that 'evolutionary theory' has removed any scientific basis for arguing the existence of God, and said that people who believe in a God who is responsible for the order and beauty of the universe are 'stupid.'"¹

Report of Dawkins' address was relayed to the present writer by Charles B. Stevens of *21st Century Science* quarterly. Stevens suggested, that several persons, whom he listed at that time, co-sponsor the submission of a rebuttal of Dawkins to the *Independent*, to consist essentially of a 1960's ontological proof of the existence of God authored by Princeton University's late Professor Kurt Gödel.²

At first glance, that suggested rebuttal was particularly relevant, since the choice of formulation reported by the *Independent* might imply to a knowledgeable reader that Dawkins had intended to single out Gödel's 1961 ontological proof for attack. Nonetheless, Gödel's work appeared to be inadequate rebuttal on three counts. Firstly, presently available versions of Gödel's proof add nothing significant to the Classical argument by Plato and Leibniz.³ Secondly, it would be disingenuous not to attack directly the shameless illiteracy of Dawkins'

rhetoric; this should be a crucial included point to be submitted in refuting him. Thirdly, the best available argument, which Gödel should have been able to offer, but apparently did not, the Classical argument restated from the standpoint of Cantor's *Beiträge*,⁴ deserves to be presented as a supplement to the Classical proofs by Plato and Leibniz.

The formal question begged, in speaking of such an ontological proof, is not the issue as posed so ineptly by Dawkins. The issue is not the simple assertion, whether God exists, or not; the immediate question is a far more modest undertaking: *by what means might human beings have the capability to know with certainty whether God exists? More precisely, what aspect of human intelligence might bear upon such a special quality of knowledge?* Also to the point is: *what relevant form of scientific incompetence, commonplace among academicians, has Dawkins exhibited?*

For Plato, to whom we owe the original ontological proof, as for the present writer, human knowledge pertaining to the existence of God is to be discovered, uniquely, within a correct grasp of the notion of "Platonic ideas" (*eidē*).⁵ The Christian Platonist, Gottfried Leibniz, employed the term *monad* as a referent for such ideas.⁶ To the same purpose, Bernhard Riemann once employed the term *Geistesmassen*.⁷ These terms, and this writer's term, "thought-objects," are each and all related in an essential way to (Christian Platonist) Georg Cantor's 1890's conception of transfinite *types*.⁸ In these following pages, we shall summarize the kernel of the proof, that *the conception of a Judeo-Christian God occurs as a matter of human knowledge only in the form of a "Platonic idea," or "thought-object."*

I. The Definition of 'Human Knowledge'

That quality which sets the human species above, and apart from all lower species, is empirically reflected most simply, but nonetheless crucially, in all that pertains to the simple fact, that mankind has risen, by successive advances, above the miserable potential population-density of a baboon-, or yahoo-like “primitive hunting and gathering” culture, to a population-density of a thousandfold greater today. This successful transformation has occurred without a change in the present-day human genotype, but, nonetheless, a succession of changes to an effect which is paralleled in the animal kingdom only by means of evolution from inferior to superior species. In mankind, this achievement occurs through upward transformations in quality of culture, a transformation effected uniquely by means of an agency termed “creative reason.”

To restate this: the notion of “human knowledge” is so defined, as the ordering of progress, from inferior, to superior forms of culture, a progress effected by that agency of change which we term human creative reason. The difficulty which impairs fatally the argument of a Richard Dawkins from the outset, and many other putatively educated illiterates voicing conceits like his own, is the fact, that no formal system of deduction/induction could portray positively such progress in human knowledge.⁹ That difficulty can be located in the following terms of reference.¹⁰

The central feature of a process of successive increases in a society’s population or potential population-density, is scientific and technological progress.¹¹ From the standpoint of formal systems of argument, the level of scientific knowledge (technology) of a society at a given time may be represented, approximately, by a mutually consistent open-ended set of theorems. This set of theorems is implicitly consistent with some underlying set of interdependent axioms and postulates. This arrangement is termed a “theorem-lattice,” and the associated, underlying set of interdependent axioms and postulates is sometimes termed an “hereditary principle.” Let one such theorem-lattice be represented by “*A*.” Let this *A* be associated with a specific potential population-density for that society. Let a fundamental discovery, overturning some part of the interdependent set of axioms and postulates of *A*, be correlated with an increase of that society’s potential population-density. This *change* de-

fines a new theorem-lattice, “*B*,” associated with a new set of axioms and postulates.¹² That transformation, from *A* to *B* typifies a rudimentary definition of “scientific and technological progress.”

As we have shown in various other locations,¹³ no theorem of lattice *A* can be consistent with any theorem of *B*; an “unbridgeable” chasm of formal discontinuity separates mutually each lattice from all other lattices of such a series. That “chasm” corresponds, as does a map to a terrain, to that action of *change* by means of which *B*, for example, is generated from *A*. The series *A, B, C, D, E, . . .*, is generated *as a series* by a higher factor of *change*. This higher order of change, orders the succession of individual changes \overline{AB} , \overline{BC} , \overline{CD} , \overline{DE} , etc., as a series. This higher change cannot be represented by any formal algebraic or similar representation of an ordered function—since each and every term of the series *A, B, C, D, E, . . .*, is separated from all others by an “unbridgeable” formal discontinuity. Yet, this higher factor of change defines in its own way the effective generation of successive increases in potential population-density, increases on which succession the continued existence of that society ultimately depends.

A detour is needed at this point; an example of the change from lattice *A* to *B* must be supplied. For this purpose, the reader is referred to Nicolaus of Cusa’s 1430’s discovery of the isoperimetric principle, as the relevant features of that discovery are emphasized in this present writer’s “On the Subject of Metaphor.”¹⁴ Briefly, the highlights most relevant to the ontological proof are the following.

To estimate the area of a square which is equal to the area of a given (e.g., “unit”) circle, use some form of the following algorithm. Construct two squares by means of a single, continuous construction, one inscribed within the given circle, the other circumscribing it. Repeatedly, double the number of sides of this pair of polygons, to generate a series of paired regular polygons of 2^n sides, from $n = 16$ to an astronomical $n = 256$. The average of the areas of the two polygons will approximate the size of a given circle, and the average of the perimeters of the polygons that circle’s perimeter. That perimeter divided by the length of the diagonal of the inscribed polygon yields an approximate value for π ; the estimated area divided by the square of half that diameter, is also an approximation of π .

However, even if n is increased astronomically, as for the cases that $n = 256$ or much more, a well-defined, discrete difference in area and perimeters persists between the circle and each of the polygons. The perimeter

of the polygons *never converges upon congruence* with that of the circle. The polygon and circle are of different species of existence.¹⁵ A strong proof, using the seventeenth-century notions of “infinitesimals,” for example,¹⁶ leads us, as in this illustrative case, to recognize that a *circular action* cannot be accounted for in terms of the set of interdependent axioms and postulates of Euclidean formal geometry.

However, let us define *circular action* in a different axiomatic way, as Cusa did. Let us define this circular action by means of what Cusa identified as his “Maximum-Minimum” principle; this principle is recognized in its more superficial aspect as the isoperimetric principle, of least action required to generate a given area, or the form of closed action which defines the largest enclosed area. Then, reference the way in which the same “Maximum-Minimum” principle came to be viewed over the course of the seventeenth century, as the Leibniz-Bernoulli principle of *universal least action*.¹⁷

We cannot define continuous circular *action* within the implicitly Eleatic terms of a formal Euclidean theorem-lattice. We must expel the disabling axiomatic features of that lattice, notably the presumption of a formally axiomatic existence of the asserted point and straight line. We must arrive at a formal description of actually existent points and lines, as consistent theorems generated by an appropriate new set of interdependent axioms and postulates. This new “hereditary principle,” from which such new theorems are to be derived, allows only the self-evident form “circular” (isoperimetric, “least”) *action*.

The seventeenth century concept of the *cycloid* (circular action acting reciprocally upon circular action), and its derivatives (involute, evolute, *analysis situs*, and envelopes), as the basis for an anti-Cartesian, non-algebraic calculus of *universal least action*, by Huygens, Leibniz, the Bernoullis, *et al.*,¹⁸ shows us that our new mathematics (“Lattice B”) enables us not only to eliminate the vicious paradoxes of “Lattice A,” but to equip mankind with the power of knowledge over nature which had not been possible within the framework of an inferior, merely algebraic “Lattice A.”

That, in brief, is the gist of this short detour. Note that we have underscored three features of the discontinuity between *A* and *B*.

1. *The preconditions for the discovery.* A paradoxical feature of theorem-lattice *A* is driven to beyond its limit. This shows, contrary to the anti-Monge, anti-Leibniz Augustin Cauchy,¹⁹ that processes defined by the infe-

rior, initial lattice *A*, could never become coincident with a higher, *bounding* state of form. Thus, as this principle’s method is typified by Plato’s *Parmenides* dialogue, we show a formal flaw of *A* to be not only axiomatic in nature, but of the form of an *ontological paradox*.

2. *The discovery.* This negative (Platonic dialectical) proof requires that the higher, externally bounding form, unreachable by the lower, is ontologically superior to, and existing independently of the lower. However, the lower is derivable from the higher; thus, a new theorem-lattice’s underlying set of interdependent axioms and postulates is required, in which the ontological superiority of the higher form is axiomatic, and the existence of the inferior is a derived one. (Note, however, the fact that the inferior theorem-lattice’s underlying set of axioms and postulates can be accessed from the higher does not mean that there is any consistency between the axiomatic structure of the higher theorem-lattice and any or all of the theorems of the lower lattice.)

3. *The proof of discovery.* The proof of a discovery is threefold: (a) it must satisfy the paradox’s requirement for a formal solution; (b) the discovery must increase implicitly mankind’s power over nature; (c) the discovery must be one of an ordered series, of a method of discovery which generates a series of a *type A, B, C, D, E, . . .*, which correlates with increasing potential population-density.

All that which is properly termed “human knowledge,” must be nothing different from that characteristic of individual human behavior which is essential to the perpetuation of the human species as an indivisible whole. It is a fact of physical economy, that such existence of the species depends upon no less than some critical, minimum rate of increase of potential population-density.²⁰ In other words, “change” in human behavior to such effect. This *change* is generated uniquely by those processes of creative reason referenced here. In other words, knowledge occurs solely in the form of “thought-objects,” *Platonic ideas*, and never as Aristotelian, Cartesian, empiricist, or Kantian forms of deductive conceits.

That point, crucial for the ontological proof in question, is best illustrated by reference to the evidence supplied by modern Classical forms of *Christian* humanist secondary education—from the Brothers of the Common Life of Groote and Thomas á Kempis, through Wilhelm von Humboldt’s nineteenth-century reforms.²¹

This bears upon our third point, 3(c) above, under “the proof of discovery.”

The relevant kernel of such a Christian humanist form of secondary education, is emphasis upon the guidance of (a sense of) primary sources to prompt the student to relive the creative-mental experience of many great original discoveries in Classical natural philosophy, Classical forms of fine arts, and statecraft. This has two leading aspects, for our purposes here. Firstly, each discovery, relived successfully by the student in that way, is a reliving of, a replication of the processes of valid discovery, virtually those which were experienced by the original source. Thereafter, that portion of the creative-mental *capability* of the original discoverer lives again in the mind of the student. This replicated portion of that original discoverer’s creative-mental capability lives on in that student’s mind as a “Platonic idea,” “monad,” or “thought-object.”

Secondly, the process of such education is *historical*, each discovery located in time and place of original discovery, and also located, in time and place, in respect to each of those subsequent original discoveries for which it serves functionally as an indispensable predecessor. Thus, in this higher *analysis situs*, each such individual discovery is a member of one, or more series, each latter of the form representable by our pedagogical series *A, B, C, D, E, . . .* With each series, there is associated implicitly the appropriate, required, higher order of thought-object. The idea of a “universal history,” as for Friedrich Schiller, in such a Christian humanist educational program, is a “Platonic idea,” a “thought-object” of this second, higher order.²²

Contrast such a Christian Classical humanist education to the stultifying philosophical banality of today’s far worse than merely mediocre secondary and university programs. The latter chiefly drilling future professionals, not to develop knowledge, but to pass computer-scoreable multiple-choice questionnaires. The Christian Classical humanist program aims directly at fostering the development, the increase of power of the student’s creative-mental faculty; this is a method, rooted in “Platonic ideas,” for fostering directly, by carefully aimed intent, the development of the student’s creative powers of reason. Modern positivist education aims at a conformist show of *mere learning*, as, in the extreme case, the late behaviorist pigeon-tormentor, B.F. Skinner, might have defined “learning.” Classical humanist education fosters *human knowledge*.

In the contrast of such “knowledge” to such mere, empiricist “learning,” is key to the kind of banalized credulity toward which Dawkins’ form of populist soph-

istry is directed. The sixteenth century, Venetian founders of modern neo-Aristotelian gnosticism and its twin, Baconian empiricism, explicitly proposed exclusive emphasis upon the symbols (“marks”) of nature (perception), in explicit attack upon Nicolaus of Cusa’s *De Docta Ignorantia*.²³ In other words, the gnostic empiricism of the Baconian Rosicrucians²⁴ is based upon a militant outlawing of “Platonic ideas.” Thus, to accept *empiricism*, or, the same thing, *positivism*, is already to have adopted, purely arbitrarily, without reason, the formal premises for denying the existence of God, e.g., for excluding arbitrarily the entirety of that body of conclusive evidence upon which a proof depends. In short, bury the relevant crucial evidence, human creative knowledge, out of sight; then, that done, deny that there is any relevant evidence in sight. (This practice reminds one of a typically crooked prosecutor, burying exculpatory evidence with the complicity of a corrupt judge.) Thus, did a hoaxster such as Professor Dawkins tread in the gnostic Venetian footsteps of Paolo Sarpi, Francis Bacon, Robert Fludd, Jeremy Bentham, Bertrand Russell, and Rudolph Carnap.

II. The Kernel of the Proof

Since all progress in knowledge is correlated with the single dimension, of an increase of society’s potential population-density, it adumbrates, from that latter standpoint, a formal representation by a *single* series of the general form of our pedagogical sequence of theorem-lattices, *A, B, C, D, E, . . .* The increase of potential population-density lies causally, not in any one or many of these denoted terms of that sequence, but in the *changes* marked by the discontinuities among the literal terms.

Thus, the “substance” of knowledge is *change*. All such change has the “content” of a “Platonic idea,” or “thought-object.” In the pedagogical sequence referenced, two distinct orders of such *change* are denoted. There is the first case, the *change* (discontinuity) defining the change from one lattice to a successor; there is the second, higher order of change, the latter implied by the specification that the sequence as a whole correlates with a succession of increases of potential population-density. *This second, higher order of change bounds the first*; the first is determined by the second, not the contrary. That is to say, that the mere fact of a successful generation of *B* from *A*, does not generate *per se* a subsequent successful

generation of C from B . \overline{AB} occurs as a subsumed action occurring on the level of the first order of approximation, subsumed (in the causal sense) by the higher principle of change, a higher persisting principle which generates the continued succession of each of the first-order changes of that series.

A still higher, third order of change (to similar effect), is implied by the notion of variability in change of the second order. Given $A_1, B_1, C_1, D_1, E_1, \dots$, is there possibly a more powerful, alternate rate of change of the second order which generates a series, $A_1, B_2, C_2, D_2, E_2, \dots$, of higher rates of growth than the first series? And, then, a third such; and, so on? The question is implicitly its own answer, at least partially so. (1) Let change of the first order be designated as *hypothesis*. (2) Let change of the second order be a principle of *higher hypothesis*. (3) Let change of the third order be a principle of *hypothesizing the higher hypothesis*.

This "hypothesizing the higher hypothesis" has a significance of *Becoming* in Plato and in Georg Cantor. This transfinite *Becoming*, in Plato and Cantor is bounded, "as from above," by Plato's ("infinite") *Good (God)*. The "hypothesizing the higher hypothesis," the highest state of mind corresponding to comprehension of Plato's and Cantor's *Becoming*, is bounded by the unchanged cause of change (for increase of potential population-density), the *Good*. This relationship of the lesser (*Becoming*) to its master (*Good*) parallels somewhat the bounding of the inferior species, a polygonal process, by the higher species, circular action.²⁵

Focus upon the crucial detail of series A, B, C, D, E, \dots , the relationship of the individual revolutionary discovery, say \overline{CD} , to altering the determination of \overline{DE} by a $\overline{BC} + \overline{CD}$. There are two qualities to be considered. First, \overline{CD} must be the necessary predecessor of \overline{DE} . Second, \overline{CD} must increase the series' rate of increase of potential population-density above that determination of future such rate already implied for \overline{CD} by the series

To accept *empiricism* is already to have adopted, without reason, the formal premises for denying the existence of God, that is, for excluding the entirety of that body of conclusive evidence upon which a proof depends.

$\overline{AB}, \overline{BC}$. Nonetheless, (respecting this second quality), the principle of transfinite *equivalence* implicitly anticipates this increase of rate of value of the series as a whole by later changes in the same series.

To illustrate what we are saying of this extraordinary quality of each term of that unified, transfinite series of changes, compare this to the case of successive integration (in the calculus): each term of the series is not only an integral of the preceding term created now as a differential; the number of multiple integrations performed increases with each successive term. This is merely a

simplified illustration of the kind of *analysis situs* which substitutes for ordinary notions of deterministic function in the highest transfinite domains.

Consider a real-life case from the history of music (Wolfgang Amadeus Mozart's "1782-1786 Revolution in Music.")²⁶ Three revolutions, in succession, brought about the discovery which Mozart exhibited in, for example, his six "Haydn" string quartets.²⁷ The first was Joseph Haydn's 1781 presentation of his revolutionary *Motivführung* principle in his six "Russian" quartets of that year, Op. 33.²⁸ The second is a Bach discovery of 1747, represented by a collection of related compositions entitled "A Musical Offering."²⁹ The third is Mozart's 1782 discovery, combining the three in the *isochronic* time-series of necessary predecessor, 1781, 1747, 1782.

This example from the history of music is equivalent to the more general form of a (Christian) Classical humanist education, based upon the *isochronic* "necessary predecessor" principle of ordering of primary-source representation of crucial creative discoveries in the advancement of human knowledge.

What is occurring in all valid such series of this A, B, C, D, E, \dots form, is that the series is converging *isochronically* upon a generalized form of Plato's and Cantor's *Becoming*. Notably, the manner in which this process of "perfection" is proceeding (in valid cases), to its "equivalence," shows that it never becomes coincident

with the efficiently subsuming principle bounding it, the *Good*.

Now, reconsider the term, “leap of faith,” as employed to describe the mere outside appearance of an act of valid revolutionary discovery. To this purpose and effect, focus all that has been, or might have been said up to this point upon the Classical humanist educational process. The following observations bring the relevant images into the required focus.

1. The purpose and content of humanist education is not the accumulation of mere information and recipes, but rather a direct fostering of the individual spark of creative genius (*imago viva Dei*) in each student, by a total emphasis upon incorporating in the student's mind crucial moments from the acts of crucial, valid discoveries by (implicitly) all of the greatest known creative geniuses in all of history. This experience of genius—this youthful living the experience of becoming a genius—is not limited to any so-called specialty; it covers all natural philosophy, plus great Classical forms of all fine arts, plus mastery of the universal principle of language from the standpoint of Classical Indo-European philology, plus the science of statecraft.
2. The discoverer does not make a “blind leap of faith,” although that appearance may be presented to an observer who lacks familiarity with the true, Classical humanist species-nature of creative genius. The discoverer reacts to the stimulating paradox in *the natural way of genius*, as previously acquired through reliving the acts of genius of the greatest discoverers from the past. Genius, so educated, is not an extraordinary event to such an educated person. For that reason, for such persons, creativity has become a continuing way of life. It is the natural way of reacting to experience for those who have made constant companions of exemplary creative moments from within the minds of numerous among the greatest original thinkers of history.

The spark of potential genius is given to all of us who might become capable of understanding, for example, this page; all are *imago viva Dei*. Some, too few, develop their talent; most, unfortunately, waste it in squirrel-like pursuits of wealth and sensuous pleasures, or simply bury it, unused. To those who do develop that talent, or who might do so, as a Christian form of Classical humanist education implies that accomplishment, the way of true genius becomes simply daily custom, in every aspect

of experience, throughout the entirety of one's life.

So, the educated Classical humanist—the modern “Renaissance man”—knows relevant parts of the creative mental processes of Plato, Archimedes, Cusa, da Vinci, Kepler, Gilbert, Desargues, Fermat, Pascal, Huygens, Leibniz, *et al.* Somewhat similarly, great moments of the greatest, and other Classical fine artists, and of the political history of our planet. For that humanist, the creative principle of change is the efficient principle, the characteristic behind all valid forms of human activity.

The apparent “leap of faith” is not a capricious act of arbitrary “blind faith.” Not only does creative revolutionary change—as best typified by valid, fundamental scientific discovery—set mankind's individual person apart from, and above the beasts; such creative thinking, such apparent leaps, is the true nature of all behavior which is characteristically human. The Classical humanist education compresses millennia of such human progress into the student's direct experience, by replication of numerous among the greatest moments of concentrated, valid discovery, by means of selection from among the works of the greatest original thinkers of all history. For the student fortunate enough to enjoy such a form of education, thousands of years of such progress in natural philosophy, fine arts, and political affairs are compressed into a few years of one's youth, one's development of the intellectual and moral foundations of adult life. In that case, one's own, richly developed creative talent is elevated from the rank of “raw intuition,” to an intelligible form of creative thinking. That intelligibility is named by Plato “the method of hypothesis:” to see one's own creative efforts in the setting of the higher hypothesis posed by one's experience of creative moments of history to date, is to make one's own conscious efforts, so situated, an object of conscious reflection; this is “hypothesizing the higher hypothesis.” Knowing the principle of hypothesizing the higher hypothesis, so, we know when, how, and where to leap.

Once that educable quality of self-consciousness, hypothesizing the higher hypothesis, is attained (through a lifetime's continuing commitment to this Classical educational approach), the ontological proof is a readily intelligible proposition. Otherwise, as the case of Dawkins' April 15 Edinburgh address illustrates the widespread illiteracy among putatively professional academics, competence in this and related deeper matters of scientific method were not possible.

The crucial marks of Dawkins' address are sufficient to prove his illiteracy, conclusively. His hand-waving reference to hackneyed phrases respecting “evolutionary theory,” is among the more glaring examples of this.

Here, thus far, we have examined, in summary, the kernel of the ontological proof; we turn next, to exploit the Dawkins case as a “whipping-boy,” to show some among the more important historical implications of the proof.

III. Plato vs. Aristotle

The core of Dawkins’ argument is derived not from the progress of modern science, but from the influence of an anti-Renaissance, anti-Christian, gnostic movement which rose to great influence over the course of the sixteenth and seventeenth centuries of modern European history, the Rosicrucian and related, gnostic cults which assumed the disguise of the eighteenth-century Enlightenment of Voltaire and his cronies.

This post-Renaissance, gnostic intrusion into Western Europe was partially an echo of medieval cults of “Bug-gery”³⁰ and “Averroism.”³¹ It was introduced chiefly through Venetian usurers, such as the faction of the notorious Paolo Sarpi,³² and his forerunners of the early through middle sixteenth century.³³ The proverbial “red dye,” by means of which this gnostic subversion may be traced from the East, is the promotion of the teachings and method of Aristotle.

That the real-life Aristotle, and also his writings are evil, is beyond reasonable doubt; his notorious *Politics* and (*Nicomachean*) *Ethics* are luridly so.³⁴ In this present discussion, a different facet of his writings occupies our attention, the Aristotle of logic and natural philosophy. The famous Philo (“Judaeus”) of Alexandria was the first leading theologian to show explicitly that Aristotle’s method rejects absolutely the existence of a Mosaic, Christian *God the Universal Creator*.³⁵ In modern times, whoever has adopted competently the method of Aristotle, such as René Descartes,³⁶ Immanuel Kant,³⁷ or the typical, consummately evil Bertrand Russell,³⁸ will reject axiomatically, as did Dawkins, even the mere suggestion that an ontological proof exists.

Expressed in this writer’s “On the Subject of Metaphor,” the Aristotelian, or so-called “Big Bang” model of the universe, is implicitly consistent with a popularized delusion, that “human intelligence” is merely “information,” the which might be assessed statistically, and therefore could be accomplished by an adequately sophisticated form of digital computing system.³⁹ This argument, typified by that of the late Professor Norbert Wiener, *et al.*,⁴⁰ is the same proposition underlying to-

day’s Boltzmann-like statistical representation of an “evolutionary theory” based upon the “action” of “survival of the fittest/natural selection.”⁴¹

Compare the primary features of two somewhat similar, but specifically distinct evolutionary series. The first, is the geological and related records of transformation of the species-composition of the biosphere. The second, is human history (and archaeological pre-history) from the standpoint of physical economy. Both series demonstrate the principle, that successful reproduction of the global biosphere, or successful cultural evolution of physical-economic modes of social existence *are characteristically negentropic processes*.⁴²

The following considerations are adduced.

1. The first series (biological evolution) is characterized by some biological principle of action, the second by the sovereignly creative-mental processes of the individual mind.⁴³ Yet, the general form of both is similar.
2. The successful case of evolutionary development is the diversification of the entire process by addition of a new type whose characteristic activity increases the relative negentropy of either the biosphere, or the society taken as a whole process.
3. There are many instances of failures in the actual history of both series, yet the failures are the proverbial exceptions which prove the rule.

Consider some crucial features of cultural evolution, and thereafter resume the comparative examination of the two, specifically distinctive series. Focus upon the physical-economic characteristics, i.e., *changes* in potential population-density *per capita* and *per square kilometer*. Include the standard of *durable survival*,⁴⁴ e.g., not the value of \overline{AB} , but of the series A, B, C, D, E, \dots , as a *type*, e.g., the *higher hypothesis*. Reflection upon variability of performance of *higher hypothesis*, then implies *hypothesizing the higher hypothesis*.

From this objective standpoint of physical performance, of the science of physical economy, the data collected by the anthropologists represent chiefly types of cultures which collapsed because they were, at best, no longer morally fit to survive, the least suitable, the “least fit” of cultural types. The usury-practicing cultures of Mesopotamia are a leading example of persistent decadence. All cultures under the influence of those forms of worship associated with the Shakti-Shiva, Cybele-Dionysus, Ishtar, Isis-Osiris, or Gaia-Python-Apollo form of Satan-worship, represent a fatal cultural virus,

a disease of culture analogous to bubonic plague in the biological domain. From no later than approximately 1000 B.C., the pre-Columbian cultures of the Americas were in a spiral of collapse, into such terminal forms of utmost moral degeneracy as the Aztec culture of the late fifteenth and early sixteenth centuries. There are virtually no instances of known aboriginal cultures; the philological and archaeological shards show that the so-called “primitive cultures” are usually the pitiful, degenerated remains of a former, collapsed culture.

Against this mass of evidence, there is no doubt of the great advancement of humanity’s potential population-density, especially since the European Golden Renaissance of the fifteenth century.

The negentropic character of successful cultures is best illustrated by attention to the largest component of the human activity of a successful culture, its *physical economy*. To the purpose of exposing the illiteracy of Dawkins’ use of so-called “evolutionary theory,” we take a necessary detour through the relevant rudiments of modern physical economy.

Physical Economy

The science of *physical economy*, or *technology*, first established by Gottfried Leibniz during the interval 1672-1716, was founded upon study of two leading features of the industrial revolution which such collaborators of Colbert as Leibniz and Huygens were designing at that time. In his 1672 “Society and Economy,” for example, Leibniz treated the principles of a real-wages policy.⁴⁵ His more extensive work emphasized the principles of design of *heat-powered machinery*⁴⁶ and the relationship between *technology* and *productive powers of labor*.⁴⁷

So, we have identified *technology*, *heat-powered machinery*, and *real-wages policy*. Examine each of these topics, summarily, in that order; we need consider only enough to situate our use of the term “negentropy” as applicable to a description of *culture*.

Technology is fairly described as follows:

1. Every scientific discovery is susceptible of being represented in its effects by a form of demonstration sometimes named “a crucial experiment.”
2. A refined version of such a crucial experiment is the model of reference for design of a corresponding principle of machine-tool design.
3. The appropriate application of such a machine-tool design increases the average value of the productive powers of labor of that society.
4. That form of increase of the productive powers of

labor is the correlative of an increase of potential population-density.

5. The crux of these connections, which places science and materialist ideology into irreconcilable opposition, is the fact that the origin of this causal sequence is a *spiritual*, i.e., mental-creative act of discovery, and *hypothesis*. I.e., a *material result*, increase of potential population-density, is the result of a spiritual cause, *a result which could be accomplished in no other way than reliance upon this spiritual causation*. This is directly contrary to the arbitrary dogmas of materialists Descartes (*deus ex machina*) and Newton (*hypotheses non fingo*).⁴⁸

For example, the importance of private entrepreneurship is implicit in this aspect of technology. The higher the rate of capital-intensive (and energy-intensive) investment in application of high rates of scientific and technological progress, the higher the combined rates of real-wage growth, profits, and potential population-density. Thus, the necessary emphasis upon the sovereignly individual, personal quality of creative-mental processes, in the form of private entrepreneurship by family farms and small- to medium-sized manufacturing and related organizations, especially in the machine-tool sector. The right to private entrepreneurship is properly contingent upon promotion of scientific and technological progress in energy-intensive, capital-intensive modes.

However, the possibility of success in the private sector depends upon certain forms of relatively massive investments by government. These are properly concentrated in two categories of *basic economic infrastructure*: “hard” (e.g., water, sanitation, energy, transportation, communications grids), and “soft” (e.g., educational systems, public health systems). We turn to “hard” infrastructure, under Leibniz’s rubric of *heat-powered machinery*.

Leibniz’s treatment of the principles of heat-powered (e.g., steam-powered) machinery shows us, that although the increase of *per capita* and *per square meter* power does tend to correlate with functions of increase of the productive powers of labor, this functional increase is delimited by progress in technology—using a geometric representation of technological progress (of hypothesis and of higher hypothesis). The reverse is also true, even “more true.” The ability to realize technological progress is delimited by several factors which are measured appropriately in common terms of “*per capita*” and “*per square meter*” (or a multiple or fraction of a square meter). We call these “basic economic infrastructure,” which we divide into the indicated “hard” and “soft” categories.

A level of technology requires a minimum to maximum range of allotment, *per capita* and *per square kilometer*, of such "hard" infrastructure as (fresh) water management, transportation grids (ton-kilometer-hours), power grids (megawatts *per capita*, *per square kilometer*), sanitation, and communications. It requires a certain level of compulsory education (by Classical standards), and health-service grids—otherwise intellectual development, longevity, and health will not be sufficient for economical realization of the indicated level of technology.

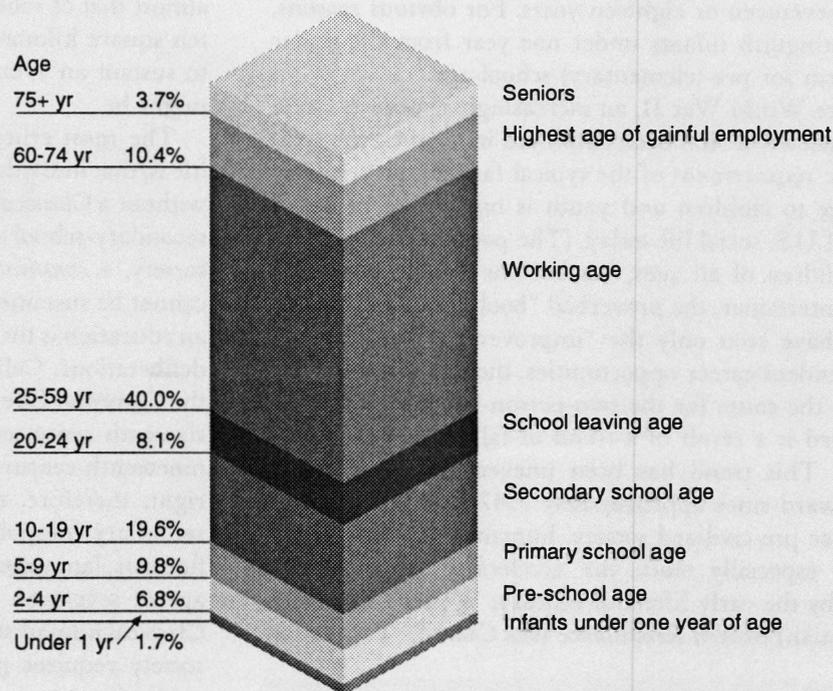
In addition to such infrastructural constraints, the feasible level of realized technology by a society (as a whole) is delimited by the *capital-intensity* of employment in infrastructure, agriculture, mining, and manufacturing, combined. This *capital-intensity* is *not* measured, in any way, in dollars or kindred monetary units or indices; it is measured twice, in ratios of the total available, and employed (respectively) labor-force. This capital-intensity of the society/economy as a whole, is the ratio of labor employed directly in production of producers' goods, to labor employed directly (physically) in fashioning households' and related goods.

This ratio of capital-intensity for infrastructure, agriculture, mining, and manufacturing, respectively, is combined to yield a capital intensity for that society/economy as a whole. Agriculture is combined with mining and manufacturing, to yield one crucial ratio; this ratio, in ratio to total (including infrastructure) yields the second significant ratio.

Demography

Given, these constraints, infrastructural and capital-intensity, for realization of a level of available technology, consider then the following, diagram-aided representation of the corresponding process of self-reproduction of an entire society.

CHART 1. *Population as a Whole.*



Social composition shown is the United States, 1970 population of 203,235,000.
Source: U.S. Bureau of Labor Statistics; Executive Intelligence Review.

The analysis of the process of self-reproduction of a society begins with the population as a whole.

In physical economy, two demographic features of the social-reproductive process are most crucial; life-expectancy and health provides us the general profile of the consuming population; the way in which the labor-force component of the population is defined, is the second of the two principal features.

In a modern, late twentieth-century industrial society, for example, the following rule of thumb applies (SEE *Chart 1*).

Chart 1 is a bar diagram placed in a representation of age (modal life-expectancy of the society) compared with a functional demographic composition of that population. This bar, roughly corresponding to trends in the post-World War I U.S. economy to date, shows the following composition.

The highest significant life-expectancy range is between eighty-five and ninety years of age. The highest generally-significant age of gainful employment is between sixty and seventy years. Except for those living in sub-standard social circumstances, the modal school-leaving age is between seventeen and twenty-five years,

concentrated in the seventeen to twenty-two year range. Elementary education occupies the age-interval from five or six through ten or twelve, secondary education up to seventeen or eighteen years. For obvious reasons, we distinguish infants under one year from the under six norm for pre-(elementary)-school-age.

Since World War II, an increasingly excessive ration of “housewives” has been employed in meeting the two-income requirement of the typical family; the resulting damage to children and youth is one of the principal evils of U.S. social life today. (The popular “baby-sitter” for children of all ages, has become Satan’s own one-eyed entertainer, the proverbial “boob-tube.”) Although some have seen only the “improvement” of women’s independent career opportunities, the fact of the matter is that the cause for the two-person-per-family income standard is a result of a trend of falling *real wages per capita*. This trend has been uneven, but consistently downward since approximately 1947-1949.

Since pre-civilized society, humanity has moved upward, especially since the accelerated impetus supplied by the early fifteenth century, Western European (Christian) *Golden Renaissance* (SEE Chart 2, “Population

Growth Since Pagan Rome”).⁴⁹ If a “primitive hunting-and-gathering society” ever existed, the life-expectancy was below twenty years of age, the infant mortality almost that of rabbits in the wild, and plus or minus the ten square kilometers of Cenozoic wilderness required to sustain an average individual life—such as that life might be.

The most crucial feature of modern civilized social life is, that individual political equality cannot be realized without a Classical humanist form of education through secondary-school age-levels. A civilized form of political society, a *constitutional form of republican* democracy, cannot be sustained unless the cultural standard of such an education is the generally accepted standard for policy deliberations. Call this standard set by the Brothers of the Common Life of the late fourteenth through the late sixteenth centuries, or of the Humboldt reforms of the nineteenth century. Every child and youth has a moral right, therefore, to completion of a Classical form of secondary compulsory education in natural philosophy, fine arts, language, and history of statecraft, through the age of seventeen or so. In addition, beyond a general Classical humanist education compulsory for all, modern society requires post-secondary specialist education of professionals, up to an age range between twenty-one and twenty-five years rather commonly, and through thirty (approximately) for the most intensive of scientific professional specialties.

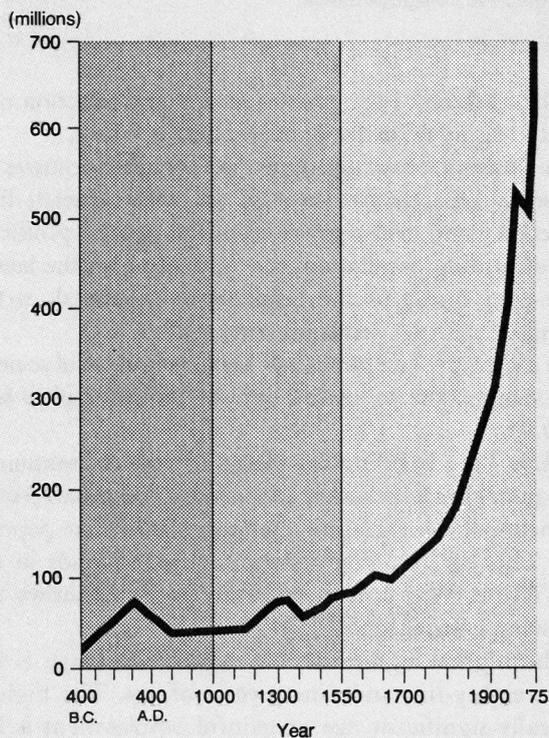
Thus, a civilized level of society today requires postponing regular labor force duties of the young until the age of between sixteen or seventeen and twenty-five. This period of life, and cost of education, must be sustained by the production of the adult labor-force. This requires a long-lived labor force, kept in sound, work-a-day health, through ages sixty-five through seventy years. Such a labor-force has the present best life-expectancy profile for the age-ranges seventy to ninety. So in these and other ways, are development and demography interdependent.

Similarly, if the modal ratio of births *per capita* of adult population falls below more than one, a catastrophic demographic aging of the total population is the result. If the family (parental) household becomes an unstable institution, serious mental illness among the young is more frequent, and a broader range of incidence of less severe personality defects as well.

Such and related demographic considerations determine the ratio of a demographically healthy society’s labor-force to total population. This brings us to *Chart 3*, summarized in the illustrative bar-diagram provided.

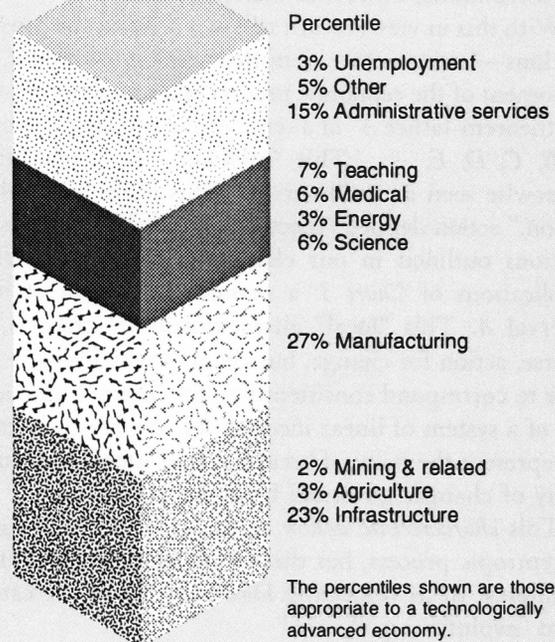
Compare the corresponding labor force and employment censuses of leading industrialized nations today

CHART 2. European Population Growth Since Pagan Rome.



Note changes in time scale at A.D. 1000 and A.D. 1550.

CHART 3. Total Labor Force.



Source: Lyndon H. LaRouche, Jr., *So You Wish To Learn All About Economics? A Text on Elementary Mathematical Economics*, chap. 8.

with the first eight U.S. censuses (1790, 1800, 1810, 1820, 1830, 1840, 1850, 1860, 1870). We begin with the required rural component of total employment which is in excess of ninety percent; we proceed, through scientific and technological progress in the family-owned and operated farm and ranch, to a requirement on the order of two percent of the total labor-force. Look closely, briefly, at some crucial features of the development of agriculture.

Consider yields in agriculture in terms of *per capita* and *per hectare*. Consider also the roles of transportation-grids, energy grids, and industrial capital-intensity, and technology in bringing about reduction in agricultural labor-force required *per* one thousand of total national population. Consider also, improvements in diet resulting from technology of agricultural development, and from water-management, transportation, and post-1930 use of chlorofluorocarbons (CFCs) for refrigeration in the food chain.

Consider the growth of infrastructure 1790-1970 (little improvement, significant collapse has occurred in the U.S.A., for example, since 1970). Consider the growth in employment and manufacturing and fluctuations in mining. Consider the growth of employment in physical science and related engineering in two respects: as a percentile of the labor force, and in ratio to the operatives employed in rural and agricultural occupations.

Consider the “post-industrial” pathologies in employ-

ment of the labor-force, which have become so prominent, and so distinctly costly, since about the time of Harold Wilson’s becoming prime minister in Britain. These include the cancerous growth of employment in parasitical expansion of administration and non-scientific services, financial services most notably. This also includes the growth of unemployment, and underemployment, and marginal employment. It includes the doubly parasitical wastefulness of a “recreational drugs” market which loots the U.S. economy today of an amount far greater than U.S. military and related expenditures combined.

Thus, as this bar-diagram illustrates the point, these patterns of allotments of the total labor-force, to the various categories of respectively (*physically*) productive and non-productive employments, are *an integral aspect of the characteristic of action* of an economy/society during a chosen interval of time. This is a key facet of what may be termed fairly the “spectroscopy” of that economy during that interval, speaking in much the same sense we speak either of characteristic spectra in referring to the Periodic Table, or the spectra emitted, for example, to be detected by a moth, of a mechanically agitated molecule of pollen.⁵⁰

This same *characteristic of action* of any interval of a physical economy has additional integral facets. The absolute levels of household consumption, *per capita* and *per square kilometer*, and the levels of output, also *per capita* and *per square kilometer*, correlate with the foregoing spectra of allotment in crucial and otherwise interesting ways. Also, we have already noted power-correlatives; this includes kilowatts *per capita* and *per square kilometer*, for both residential and production uses of land, respectively; the distribution of this requirement varies by type of land use, and by level of technology and capital-intensity employed. At the point of application of power by technology, we have power-density and electromagnetic-radiation characteristics.

The result of correlating this and other significant, integral facets of the *characteristic of action*, is an estimate of the necessary, optimal allotment of the total labor-force, as contrasted with any actual or mooted “spectroscopy.” This picture of a “global” economic function can be described in a series of constraints, written out for purposes of approximation as a list of inequalities.⁵¹ These include such constraints as the following leading items:

1. The longevity and coefficients of health of the population must be increased, while the duration of the period of education converges upon a Classical-humanist program of compulsory education for all, ex-

tended upward in specialist professional education toward an asymptotic level of perhaps twenty-five years modally.

2. The *per-capita* household consumption of a population of such demographic characteristics must be gradually increased in quality at an approximately steady rate.
3. The allotment of labor force directly to agricultural employment must be decreased as a percentile, toward some lower asymptotic limit of probably between one and two percent, while increasing the *per capita* supply and quality of agricultural products for the population as a whole.
4. The employed industrial operatives component (including infrastructural employment) of the labor force must grow to a level of perhaps seventy percent of the total labor force, and be diminished below that only by transfers into the professional ranks of science and engineering.
5. Within the individual operatives segment of employment, the ration employed in producers goods must increase relative to employment in production of household goods, but without reducing the *per capita* supply of household goods.

And so on.

However, to realize the program of development such constraints imply, imposes two additional constraints upon the economy. First, scientific and technological progress must proceed at an adequate rate. Second, increases in development of basic economic infrastructure must be supplied in quantity and quality.

This requires a minimization of wasteful and parasitical activities, especially the evil of financial and related usury. If the kinds of constraints indicated are not satisfied, the physical economy will slide into an entropic collapse. The general rule is fairly described as follows:

Think of both “raw materials” and man’s improvements of the total physical environment as, at each moment, a productive resource which must be maintained, if the productive potential—potential population-density—is not to be lowered. It is sufficient, for our present purposes, to stress an aspect of this connection: as the best and cheapest raw materials are depleted by use, physical productivity must fall in the sector, (and, thus, in the economy as a whole), unless this marginal depletion’s effects are offset by advances in technology. There is no possibility of a “zero technological-growth equilibrium” in a real society/economy without scientific and techno-

logical progress in a relatively capital-intensive, power-intensive mode; otherwise society decays.

With this in view, return to *Chart 3*. With the considerations—constraints—identified taken into account, let a moment of the economic process of a society be treated as “theorem-lattice *A*” of a series of the pedagogical form *A, B, C, D, E, . . .*. This “moment,” *A*, is, of course, otherwise seen as an “interval.” This is an “interval of action,” action defined “spectroscopically” by the considerations outlined in our elaboration of some leading implications of *Chart 3*: a *characteristic action* of that interval *A*. This “local” characteristic of action is, of course, action for change, but changes which might appear to correspond consistently to the internal functioning of a system of linear inequalities. We are concerned to represent the point of breakdown of such a particular array of changes governed by linear inequalities.

This *characteristic action* of the *economy/society* as a negentropic process, has the following general features of interest to us respecting Dawkins’ use of the catch-term “evolutionary theory.”

We begin with a demographic determination of a total population’s labor force; this, as we have indicated, already reflects, at each moment, a level of technological practice. We measure consumption, *per capita* and *per square kilometer*, in terms of the total physical output of an operative’s portion of the total labor force. We then estimate the amount of combined technological progress and expansion required (after accounting for depletion of previously improved resources) to sustain at least the same *per capita* values; this rate of technological progress plus expansion defines—with apologies to Professor Hermann Minkowski—a “world-line,” a pathway of growth which merely secures a “zero entropy” condition for that society.

The margin of total physical output of operatives which is consumed up to the level of securing a bare “zero entropy” of the *economy/society*, is treated as analogous to the thermodynamic “energy of the system.” The “free” margin of total output remaining after this deduction for maintaining a “zero entropy” state, then attracts our attention. We focus more narrowly on that ration of this “free output” which is employed in fostering technologically progressive expansion of the economy’s productive system; this latter, smaller portion of the “free” output is treated as analogous to “free energy.” We have, then, a notion analogous to that of a variable ratio of “free energy” to an absolutely expanding “energy of the system.”

This analogue of a “free energy” function correlates with a rising potential population-density.

Actual Physical Economy

The outline of economic growth just summarized does not correspond, in any consistent way, to the overall practice of modern European civilization. However, the exceptions prove the rule, conclusively.

Speaking statistically, European civilization—and its actual economy—is not the result of a single current of successive cultural impulses (“characteristic of action”); for more than 2,500 years to date, Europe and European civilization have been, at each moment, the net result of two conflicting, irreconcilable sets of impulses. There was the evil of Mesopotamia and Canaan, against the Ionian city-state republics. There was the conflict between the Athens of Solon’s constitutional reforms, and the oligarchical evil of slave-holding Sparta under Lycurgus’s code.⁵² There was Plato, versus the evil represented by Aristotle and Isocrates.⁵³ There was the Christianity of Sts. Peter, John, and Paul, against the oligarchical, paganist gnosticism of the Delphic and Roman pantheons.⁵⁴

Of these, Professor Dawkins might say, “Two opposing viruses.” Indeed, from the standpoint of his April 15 address, were he consistent, the whole of history, including the history of teaching biology at Oxford University, must appear to him as not a product of human behavior, as much as a virus-like infection of the collective mind by some potency in the form of “covenants,” or “linear systems.” To understand Dawkins’ thus-perplexed miscomprehension of history and science, think back to a type of Hollywood, pseudo-science fiction rather modish during the 1950’s. Pods from outer space invade Earth surreptitiously (of course), and capture the minds of hapless persons, which latter become a special sort of “zombie-like” creatures, “pod people.” Unfortunately, there are real-life approximations of that script, less fantastic, but ultimately just as eerie in their own

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fashion, and as evil.

“Sorry, buddy. This is nothing personal; I’m just doing my job.” Assassin? Government bureaucrat? Corporate bureaucrat? U.S. Democratic Party hack? Concentration camp gas chamber attendant? Vietnam body counter for Robert S. McNamara? Whoever that might be, the principle of the case is essentially the same. Personal moral responsibility to be self-governed by truth-seeking reason is put aside, when a mere covenant might be obeyed blindly. Who or what covenant-

wielding potency is directing this “zombie”? A “blob” from outer space, perhaps? No, not from “outer space,” but perhaps one of those “blob”-like pestilences spread from the Cult of Apollo by way of a Venice faction to which the notoriously evil Paolo Sarpi and also England’s Sir Henry Wootton adhered.⁵⁵

Fly for a moment, in the imagination, to a possibly fictional death chamber of a dying, fabulously wealthy and powerful man. His attorneys and a notary are occupied at the side of the tycoon’s bed. The dying man completes the legal rituals; his visitors depart, leaving the old Croesus to the ominous sound of his own breathing. Whatever his daydream, it brings a small, sadistic smile to his aged, Faustian features. He has purchased a certain, perverse kind of earthly immortality, by creating his own “blob” to live after him: a new charitable foundation.

Already, the foundation’s initial roster of administrators is in the process of being selected and installed. They will each die, as will the individual attorneys of the law firms, and the officials of the private banks; but the foundation will live on in its eerie, “blob”-like earthly quasi-immortality, like a pagan god of Olympus—to live in earthly immortality forever, at least until the inevitable “Twilight of the Gods.”

Who are the passing generations, of attorneys, bankers, and so forth, who administer to the “blob”-like

covenant throughout its long, but finitely eternal immortality? "Pod people"? More or less, exactly so; just "pod people" going about, "just doing my job." The dying old man leers at the thought.

The "pod people" who minister to such "blobs," are not limited to the administrators, attorneys, financial officers, and so forth, who serve as the lackeys of the "blob's" personal household. Its power reaches out, through the tentacles of its usurious capital, to recruit its "pod people" among the corporation executives, real estate schemes, and reinsurance cartels. Through the tentacles of its charities, the "blob" controls its "pod people" in the university faculties, the science laboratories, the fine arts, medical officials, and the popular entertainments. By aid of these means, the "blob's" roster of "pod people" includes judges, various officials of other branches of government, and political party organizations, as well as the leading news and entertainment media.

One "blob" by itself does not make such an Olympian power within, or over society. Over the centuries, the species of "blob," called in Venice the *fondi*, has come to constitute a large number of such "blob" families. It is these types of "blob" families who constitute the collection of those non-human creatures, the real-life gods of Olympus. These "blobs," whose existence is premised upon a mere parasitical, usurious covenant, constitute the oligarchy; those "pod people" who serve the oligarchy's "blobs" are merely the mind-slave lackeys of the inhuman oligarchy proper.

Since King Philip's ancient Macedon, Philip's agent Aristotle is the gnostic archetype for the mind-slave lackey of those inhuman "blobs" which constitute the ruling oligarchies of this planet, the quasi-immortal, earth-bound gods of pagan Olympus. This quality of evil in Aristotle's still continuing influence, is shown explicitly, pervasively in his *Politics* and *Ethics*.⁵⁶ The immediately relevant point is the correlation between the *method* of Aristotle's anti-scientific logic and natural philosophy, on the one side, and the method permeating Dawkins' address reported in the April 16 London *Independent*. We are stressing here the congruence of that Aristotelian method with the state of mind which is typical of the mind of the priestly rank among mind-slave lackeys of the "blobs," down through the ages, into the present.

The non-human existence of the "blob" as a species, is key to the curious dualism we see in 2,500 years of European civilization to date. The "blob" does not exist, of course; it "lives" only as a phantasm in the minds of deranged children, children who might just be occupied

with playing the game of the *Lord of the Flies*.⁵⁷ What if many deranged people play out acting lackeys of a "blob," or of an assortment of "blobs," as young people might be caught up playing "Dungeons and Dragons" in dead earnest? What if people make a secure income, and enjoy great covert power by pretending that the "blob" which nominally employs them is a real personality, a personality whose absolute self-interest is the preservation of itself as an increasingly wealthy "blob" in a nation which is ruled by like-minded "blobs"? What if overgrown children, as an assortment of trustees, attorneys, financial agents, corporate executives, heads of fraternal orders, university officers, and so on, each and all dedicate all of their resources, in dead earnest, to perpetuating eternally "the game of blobs"?

What, on the other side, if a newly elected government, for example, were to remove the legal protection of tax and other statutes indispensable for the continued fictive existence of a powerful nation's local oligarchical collection of "blobs"? How would the assembled lackeys of the "blobs" respond?

Some common gossips insist, that every individual's opinions are either a response of an experience-scarred "human nature" to sensory stimuli, or some silly babbling to the same net effect. What ignorant, unobservant, foolish gossips these are! How often do we not meet a person pompously "just doing my job" in the disgusting manner of a mind-slave lackey of either some "blob," or another, but related type of non-human, fictive institution manned by mere apparently soulless lackeys? What of the curious propensity, observed in that way, in such a variety of frequently encountered incidents, of persons whose apparent chief concern in life is "what will the neighbors think?" What is the commonly pathological feature of mental life typical of those persons who behave in such unwholesomely aberrant ways? Why speak of "human nature"? Why not speak also of persons of "unhuman nature"? What is the *method* commonly characteristic of such bureaucratic, unhuman mental processes? This brings our attention back to the method of Aristotle, and of Dawkins' address.

The submission of the human will to the service of a non-human, fictive potency, such as an oligarchy of "blobs," submission to such an institution, the most vital, usurious interest of which is antithetical to *natural law*,⁵⁸ such submission is in itself a form of *evil*. This evil is intrinsic to the most essential feature of oligarchical overlordship. This evil is that which underlies the method and doctrines of that person who is, historically, to date, one of the most famous, perhaps the most famous, gnostic lackeys of the oligarchy of "blobs," Aristotle.

Construct a concept of the relevant conception in the following, illustrative way.

Focus upon the cited attribute of the “pod people,” the lackeys: “This is not personal; I’m just doing my job.” That statement reports implicitly that lackey’s conviction that he has, at least momentarily, suppressed that agency fairly identified as “one’s personal conscience.” In other words, the lackey signals us so, that he has suppressed his capabilities for truth-seeking, rejected, at least for the moment, that quality of rational thinking and action we associate with the tradition of scientific discovery.

There is nothing immoral, *per se*, in carrying out orders; it is the suspension of reason, the suspension, thus, of moral responsibility for the ultimate consequences of one’s actions, which is immoral. One might say, “I know the person guiding my actions in this matter is a reasonable, responsible person, who deserves to be respected *morally* as an ‘authority’ in such matters.” A respected physician might be such an authority, and the person speaking a patient of that physician, or a person assisting in the care of one of that physician’s patients. In such latter circumstance, to reject or ignore the physician’s authority out of hand, would be an irrational act, and therefore an immoral act. Or, persons who insist on “my right to act according to my gut-feeling,” that tribal witch doctors often know better than doctors, are behaving irrationally, certainly immorally, and perhaps also criminally. In the latter case, the evil lies in the mode of thinking *per se* of that culprit.

So, there is nothing intrinsically immoral in short-term faith in the competence of moral accountability of some putative authority provided that judgment is premised upon a reasonably grounded, intelligible basis for faith. Frequently, especially in those urgent cases where postponed action would be disastrous, it would be a lunatic degree of immorality to do other than act, at least for the near term, upon acceptance of such authority. The moral question is, whether one is acting on the basis of a reasonable attribution of reason and personal moral accountability to the person issuing the instruction, or, in the opposite case, acting as an “amoral” lackey in service of a form of “blob”-like power, such power as command over great wealth or physical forces. Without going much further than this in the matter of a fine, legalistic distinction, we may now concentrate on the types of instances in which the latter, immoral relationship to power is clearly the case, the point in Beethoven’s *Fidelio* (Act II, Scene 3) at which the bass, “Papa” Rocco, the warden of the prison, exclaims with evidently great relief and recognition: “O was ist das, gerechter Gott!”⁵⁹

For this purpose, we must exclude from the Christian (and, Plato’s) notion of an ontologically existent creator the Adam Smith doctrine of worship of God “by faith alone,” without “any consideration of their [personal impulses’] tendency to those beneficent ends which the great director of nature intended to produce by them.”⁶⁰ The god of Adam Smith and Lady Margaret Thatcher’s “free trade” dogmas, is clearly not the God the Creator of Moses and the Christians. This is to underscore the point, that the “beneficent ends” of policy guided by true reason are intrinsically intelligible to the degree that whoever disregards that practical connection, as Adam Smith proposes we do, is plainly a scoundrel. It is the intelligibility of the Creator’s work, as this is accessible to us within the inferior domain of Plato’s *Becoming*, and Cantor’s *Transfinite*, which is the intelligible basis for morality, and also the intelligible elementary basis for faith in the ontological existence of the Creator.

In belief, as in Adam Smith’s clearly paganist belief, there is another, pagan’s choice of monotheistic deity, such as *Baal* and the *Zeus* of Olympus. This deity is a “blob,” a pseudo-human (anthropomorphic), quasi-immortal, fictive object, to which is ascribed the authority and power of a Babylonian potentate, the authority and power of the ruling *fondo* of this usurer’s earthly paradise.⁶¹ In a word, *Satan*. For Adam Smith, this *fondo*-god was currently incarnate as that spawn of Paolo Sarpi, *et al.*, the “Venetian Party’s”⁶² British (and, Dutch) East India Company, which Smith served as a lackey. For this Smith, the palpable devil incarnate was probably known to him as that lackey’s immediate employer, Barings Bank’s William Petty, also controller of William Pitt the Younger’s Parliament, and paymaster also for King George III, the second Earl of Shelburne.⁶³ If not Shelburne himself, then certainly Shelburne’s chief thug, the murderous professed usurer and pederast, Jeremy Bentham.⁶⁴

Such pagan deist’s anthropomorphic concoctions are a caricature of all the wicked rulers of ancient Canaan and Mesopotamia, concentrated into one foul essence. They are as arbitrary in their absurd claims to legitimate authority as in their whimsical decrees, their literal commands. These are *fondi*, whose literal commands must be obeyed by the lackeys (and helots) without rhyme or reason. Such a lunatic’s earthly paradise corresponds to its own implicitly underlying axioms respecting ordering and ontology. The most consistent known representation of such a satanic form of natural philosophy is the *Organon* of Aristotle.⁶⁵

Let us introduce the term *institutional reflex*, to iden-

tify that *type* of human behavior which is controlled characteristically by a wont for blind implicit obedience to literal commands; this is in contrast to individual behavior *intelligibly* directed by an agency of truth-seeking reason (as we have defined reason, both in the referenced “On the Subject of Metaphor,”⁶⁶ and earlier in this present writing). Focus upon that type of institutional reflex we have described here to the lackey’s form of submission to the “blob.”

In the oligarchical utopia, the infantile, mythical realm of the Olympian pantheon, men and objects alike are ordered directly by the literal form of a command spoken by one among the pagan gods, or as conveyed by an Olympian emissary (lackey) to the same effect. The intent attributed to such literal babbling by Delphi’s *Pythia*, as such intent is interpreted by the local, hermeneutic “spin doctors,” the priests of Apollo at the bench before Python’s grave, is the presumed order of universal pagan law, civil, geological, biological, and astronomical.⁶⁷ Herein lies, implicitly, the underlying axiomatic, ontological basis which, as an “hereditary,” oligarchical principle, underlies Aristotle’s so-called *Organon* as a whole.⁶⁸ Mythically, Zeus spake, and by his literally spoken command, all the objects in Aristotle’s universe, and their attributes, were created in a single “Big Bang.” If this is examined rigorously, then, as Friedrich Nietzsche adduced from Aristotelian rantings, such a god—Aristotle’s pagan god, in point of fact—is long since as good as dead.⁶⁹ The simple Aristotelian dialectic, turned upon Aristotle himself, is to the following effect.

Q: Is this God perfect?

A: Yes, that is his nature, by definition.

Q: Otherwise, he would not be God. Is that not true?

A: That is true.

Q: If he is perfect, then his commands must be perfect. Is this true?

A: Yes, that is true.

Q: Then, his creation is perfect. Is this not also true?

A: Yes, that follows, as you have said it.

Q: Then, the laws his creation builds into the universe are perfect?

A: Also.

Q: If they could be changed, they would not have been perfect laws in the first place?

A: Also true.

Q: Then God could not act to alter any of these laws without causing them to have been imperfect?

A: That is true.

Q: Then, once your God had created this universe, he must never act to change what he had done at the moment of creation?

A: (Silence)

Q: Did you hear me?

A: (Nods slowly)

Q: Do you see any flaw in my argument thus far?

A: (Shakes his head very slowly).

Q: Then, all is as pre-ordained at the instant of creation, and your God himself could not change any of it, without making the original creation imperfect, and therefore himself the author of an imperfect act, and not a true God. Is this not also true?

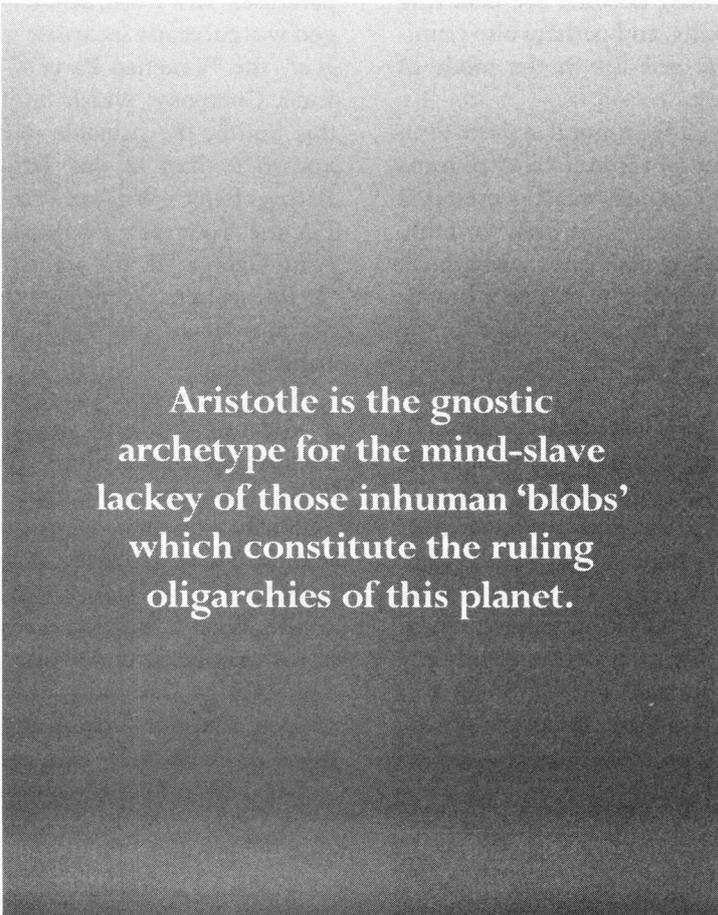
A: (Pulls out a dagger, and moves as if to kill).

So, like the pagan oligarchical priest’s mythical Python swallowing his own tail, Aristotle’s form of the dialectic consumes, and nullifies itself. His God never existed; neither did his fictive, linear, mechanistic uni-

verse, nor the neo-Aristotelian fictive universe of the materialists Francis Bacon, Descartes, Kant, Darwin, and Dawkins.

In Aristotle’s fictive universe, the name of an attribute, associated with the mere name of an object, drives the name of that object, linearly, to affect the name of another object in a named way. In Aristotle, there is no true causation; there is only the mechanism of the syllogism. His universe is a tangle of “blobular,” “physiocratic” covenants, in which each particle does his duty as prescribed by contract.

The Christian impulse in political-economy, in opposition to the oli-



Aristotle is the gnostic
archetype for the mind-slave
lackey of those inhuman ‘blobs’
which constitute the ruling
oligarchies of this planet.

garchical radical Aristotelian nominalism of modern monetarist dogma, drives the economy as we have indicated, but does so in defiance of the satanic power of the oligarchical enemy. Hence, the dual aspect of European civilization's history. Hence, because of the political power currently enjoyed by the oligarchical patrons of empiricism, Dawkins acquired his esteem for the views he has championed in his April 15 published address.

Evolutionary Theory

Evolutions intrinsically are negentropic processes, as this writer, for example, has supplied a corrected definition of "negentropy" in other locations. We introduce four exemplary relevant paragraphs from "Mozart's 1782-1786 Revolution in Music"⁷⁰ for this purpose:

"There are two distinct species of thought-objects implied in the given, illustrative series of theorem-latitudes. First, on the relatively lower level, there is a quality of the thought-object which is typified by the transformation of A to generate B . Second, there is the higher quality, higher species of thought-object associated with a notion of a choice of determined ordering for the series presented, the ordering of the lower-order thought-objects corresponding to the discontinuities \overline{AB} , \overline{BC} , \overline{CD} , \overline{DE} ,

"For example, a successfully advancing science would be associated with a succession of such revolutions, each always leading the relevant society (implicitly) to higher levels of potential population-density. This would also signify, that that generation of successive revolutions \overline{AB} and \overline{BC} must result in a revolution \overline{CD} , which latter increases the *potential* population-density more rapidly than the average of \overline{AB} and \overline{BC} . These successive revolutions are effected under the guidance of a self-evolving method for effecting successive such revolutions, a self-evolving method of scientific discovery. Call this quality of revolutionary ordering a method of *evolutionary negentropy* in increase of potential population-density.

"Understand 'evolutionary negentropy' as a conception introduced by Nicolaus of Cusa. The progressive evolution of the biosphere is dominated by emergence of relatively higher species—higher than any previously extant. This does not (generally) wipe out the surpassed inferior species. Rather, the proliferation of most among the accumulated, interacting species makes possible the emergent existence of the higher species. Similarly, in the case of the Mendelejev Periodic Table of Elements and their Isotopes, the emergence of helium and lithium, and so on, from nuclear fusion of hydrogen, and so on, does not eliminate the lower ranking elements and

isotopes of that table; rather, that development is characteristic of an ever higher state of organization of the "table" as an interdependent wholeness.

"We combine this view of such revolutionary/evolutionary processes as these, with a notion of rising 'free energy' of the entire 'system' undergoing such ordered evolution. This combination of higher states of organization with relative increase of 'free energy,' is a definition we prescribe for our use of the term 'negentropy.'"⁷¹

And, an additional paragraph on the same subject:

"Thus, the provisional array of such thought-objects, μ_{ab} , μ_{bc} , μ_{cd} , . . . , is subsumed by a generative, self-evolving quality of yet higher-order thought-object. This higher species of such thought-object is called *scientific method*, a thought-object whose efficient dimensionalities are the notion of 'evolutionary negentropy,' which we referenced above."⁷²

In contrast to such a definition of "evolutionary negentropy," Dawkins' address adopts the contemporary positivist representation of the Malthus-Darwin-Huxley dogma of the "survival of the fittest"/"natural selection." This dogma Darwin adopted explicitly from Thomas Malthus; however, the dogma was not original with Malthus; it had been introduced to Britain earlier from the work of the Venetian Giammaria Ortes.⁷³ It had been rightly seen as consistent with a Hobbesian-Lockean, bestial view of man's nature.

If we adopt as the primary phenomenon of biophysics, the biosphere as a whole, rather than the individual species taken one, two, or three at a time, the truer picture, refuting Darwinism, quickly appears. Contrary to the faddish "ecological catastrophes," the biosphere as a whole has a remarkable adaptability, a remarkable *type of metastability*. This quality is associated with the curious interdependency among the full range of participating species in the evolutionary development of the biosphere as a whole. The characteristic of the emergence of new, higher species, successively, within that biosphere, is a *type* of generative principle, a principle of negentropic *transfinite* ordering, analogous to the subsuming principle of thought-object depicted here as ordering the successful successor of an evolutionary negentropic series of the pedagogical form $A, B, C, D, E, . . .$

This "evolutionary negentropy" is, on the one side, a description of those processes of successive ordering which we associate with the term "creative," as employed to signify the form of "creative reason."

Thus, successive evolution "in the wild" has an eerie resemblance to successful creative, problem-solving reason in man. The effect of successful evolution of species and varieties is to increase the negentropy of the characteristic action of the biosphere as a whole; conversely,

the level of the negentropy of the biosphere as a whole delimits the “spectra” of species which can be sustained. The existence of human culture is functionally a part of the biosphere as a whole; thus, as human development is negentropic for the human species, it is also a negentropic enhancement of the entire biosphere.

This line of argument is required, not to settle here issues of biology, but to expose the shamefully theological bias which Dawkins’ address superimposes arbitrarily upon the hapless name of “evolutionary theory.” It is not biological science which governs Dawkins’ theology; rather, Dawkins delimits “evolutionary theory” to what fits the Olympian blob’s theology of his circle of putatively atheistic co-thinkers. We continue this line of argument, now, briefly, with that warning to the reader set plainly in view.

What Dawkins’ choice of “evolutionary theorists” have done, may be described fairly in the following way.

Let the pedagogical series, *A, B, C, D, E, . . .*, represent a species-evolutionary development—“evolution.” Instead of viewing the succession of discontinuities as this writer has described (as in correspondence with a higher, transfinite principle of ordered, “axiomatic”—or, “genetic”—changes), the empiricist ideologue⁷⁴ demands, perhaps even hysterically, that we attribute the change from *A* to *B*, *B* to *C*, and so forth, in each instance, to some mechanistic, e.g., statistical form of action. Such an ideologue next aggravates his initial mechanistic assumption by demanding that we all ignore the most crucial fact of this series, that the succession itself has a *self-similarly negentropic* form of ordering; this ordering is, in turn, the characteristic action of the transfinite *equivalence* of each valid stage in the succession.

All such ideological errors of the empiricists are premised upon that same, specifically *gnostic* (i.e., *oligarchical*) principle which is typified by such marks as Descartes’ *deus ex machina* and its Newtonian predicate *hypotheses non fingo*. Thus, in the case of the evolutionary biosphere, as in cultural progress, there is something which the gnostic refuses to face. In the case of the biosphere it is the evidence that evolution is not “randomly mechanistic,” but has an intrinsic ordering, as if *a priori*, an ordering consistent with a principle of nature subsuming the creative evolution of living from ostensibly non-living processes. In the case of cultural progress the empiricists deny the existence of a “divine spark” of the person’s sovereign, human-specific potential for creative reason. As this “divine spark” puts mankind’s existence into an efficient relationship to the creator of this universe, so that “divine spark” (Schiller’s and Beethoven’s *Götterfunken*⁷⁵) must be denied hysterically by all of pa-

gan Olympus’ lackeys. Hence, the mark of the lackey intellectual in European civilization has become a preference for the method of Aristotle (or, worse, Ockham),⁷⁶ and calumnious hatred toward the person and method of Plato.

This mark of the academic lackey is key to the perpetuation of the so-often discredited Malthus-Darwin-Huxley “evolutionary theory” hoax. When Professor Dawkins employs the name of such an “evolutionary theory” dogma to libel the Creator, it must be pointed out, that from the outset, the very existence of such an “evolutionary theory” was a gnostic’s “religious” refusal to allow crucial evidence to be considered. Thus, the use of “evolutionary theory” to libel God, is a plain tautological fallacy.

It may be the case, that some persons had started from their arbitrary, diabolical hatred of God as Creator, to arrive at an adoption of the formalist methods of either an Aristotle or an Ockham. We are not making such an assumption; we are focusing our argument here only on the general case, in which the origin of Aristotle’s (or, Ockham’s) method is axiomatically implicit in the oligarchical lackey’s servile attitude of dependency upon the species of Olympian “blobs.”

IV. Social Relations As A Correlative Of Method

We have reached a crucial subordinate feature of our proof.

We said, at the outset, that the issue posed for us, is not whether God the Creator exists, but whether it is possible for the mortal mind of an individual person to know that He exists. We have demonstrated several things. We used the case of Nicolaus of Cusa’s discovery of a principle of universal least action, to define a notable experience of an individual creative act. We show the equivalence of this creative act to Plato’s *Parmenides* method, and to his *negative* proof of an absolutely infinite *Good* (God) from manifest existence of a universal, transfinite *Becoming*.⁷⁷

That, with its essential, subsumed features, was the first part of our rebuttal of Dawkins’ address.

We then focused upon Dawkins’ specific assertion, that so-called “evolutionary theory” absolutely refuted the notion of the existence of God. We examined the

Ortes-Malthus-Darwin-Huxley dogma of mechanistic “evolution” against the backdrop of social (e.g., “cultural”) evolution. We emphasize the proof, that social evolution is ordered by the creative principle of reason, which defines the individual person as *imago viva Dei*. We define this evolution as necessarily subsumed by a principle of *higher hypothesis*, a principle expressed in the form of *self-similarly negentropic change* in sequences of the pedagogical form *A, B, C, D, E, . . .*. We indicated that the interdependence between an entire biosphere and its included, newest highest participating species, reflects an ordering-principle of this same form.

To make clear the case for cultural evolution, we described the relevant setting of Dawkins’ own existence and development: the two, irreconcilably (“axiomatically”) opposed social currents whose interaction is the past 2,500 years of European civilization. We defined, thus far, the crucial features of one of these two conflicting social currents, the “blob”-dominated oligarchical faction. We turn, now, to contrast that current with its Platonic and Christian adversary. We define thus, the most characteristic features of the conflicting interaction. We proceed thus, to show how the defect of Dawkins’ imperfect thinking, on the subject of God the Creator, can exist in a universe created by a perfect God, in “this best of all possible worlds.”⁷⁸

There is a manifest reciprocity between the two conceptions, between the individual person as *imago viva Dei*, and the “evolutionary negentropic” form of *characteristic of action* of a viable form of physical economy. In this connection, we have shown already, that the axiomatic basis for all valid thought respecting either conception, is Plato’s quality of *change* as we have enriched Plato’s notion of change by aid of references to our pedagogical negentropic series *A, B, C, D, E, . . .*. For the Platonist, for the Christian humanist, this *non-linear* quality of (negentropic) change takes the axiomatic place otherwise occupied by that *linear* principle of the

In the republican, anti-oligarchical humanist tradition of Solon, Plato, and the Christian Platonist, the quality of *change* is the essential, non-linear social relationship.

Aristotelian syllogism within the oligarchical thinking of the “pod people,” the mind-slaves of “the blobs.” This latter distinction is key to both the functional differences and the interaction between the two warring factions in 2,500-odd years of European civilization to date. This is the axiomatic root of the difference between Professor Dawkins’ April 15 address and the contrary way of thinking represented by Plato’s, Leibniz’s, and this present writer’s statement of the ontological proof.

This is key to understanding those moral disorders of the student’s or professional’s intellect which are induced by the continued influence of such sadistic scalawags as the neo-Aristotelian formalists Leopold Kronecker⁷⁹ and Bertrand Russell.⁸⁰ A similar impairment of otherwise gifted minds is met too frequently, caused by the victim’s guilt-ridden, propitiatory compulsion to conform to the crippling, anti-geometry sophistries of today’s “generally accepted classroom mathematics.”⁸¹ The Cusa solution for the paradox of Archimedes’ construction could never have been discovered, to this day, 550 years later, nor anything of non-algebraic functions, had the discoverers not detested the anti-geometric Aristotelian formalism of Ockham, Descartes, Newton, Kant, and the nineteenth-century positivists.

Contrast the two mutually-exclusive axiomatic systems: first, the modern Platonist mathematics, in which (in non-algebraic functions) multi-connected, circular least action is made self-evident through successive discoveries, especially the crucial such discoveries of the A.D. 1440-1697 interval; second, the opposing, Aristotelian system, in which static objects enjoy the attributed axiomatic quality of being perceived to exist self-evidently. For the second case, therefore, the “perfect point” and “perfect straight line” have also a self-evident, axiomatic existence, derived from the Aristotelian axiom of perception. For the first case, the modern Platonist thus echoes ancient Heraclitus’ “nothing exists but

change”; from this, we are led to the notion of *action for change in physical space-time* as the most elementary unit of cognition of the particular. In the second case, contrary to the first, the essential thing is that *the mere sensory perception of the discrete object is the premise for the notion of existence.*

Dawkins’ address rests implicitly, entirely upon the implications of the Aristotelian’s crude faith in the authority of perception *per se*. The deeper point to be made is that Dawkins’ opinion flows ultimately from his adopted social

status, as, so to speak, a “pod person,” a lackey of the oligarchical hierarchies within the “Venetian Party’s” system.

The issue thus posed is implicitly twofold. First, how do social relations determine the axiomatic (methodological) beliefs of persons? Second, how is it possible, that an imperfect system, specifically the implicitly satanic system of Aristotelian oligarchism,⁸² may exist as ostensibly part of a perfect Creator’s universe? We will bring this rebuttal to its implicitly pre-designated close by applying the answer to the first query to resolve the paradox of the second.

We know the universe by changing it. By comparing changes in human productive (and, related) behavior with corresponding changes in potential population-density, we are enabled, uniquely so, to know two things we could not know in any other way. The experience so identified admits of representation in the form of our pedagogical series, *A, B, C, D, E, . . .*. Thus, as indicated earlier here, we have two immediate qualities of change represented. First, the relatively linear order of change: from *A* to *B*, *B* to *C*, and so on. Second, the *analysis situs* ordering principle which subsumes the series of changes \overline{AB} , \overline{BC} , \overline{CD} , \overline{DE} , In other words, *hypothesis* and *higher hypothesis*. As noted earlier, any value of *self-similarly negentropic evolution* attributed to a row-series \overline{AB}_1 , \overline{BC}_1 , \overline{CD}_1 , \overline{DE}_1 , . . . , implies a column series \overline{AB}_2 , \overline{AB}_3 , \overline{AB}_4 , . . . , of additional row-series, each with a

Dawkins’ opinion flows ultimately from his adopted social status as a ‘pod person,’ a lackey of the oligarchical hierarchies within the ‘Venetian Party’ system.

higher value than row-series \overline{AB}_1 ; hence, implying the envelope-like *hypothesizing the higher hypothesis*. The object of our quest for scientific knowledge, is to refine our hypothesizing the higher hypothesis toward desired lessening of disagreement between our wills and the manifest *Will of God*.

That is not *perfect*, not *absolute* knowledge, nor does it converge, as if asymptotically, upon absolute knowledge. It is merely the *transfinite* of Georg Cantor, or, the same thing, the *Becoming* of Plato, which differs in species from the *Absolute*,

the *Good* in the sense the perimeter of Nicolaus of Cusa’s 2ⁿ regular polygonal perimeter differs from that higher species of bounding existence, the circle.⁸³

This (transfinite) hypothesizing the higher hypothesis is what we must signify by use of the term “human knowledge.” It is not only false, but a quasi-schizophrenic sickness of the mind, to imagine that God or nature poses “right answers” neatly parsed in textbook formalism.⁸⁴ No defensible definition which is contrary to our own here exists. This knowledge is generated and recalled in the form of what we have identified variously as “Platonic ideas,” “monads,” “*Geistesmassen*,” or “thought-objects.” It belongs to a higher species of mental existence than communicable forms of conscious activity, and bounds all sane forms of such inferior species of activity. The substance of this knowledge is, generically, not objects, not perception, but *change*; this change occurs in four forms: *hypothesis*, *higher hypothesis*, *hypothesizing the higher hypothesis*, and that still higher species which may be known only negatively, the *absolute Good*.

This knowledge is individual knowledge, but it can be acquired and expressed only in a social way. It is *individual* because each and every generation of a true thought-object occurs uniquely within the sovereign creative-mental processes of the individual person, and never occurs in any different way.⁸⁵ Nonetheless, in each valid discovery, the individual acts directly upon the

entire corpus of human knowledge to date, and upon the potential population-density of the present and future of the human species. The terms of reference in which all discoveries are made is the general, historical-social context to which the *efficiency* of all discoveries refers.

In such creative-mental activity, it is as Nicolaus of Cusa stressed: the individual, as microcosm, participates directly, *efficiently* in the macrocosm—the society and the universe are as a *Becoming* within a timeless wholeness.⁸⁶ It is through this relationship to knowledge for society as a whole, that the individual mind acts upon the wholeness of the efficient relationship of the human species to the universe. It is as hypothesis, and changed practice whose change is informed by hypothesis, that the individual mind *acts upon* the universe directly. This nexus is the point to which all development or proof of human knowledge is referred.

In the case of the Christian Platonist (to be specific), all such knowledge has the substance of “change”: hypothesis, higher hypothesis, hypothesizing the higher hypothesis. Thus, knowledge as a process is not merely non-linear in the relatively limited sense of non-algebraic function in general; it reaches into the still higher domain of the “*alephs*” (“*N*’s”),⁸⁷ as the discontinuities of the pedagogical series *A, B, C, D, E, . . .*, are such. In the contrary case, the Aristotelian, the Ockhamite, the principle of the syllogism—the linear principle of Kronecker, *et al.*—takes the place of Platonic change.

The Platonic social relationship is essentially educational, as the Schiller or von Humboldt (Christian) humanist educational programs, or the related aesthetical principles of Schiller illustrate such a relationship.⁸⁸ It is as we have summarized the matter above, the generation of thought-objects, as in the use of primary sources to replicate the creative-mental processes experienced by an original discoverer as part of the genius reproduced within the mind of many students. Thus, in the republican, anti-oligarchical humanist tradition of Solon, Plato, and the Christian Platonist,⁸⁹ the quality of *change*, as we have defined its significance, is the essential, non-linear social relationship.

In the contrasted, oligarchic scheme, man’s individual and collective relationship to both man and nature is that arranged by the Sophist’s nominalist reading of the literal commands issued on behalf of the Olympian “blobs,” as Lycurgus’ Spartan communistic oligarchy illustrates the point.⁹⁰ Literal, deductive, *linear* consistency, as typified by Aristotle’s and Kant’s principle of the syllogism and categories, is the prescribed form of relationship among persons, and of mankind to nature.

On this account, if one does not see the unbridgeable gulf separating Socrates and Plato from the evil Aristotle, one understands nothing of the underlying issues of modern scientific work. On this account, among Plato’s attacks upon the Eleatic forerunners of Aristotle and the Sophists, his concentrated *Parmenides* dialogue takes us most directly to the core of Plato’s thought and method. If one does not grasp the significance of that dialogue, one understands nothing of Plato’s work and standpoint. A related point: the student who has not yet experienced the abyssal and tectonically violent issues separating Plato from Parmenides and Parmenides’ Sophist followers, one has not yet grasped anything of the principal issues of European thought during the past 2,500 years.

The *Parmenides* dialogue, with its central ontological paradox, is also the key, both to the Platonic ontological proof for the existence of God the Creator, and to recognizing the implications of the two indicated, mutually opposing, humanist versus oligarchical, social systems, as the root of those axiomatic differences in method which divide all of the recent 2,500 years of European civilization into two, thus far, perpetually warring cultural camps.

On this point of cultural differences, the oligarchical representative Sir Isaac Newton conceded—unlike British oligarchists Kelvin, Clausius, Grassmann, Helmholtz, Maxwell, and Rayleigh, later⁹¹—that the false picture of the universe, the “entropic” one, which is characteristic of the method of his *Principia*, was the result of a vicious defect in his choice of mathematics.⁹² That defective mathematics was the same syllogism-based formal algebra which underlies axiomatically the flawed “generally accepted classroom mathematics” of today. Any attempt to portray a universe in terms consistent with such a philosophically oligarchical, *gnostic*, linear mathematics, consistent with the principle of the syllogism, must represent the universe falsely, and pervasively so: from frontiers of scale in astrophysics, to frontiers of scale, beyond 10^{-18} centimeters, in microphysics. Linear mathematics must represent the phenomena falsely, superimposing upon the array of data a false image of an efficient statistical principle of universal entropy (“Time’s Arrow,” this folly is sometimes named).

Similarly, as in the included case of mathematics’ sly imposition of its vicious ideology upon the image of nature, does the axiomatic root of a method of thinking determine the policies of practice in all aspects of cultural determination of individual and social life. In this way, two mutually irreconcilable methods, the Platonic notion of universal change, versus the Aristotelian notion of a universal syllogistic principle, define implicitly, in their

interaction, the essential features of the ruling cultural warfare of the recent 2,500 years.

Parmenides and the Aleph-Transfinite

The oligarchical syllogistic method, as Bertrand Russell's and Alfred North Whitehead's *Principia Mathematica* depicts a radical Ockhamite form of Aristotelian mathematics, is axiomatically simple, one might say "brutishly simple."⁹³ As the case of the great Professor David Hilbert's pathological "Tenth Problem" ably illustrates this point, the comprehension of Platonic axiomatics is notoriously less simple. To be certain our ontological proof is stated without omission of any crucial pedagogical point, we describe summarily the importance of this present writer's relevant 1952 discovery.

In the culminating work of his *magnum opus* series on the transfinite, the 1897 *Beiträge*,⁹⁴ Georg Cantor provides a systematic view of his last great discovery, the transfinite alephs (\aleph 's). Certain among Cantor's sophisticated admirers, then and later, praised this discovery, many with the curiously mistaken assertion, that Cantor had discovered a higher class of numbers which had no useful place in the real world. This latter mistaken opinion is analogous to the prevailing scholarly misinterpretation of Plato's *Parmenides* dialogue. This writer's 1952 solution, as represented in the design of the pedagogical series employed pervasively in this and earlier books and papers,⁹⁵ permits a "stronger" treatment of both the *Parmenides* paradox and Cantorian alephs, than has been otherwise available.

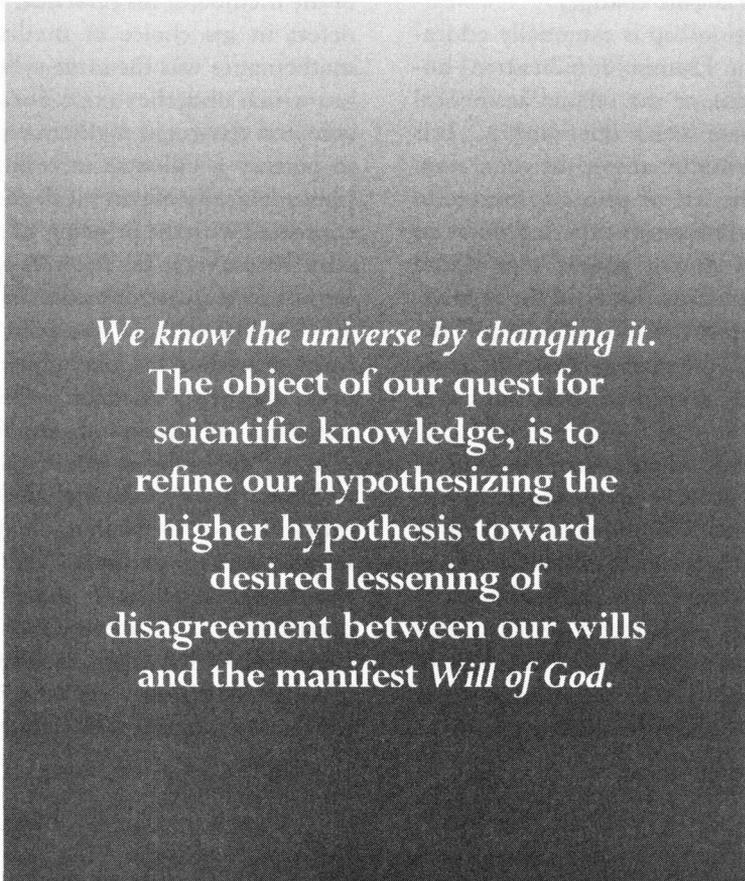
The crucial added feature of the pedagogical series (*A, B, C, D, E, . . .*), relative to Plato's *Parmenides* and Cantor's treatment of his alephs, is this writer's definition of that series as a sequence of successive increases in *potential population-density*. This addition leads to solution of hitherto perplexing problems in the physical economic functional definition of the Leibnizian term, *tech-*

nology. That, in turn, defines a quality of process in which Cantor's alephs acquire a unique physical significance.

The apparent problem of these alephs, is, that, apparently, by construction, they do not permit the kind of notion of functional ordering which we associate with a mathematical physics. They differ thus from algebraic and also non-algebraic series. In the pedagogical series *A, B, C, D, E, . . .*, the commas correspond to formal discontinuities. These discontinuities are alephs, by construction; they also correspond to the indicated *action of change*, and thus to "thought-objects." As thought-objects of such a series, they have a certain kind of *two-fold functional ordering*. They have the *analysis situs* order of "necessary predecessor"; they are a series subsumed *in effect* by rising negentropy (potential population-density).

Look at Plato's *Parmenides* from this vantage-point. Substitute for the series of sections of that dialogue a series conforming to our pedagogical series here. This substitution does not alter any essential feature of the methodological and ontological issues posed by the original. Yet, this substitution, by introducing technological ordering, shows a case in which the doubly (or, even trebly) transfinite ordering of change is introduced to a dialogue which is perfectly characteristic of the form of Plato's *Parmenides*. On later reflection, this substitution yields in fact the general form of Plato's own dialectical argument.

That is to emphasize, once more, that if the change from *A* to *B* represents the actions of hypothesis, the series as a whole represents a higher hypothesis action. This, in turn, poses hypothesizing the higher hypothesis. Then, with the introduction of *self-similarly negentropic action* as the metrical feature of the higher hypothesis (increase of potential population-density), the meaning of the *Parmenides* is illuminated most brightly. Hypothesizing the higher hypothesis is the "envelope" of all



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higher hypotheses, and corresponds to the *Becoming*; the *Becoming* defines negatively the *Good* which bounds and subsumes it.

Examine the quality of *analysis situs* this (negative) dialectic implies. Begin with the exemplary case of Cusa's "*De Circuli Quadratura*,"⁹⁶ and *De Non Aliud (The Not-Other)*.⁹⁷ The persistence of a discrete discrepancy, and also a *typical* non-congruence between a 2ⁿ-regular polygon and the circumscribing circle, shows that the linear (algebraic) species of construction (action) defines the existence of the higher species, *circular action*, only negatively. Consider the discrete margin of discrepancy between the perfectly defined area of the sphere, and the indeterminately approximate area of the corresponding pseudosphere.⁹⁸ However, the higher species, multiply-connected least (circular-derived) action adequately defines subsumed algebraic forms. This set of relations, between lower and higher species of constructions, illustrates the relevant notions of *analysis situs* ("required predecessor," "required successor").

Given, such a sequence (e.g., of the *A, B, C, D, E, . . .*, form). The "required successor" is the higher hypothesis which orders the sequence of changes as a *self-similarly negentropic* series of a *type*.

This corresponds to the empirical actuality of cultural evolution.

That *type* is a *one* which subsumes perfectly a *many*. This example supplies a functional significance to the method of the *Parmenides* dialogue, a dialogue echoed by Cusa's *De Non Aliud*. So did the application of the relationship of Plato's the *Becoming* to the *Good*, applied to the method of the *Parmenides* dialogue, suffice to point to the crux of Cusa's *De Non Aliud*.

The Subjectivity of Science

It is fashionable to speak of "scientific objectivity." Yet, like most popular beliefs nowadays, this fashionable conceit is also false. Science is intrinsically *subjective*.⁹⁹ Science is essentially the correlation of our hypothesizing of our formation of higher hypothesis with resulting increases of potential population-density. This hypothesizing, insofar as it governs our on-going process of changing our society's practice, is our relevant action upon the lawfulness of our universe. The gains in potential population-density "measure," in effect, the lessening of the discrepancy between our thinking about the universe and the way in which the universe "thinks" efficiently. It is as if our hypothesizing the higher hypothesis were an attempt to guess at the "hypothesizing of the higher hypothesis" by the universe. The "reward" for

our thinking in the right direction, is increase of our society's potential population-density.

This subjectivity of scientific thinking is key to defining the interaction of the humanist and opposing, oligarchical cultural impulses¹⁰⁰: the respective consequences of a culture based upon either the oligarchical gnostic principle of the syllogism, or of the opposing principle of "Platonic ideas."

Sir Isaac Newton once held the key in his hand. The gnostic principle of the syllogism, expressed as mathematics, is a pagan religious ideology, which superimposes an entropic principle upon the array of data it adopts; true, such a mathematical ideology imposes entropy also upon the practice of a credulous society. As the Golden Renaissance of Cusa *et al.* demonstrates the reverse, the practice of "Platonic ideas" (change) imposes negentropy not only upon the data as a whole, but also social practice.

If Isaac Newton did, thus, recognize the falseness of that "clock-winder" ("entropic") portrait of nature, which his *Principia* presented, and, if he also recognized (as he did) that this false portrait was directly the result of a flaw in the mathematics he had adopted, why did he not choose a different mathematics? Why did he not choose a readily available, alternate mathematics which was free of that specific flaw, that mathematics of Johannes Kepler from which Newton and his Rosicrucian cronies of the London Royal Society had plagiarized such notable contents of the *Principia* as Kepler's discovery of the correct algebraic formulation for universal gravitation?¹⁰¹ The answer to these, and other such questions is veiled behind the lurid fact, that Newton and other Ashmolean scalawags among the followers of Francis Bacon and Robert Fludd were pagan mystics, a collection of gnostic, cabbalistic practitioners of black magic in the image of Christopher Marlowe's Doctor Faustus.¹⁰²

What lies behind that sordid veil of Ashmolean debauchery? What but that which the higher-ranking English people (and others) of the seventeenth and eighteenth centuries knew as "the Venetian Party"¹⁰³ of Paolo Sarpi's *casa nuovi*, the "blobs" transplanted North by the usurers of Venice.¹⁰⁴ Newton was a lackey of those "Venetian Party blobs." The history of this Venetian Party in England, notably from the 1520's onward, is a topic of most importance and detail in its own right; let us limit our treatment of it here to stipulating those few most urgently relevant highlights, as follows.

In the middle of the fourteenth century, England repudiated its usuriously pyramided debt to the House of Bardi. This event triggered an avalanche of similar debt-repudiations throughout Western Europe. During

the hundred-odd years preceding that event, and following the A.D. 1250 death of the Hohenstaufen Holy Roman Emperor Frederick II, these evil, usurious Venice-led *fondi* had nearly destroyed the economies, the Church, and the political institutions of Western Europe by “IMF conditionalities”-like measures, promoting economic collapse, wars, famine, and epidemic—wiping out half the population of Europe in the greatest genocide until the twentieth century’s looting of the so-called “developing sector.” Thus, the middle decades of the fourteenth century are known in the history texts as the “New Dark Age.”¹⁰⁵ The wave of mid-fourteenth century bankruptcies of Lombard “blobsters” created the opening into which the Christian humanist forces advanced, leading to their glorious *Golden Renaissance* of the fifteenth century.

The central figure of the mid-fifteenth century Renaissance was the towering intellect of that priest, theologian, scientist, and statesman, Cardinal Nicolaus of Cusa. Several times during the 1430’s and 1440’s, Cusa played a crucial role in reconstituting the shattered Christian Church, and also defined the indispensable foundations of modern scientific method in his *De Docta Ignorantia*,¹⁰⁶ and in his relevant later writings.¹⁰⁷ Venice responded promptly with efforts to destroy the work of the A.D. 1439 Council of Florence, and the influence of the Platonic Christian humanists. On the practical side, Venice and its Ottoman partners conspired with the leading Aristotelian gnostic of Mount Athos, Scholarius (later Patriarch Gennadios) to bring Constantinople and the Greeks under the partitioning of Greece by Venice and the Ottomans, in A.D. 1453.¹⁰⁸ At the same time, Venice worked virtually to drive the memory of Cusa from the Church, and to establish Aristotle as the official pagan philosopher of organized Catholic, Byzantine, and Protestant theology during the course of the sixteenth and seventeenth centuries.

By the middle of the sixteenth century, Venice had nearly succeeded. Venice’s usurious “IMF conditionalities” had plunged Europe into what some have described as a hundred years of a “little dark age,” until the 1648 Peace of Westphalia.¹⁰⁹ By 1648, the name of Cusa had been driven into obscurity by Venetian calumnies.¹¹⁰

This is the background for the launching of strange pseudo-scientific, gnostic cults by the oligarchical faction, from approximately the beginning of the seventeenth century. Typical are Francis Bacon’s rantings against England’s greatest scientist of that time,¹¹¹ and Rosicrucian Robert Fludd’s attacks upon Johannes Kepler.¹¹² The strange features of Descartes’ *deus ex machina* dogma, and of the Rosicrucian kookery by the Ashmolean

London Royal Society’s Isaac Newton, *et al.*, represent the pro-Aristotelian Venetian Party’s basing of both Cartesian formalism and English liberalism and empiricism upon the revived core of theological dogmas of French medieval “Buggery” (“Bogomil/Cathars”).¹¹³ This echo of “Buggery” persisted after the seventeenth century, as the axiomatic basis for the philosophical standpoint of such exemplary influentials as David Hume, Adam Smith, Voltaire, Rousseau, Bentham, and the “French (pro-Aristotelian) Enlightenment” generally, Immanuel Kant, Karl S. Savigny, and today’s positivists.

This tradition of “Buggery” in the misused name of science, is known to us most commonly as “materialism,” although it has other expressions, including wildly mystical speculations. The “Buggers,” otherwise known formerly as the “Bogomils” or “Cathars,” were, like their Manichean forerunners, a Byzantine-created cult, deployed by Constantinople as part of its arsenal of alternating military and cultural warfare against both the so-called barbarians and Western Christianity.¹¹⁴ The usury-practicing Bogomil cult, thus established in Byzantine Thrace (Bulgaria) about 1,000 years ago, spread across Bosnia into the commercial centers of northern Italy and southern France’s Rhône and Cologne-Tarne-Pyrenees regions. The cult’s notion of an “elect” was based upon a Dionysiac/yin-yang notion of hermetic separation of the spiritual from the material realm.¹¹⁵ That is a hermetic distinction perfectly consistent with Aristotle’s *Organon* and the Aristotelian “Big Bang” dogma of Creation attacked by Philo of Alexandria.¹¹⁶ Although this Bogomil cult was nearly destroyed several times, including the case of the “Albigensian Crusade,” its network of usury, extending across northern Italy, enabled it to persist into the sixteenth century, whence are derived the prominent reflections of its dogmas of “elect” and “spiritual/material” dichotomy in Descartes’ *deus ex machina* and other ways. The Rosicrucian cults of the London Royal Society, and Newton’s *hypotheses non fingo* are consistent reflections of the usury-network’s deeply embedded tradition of such Buggery.

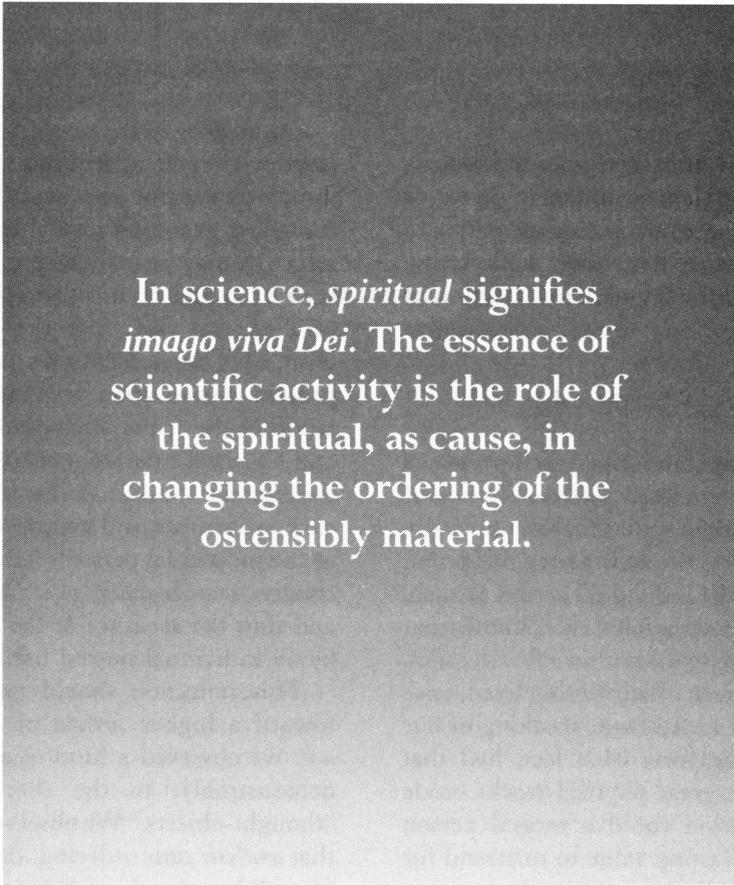
The relevance of the Padua Aristotelians’ promotion of Bogomil dogmas in this way, ought to be clear at this point in our report.

In science, *spiritual* signifies *imago viva Dei*, those faculties of creative reason which cast man in the imperfect likeness of the Creator. Similarly, it signifies three conscious states of the maturely developed creative scientific intellect: *hypothesis*, *higher hypothesis*, and *hypothesizing the higher hypothesis*. The essence of such scientific activity, is the role of the spiritual, as cause, in changing the ordering of the ostensibly *material*.

From the standpoint of the oligarchical “blobs’ ” pagan-priestly lackeys, the useful feature of the sexually aberrant Bogomil dogma was the passionate extremes to which these Buggers went in outlawing interaction between the creative powers of the spiritual realm and their usury-bound material domain.¹¹⁷ The motive of Venice’s sixteenth and seventeenth century’s Aristotelians for promoting the Bogomil dogma as Cartesian *deus ex machina* and English Rosicrucianism, was essentially the same as the impulse among today’s oligarchs for promoting “ecological” anti-science fanaticism under such rubrics as the satanic (gnostic) dogma of *stewardship*, or revived pagan worship of Satan’s putative Delphic mother, *Gaia*.¹¹⁸

In summary of this point: the seventeenth-century oligarchs attempted to destroy, and replace then-existing institutions of Renaissance science, by aid of the following doctrinal argument. “The world of perceived things, the material world, is the realm of Satan, a realm which operates according to its own, nether-world logic, Aristotelian logic. You must deal with this nether-world of perceived things on its own terms, and never attempt to mix in anything pertaining to the higher, spiritual domain.” Hence, Descartes’ *deus ex machina* and the London Royal Society’s war-cry, “Hypotheses non fingo!”

The same echo of medieval Buggery dominates, permeates the work of Immanuel Kant, and also the nineteenth-century dogmatic, neo-Kantian Romanticism of Karl Savigny’s war-cry: “*Absolute separation of Geisteswissenschaft (spiritual) and Naturwissenschaft (material)!*” Thus, it was avowed by these modern Buggers, that there must be no attempt to find the connection between science and the fine arts, or to consider any principle of creative discovery in efforts to define the characteristics of valid work in the physical sciences. Such was the doctrine of Kant.¹¹⁹ Such is the basis, in the tradition of Buggery, for today’s “generally accepted classroom



In science, *spiritual* signifies *imago viva Dei*. The essence of scientific activity is the role of the spiritual, as cause, in changing the ordering of the ostensibly material.

mathematics.”

To repeat the crucial point of rebuttal, we summarize the case as follows. We are able to demonstrate knowledge of nature, not from repetition of the same facts of perception, but only by showing a correlation between our states of mind and increase of man’s power over nature, as measurable in *per-capita* and *per-square-kilometer* terms. It is this kind of efficiency of material change, as a consequence of the spiritual change we experience as Platonic hypothesis, higher hypothesis, and

hypothesizing the higher hypothesis, which is the sole basis for that which deserves the name of human knowledge.

We note, and emphasize, in this connection’ the *aleph*-like ephemerality of a creative action which shows itself to be the most powerful agency internal to the universe of the *Becoming*.

Thus, through showing the creative power of the spiritual, hypothesis, we expose the quality of *imago viva Dei* in its aspect as efficient agency. This shows man as participating in God! Through knowing this connection, we have access to certainty respecting the efficient existence of God as the higher species of universal personality which bounds and subsumes both our universe and ourselves individually.

We see thus directly the fallacy, the Bugged-up quality of Dawkins’ thinking. He proceeds, according to his own insistence on the point, from a *materialist* standpoint (in “evolutionary theory”), a standpoint which was established for the specific purpose of excluding fanatically all signs of the spiritual domain from contemplation of perceived things. This policy, this so-called materialist method, was introduced directly, contrary to a two-hundred-year record of the greatest material scientific successes in history by persons who rejected the materialist method.

Thus, we should not be astonished at the spectacle of those only philosophically illiterate, or, in some cases

lying professors today, who insist that science is essentially “objective”; there exist the strongest motives of factional self-interest, among the oligarchical party, to conceal the mystical depths of their own subjectivity, the subjectivity upon which the popularized delusion of “objective materialist science” is premised rhetorically.

“The Best of All Possible Worlds”

If we measure history by the standard of each person as *imago viva Dei*, we have a completely different notion of history in general than is taught in our foolish university textbooks and kindred places. We summarize this proof, beginning with the case of the individual person as such. Each of us, by the time we enter adolescence, knows that we are mortal creatures born to die within a few decades, more or less. What will be seen of our having lived, once we are deceased? Let it be added then, speaking of our past life, “what would humanity have lost, had that person never lived?” Even great physical works erode with time; what contribution could a mortal person supply, which might have lasting value to mankind for thousands of years—for example—to come?

For example. During the coming centuries, mankind will—almost certainly—begin to colonize space, rather than merely explore it. For future mankind, which will come to dwell, in the vast majority, many, many light-years far from our Solar System, Earth will be but a very distant, legendary speck in man’s ancestry. Think of school-children living in those far future places; they will be stunned by the very idea that mankind was once pitifully Earth-bound, apparently hopelessly so. “How did they finally begin to get up from Earth?” a child’s voice will ask. What, then, of that mere handful of German scientists who, in the 1920’s, began the project which, about five decades later, placed the first human footsteps on the Moon? How necessary did those few persons turn out to have been to the human species as a whole, and for more than many billions years to come?

For example. Look back to Plato. If we were to remove from 2,350-odd years of history all that humanity has received from Plato and his Academy, would there have been a European civilization during the recent five hundred years since Christopher Columbus? If one is informed of all those things for which modern Europe is indebted to Plato’s work, it is doubtful that a European civilization would have developed under the Christians without Plato.

We have indicated earlier, that continued human existence, as human, requires at least sufficient scientific and technological progress to more than meet the “zero-

entropy” degree of required offset to depletion of man-improved natural resources. Thus, although, as the two foregoing examples imply, the necessity for a life lived long ago may be expressed in terms of a concrete work, such examples do not address the essence of the matter in a general way. It is the participation of, one may wish, all of the population’s individuals in the continuing process of generation, transmission, and efficient assimilation of the fruits of combined, fundamental scientific and Classical fine-arts progress, which is the essence of the human species’ ability to continue to both merely exist as a species, and to progress. Thus, the development of the individual person’s “divine spark” of potential for creative reason, *imago viva Dei*, is the essence of history, and thus the measure of the immortal necessity earned by an individual mortal life.

This reflection should guide the reader’s thoughts toward a higher notion of relativistic space-time. *To wit:* we observed a kind of *analysis situs* which applies, demonstrably, to the domain of creative reason’s “thought-objects.” We observe, that in that space-time, of that *analysis situs* ordering, the relations among efficient ideas (“thought-objects”) have a characteristic paralleling *isochronicity* in the domain of non-algebraic physical functions. On such grounds, we may not know the design of God’s own clock, but we can see its reflection within a domain of our “thought-objects,” the domain Plato named “the Becoming,” Georg Cantor’s higher transfinite. That reflection is, as we have just indicated, a far different sort of a clock than that to which we are accustomed in measuring ordinary, mere perceptions.

Think! When we reach back into history, to employ and modify a discovery a century or more ago, we are changing the past in the essential feature of all things past, their outcome for our future. Once we shift our notion of what is essential, from the relatively petty matters of perception, to that which is historically essential, the “world-line” of necessary predecessors and successors in the isochronic domain of “thought-objects,” we’re in a higher, truer universe, qualitatively different than the inferior world of mere perception, a wonderful domain in which I may know Plato, or Nicolaus of Cusa, far better, more intimately than a sibling in my household.

It is from the vantage-point of such relations among efficient “thought-objects,” which he named “monads,” that Gottfried Leibniz spoke of that domain as “the best of all possible worlds,” the “best world” one might choose to inhabit.

What, then, of poor Richard Dawkins’ pathetically blasphemous public utterance of this recent April 15; did

that transpire in “the best of all possible worlds”? The largest genocide in history, executed upon Africa by such means as “IMF conditionalities,” is occurring; is that an event in the “best of all possible worlds”? We might continue so.

A friend has recently translated into English three extremely important essays, on the subject of tragedy, by history’s greatest tragedian, Friedrich Schiller.¹²⁰ In these three are stressed, in an excellent way, a topic which fills Schiller’s treatments of the intertwined topics, tragedy and history, in many more instances than these three. The gist of the matter to be emphasized here, is that the emotions are an integral feature of our powers of reason, creative reasoning most emphatically so. I know that the sight of great suffering, real or Classical tragedy, musters within me a well-spring of motivating strength, to the purpose of goading me to solve the quality of problem

which has afflicted my emotions in that painful way. In that way, in “this best of all possible worlds,” despite himself, Professor Dawkins’ shameful piece of public blasphemy may evoke from others, by negation, a good thing we might otherwise lack.

That now said, in conclusion of this, let us turn our imagination to the Prometheus of Aeschylus’ *Prometheus Bound*.¹²¹ Prometheus warns the immortal, Olympian “blobs” by the ears of Zeus’s message-bearing lackey, that there is a real god who will work justice upon both Olympian pretenders and on behalf of mankind. I am certain that Aeschylus’ Prometheus is a true prophet; we shall have an end of Olympus’ tyranny soon, and that by aid of God’s own agent, the *imago viva Dei* acting within men and women. Then, soon, I presume that Professor Dawkins will begin to recognize the ontological proof of the existence of God.

A D D E N D U M

On the Subject of God: Suffix

A friend, after reading the draft of this work, suggested that I compare my argument with the content of Book II of St. Augustine’s *Free Choices of the Will*.^{*} From this, I have adduced two topics whose brief treatment may help to clarify further the arguments central to my principal text. The first, prompted by Chapter II, Section III of Augustine’s text, I caption now “The Correspondence Among ‘Free Will,’ ‘The Power of Reason,’ and ‘Self-Similar Negentropy.’” The second, prompted by Chapter VIII of Augustine’s text, I caption now “The Paradox of Indefinite Divisibility of Number.”

Chapter II, §III of Augustinus’ *Free Choices of the Will* The Correspondence Among ‘Free Will,’ ‘The Power of Reason,’ And ‘Self-Similar Negentropy’

Populist hermeneutics misdefines “free will” as a matter of mechanical choices. The “freedom” of the voter to

choose the received “lesser of two evils” in the 1992 general election, is an example of that pathetic opinion. In my book, on the contrary, “freedom” is equal to those exercises of truth-seeking *creative reason* in the sense I have employed that term in this and other relevant published locations.

To the point, a beast may choose, even if he is likened to Balaam’s Ass. So much for “unhuman behavior”; *creative reason* signifies more than choice; it signifies an included quality of *negentropy*, or, for emphasis, “evolutionary negentropy” as that is described in the article above.

To “do what is right,” is not to select one from among an array of two or more alternatives presented; to “do right” is to do only that which promotes the cause of the right in defiance of all wrongs, including all “lesser evils.” That “right” is not the mere avoidance of evil (wrongs), but has a required *negentropic* quality, even as *I Corinthians 13* defines the requisite quality of *agapē*.

For example. In music, to repeat a thematic passage over and over, without developmental change, as Maurice Ravel’s experimental “Bolero,” for one case, is a degradation of music. In music, constant simple repetition, like monotony *per se*, is to be abhorred. *Negentropic change*, as the Haydn-Bach-Mozart form of the *Motivführung* principle^a of unifying equivalence^b in composition exemplifies this, is the essence of truth in artistic beauty in Classical composition. This principle, as typified by two outstanding Mozart songs, his *Abendempfindung*^c and *Ave Verum Corpus*,^d is also key to the perceived quality of *agapē* in great artistic compositions.

^{*} St. Augustine, “The Free Choice of the Will,” Book II, in *The Teacher, The Free Choice of the Will, Grace and Free Will*, trans. by Robert P. Russell, O.S.A. (Washington, D.C.: Catholic University of America Press, 1968), pp. 108-163.

The complementarity/interdependence between the “evolutionary negentropic” quality of creative reason, and the quality of “sacred love,” *agapē*, is the reflection of the *Good*, of *rightness*, in the macrocosm.

It should not be inferred from this excerpt from Augustinus that good deeds are always followed by simple rewards to the doer. Only a fool would deny that Augustinus was already aware of martyrs at the time of writing this referenced passage. However, the society which fails to sustain scientific and technological progress, for example, will soon discover itself to have lost its moral fitness to survive. All individual Good, and its consequences, lies essentially in the macrocosm, in the larger process in which the mortal individual action participates.

Chapter VIII of Augustinus’ *Free Choices of the Will*

The Paradox of Indefinite Divisibility of Number

Georg Cantor’s referenced *Beiträge* obliges us to look in a new way at the nature of attempts at an indefinite divisibility of number. Nonetheless, although it might

appear that Augustinus suffers from a deficient mathematical education, the point of his argument endures on the condition we shift the discussion of Augustinus’ illustrative point from the standpoint of Cantor’s *Beiträge*. For example, referenced, above, are a treatment of the polygonal series to the n , through $n = 256$.⁵

Nature is not “indefinitely divisible” in a simple way. However, the proofs of that fact lead us to Cantor’s discovery of the *alephs*, as presented in his *Beiträge*. Thus, as we have corrected, above, such relatively popularized misreadings of Cantor’s work as that of David Hilbert, a rigorous form of failed attempt to solve problems of convergence “at infinity” is the basis for proving Augustinus’ point respecting the faculty of reason.

- a. See page 21 above on the *Motivführung* principle.
- b. The *Motivführung* principle and its implementation in Mozart’s and Beethoven’s method of composition corresponds to the notion of *equivalence*, especially the higher notions of equivalence, of transfinite ordering, in the work of Georg Cantor.
- c. W.A. Mozart, “Abendempfindung,” K.523.
- d. W.A. Mozart, “Ave Verum Corpus,” K.618.
- e. See Lyndon H. LaRouche, Jr., “On the Subject of Metaphor,” *Fidelio*, Vol. I, No. 3, Fall 1992, pp. 19-20.

NOTES

1. The quoted passage is from the April 16, 1992 wire-dispatch summary by EIR News Service. Dawkins’ reference to “order” and “beauty,” appears to be a direct slap against the 1961 “informal proof of God” by Princeton University’s Professor Kurt Gödel; that appearance is buttressed, twofoldly, by the fact that Dawkins’ radical-positivist argument is virtually plagiarized intact from “linguistics” co-founder Rudolf Carnap’s 1941 arguments against Gödel.
2. Cf. Hao Wang, *Reflections on Kurt Gödel*, (Cambridge, Mass.: M.I.T. Press, 1987), pp. 214-217; John Howard Sobel, “Gödel’s Ontological Proof,” in *Festschrift für Richard Cartwright*, ed. by Thompson (Cambridge, Mass: M.I.T. Press, 1987), pp. 241-261; C. Anthony Anderson, “Some Emendations of Gödel’s Ontological Proof,” in *Faith and Philosophy* (Ann Arbor), Vol. 7, No. 3, July 1990; Jerzy Perzanowski, “Ontological Arguments II: Cartesian and Leibnizian,” in *Handbook of Metaphysics and Ontology*, ed. by Barry Smith (München: 1991).
3. E.g., Plato, *Parmenides*, in *Plato: Cratylus, Parmenides, Greater Hippias, Lesser Hippias*, Loeb Classical Library, trans. by H.N. Fowler (Cambridge: Harvard University Press, 1926), and *Timaeus and Critias in Plato: Timaeus, Critias, Cleitophon, Menexenus, Epistles*, Loeb Classical Library, trans. by R.G. Bury (Cambridge: Harvard University Press, 1929). Also, Gottfried Wilhelm Leibniz (on “most perfect being”), *Monadology*, trans. by George Montgomery (LaSalle: Open Court Publishing Co., 1989); also, *Theodicy*, trans. by E.M. Huggard (LaSalle: Open Court Publishing Co., 1985).
4. Georg Cantor, “Beiträge zur Begründung der transfiniten Mengenlehre,” in *Gesammelte Abhandlungen*, ed. by Ernst Zermelo (Hildesheim, 1962), pp. 282-356; English translation: *Contributions to the Founding of the Theory of Transfinite Numbers*,

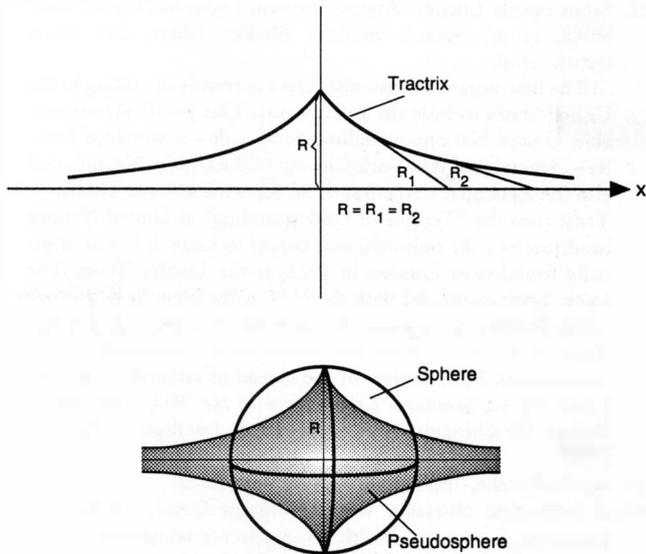
- trans. by Philip E.B. Jourdain (1915) (New York: Dover Publications, 1941). It is in this development of Cantor’s work, that Cantor touches most critically upon the quality of the Platonic “idea” (*eidōs*); see Lyndon H. LaRouche, Jr., “On the Subject of Metaphor,” *Fidelio*, Vol. I, No. 3, Fall 1992, pp. 17-50.
5. Admittedly, “Platonic ideas” are not to be confused with the ordinary positivist definition of the term. Hence, for several years, this writer accepted the suggestion that Plato’s *eidōs* be translated as the English “species,” or Cantor “type.” For reasons grounded in the argument of his “On the Subject of Metaphor,” *op. cit.*, it is better to adhere to the two-word translation, “Platonic ideas.”
6. See footnote 3.
7. See Bernhard Riemann, “Zur Psychologie und Metaphysik,” on Herbart’s Göttingen lectures, for Riemann’s reference to *Geistesmassen*, in *Mathematische Werke*, 2nd. ed. (1892), posthumous papers, ed. by H. Weber in collaboration with R. Dedekind.
8. LaRouche, “Metaphor,” *op. cit.*, pp. 42-44; Lyndon H. LaRouche, Jr., “Mozart’s 1782-1786 Revolution in Music,” *Fidelio*, Vol. I, No. 4, Winter 1992.
9. This is proven implicitly by Plato, as in his already referenced *Parmenides*. Modern proofs of this, such as Georg Cantor’s, or the famous “Gödel’s Proof” of Professor Kurt Gödel, are reflections of Plato’s original model proof. Although a correspondent of Gödel’s, Göttingen’s famous Professor David Hilbert never understood the most essential implications of Cantor’s *Beiträge*; cf. *Georg Cantor’s Briefe*, ed. by Herbert Meschkowski and Winfried Nilson (Heidelberg: Springer-Verlag, 1991), *passim*. This is perhaps nowhere more plainly displayed than by Hilbert’s axiomatic blunder proposing his famous, intrinsic-

- cally insoluble “Tenth Problem”; see J.P. Jones and Y.V. Matijasevic, “Proof of Recursive Unsolvability of Hilbert’s Tenth Problem,” in *The American Mathematical Monthly*, Oct. 1991, pp. 689-709; see also LaRouche, “Mozart’s Revolution,” *op. cit.*, footnote 56.
10. See Lyndon H. LaRouche, Jr., “In Defense of Common Sense,” chaps. II-V, in *The Science of Christian Economy and Other Prison Writings* (Washington, D.C.: Schiller Institute, 1991).
 11. *Ibid.*, chap. III.
 12. *Ibid.*, *passim*; also, LaRouche, “Metaphor,” *op. cit.*, *passim*.
 13. *Ibid.*
 14. *Op. cit.*, pp. 17-22.
 15. *Ibid.*
 16. See Gilles de Roberval, “The Cycloid,” in *A Source Book in Mathematics, 1200-1800*, ed. by D.J. Struik (Princeton, N.J.: Princeton University Press, 1986), pp. 232-233; also in Gilles de Roberval, *Treatise on Indivisibles*, trans. by Evelyn Walker (New York: Teachers College, 1932).
 17. See Johann Bernoulli, “Curvatura Radii,” in Diaphonous Non-formabus *Acta Eruditorum*, May 1697; trans. in D.J. Struik, *op. cit.*, pp. 391-399.
 18. *Ibid.* See Christiaan Huygens, *The Pendulum Clock, or Geometrical Demonstrations Concerning the Motion of Pendula as Applied to Clocks*, trans. by Richard J. Blackwell (Ames: Iowa State University Press, 1986); also Christiaan Huygens, *Treatise on Light* (1690), trans. by Sylvanus P. Thompson (New York: Dover Publications, 1962).
 19. Contrary to later apologies for the London-allied Enlightenment circles, France’s continued leading position in the world’s science and technology, through 1815, was centered in the Platonic heritage of Minister Jean-Baptiste Colbert’s Académie des Sciences, and its successor, the Leibnizian Gaspard Monge-École Polytechnique of 1794-1814. The factional opposition represented the contrary, Aristotelian, “Enlightenment” method. With the victory of Castlereagh’s faction at the 1814-15 Congress of Vienna, the Holy Alliance forces inside the Restoration Bourbon monarchy expelled Monge and his program from the École Polytechnique, putting French science under the vastly less competent leadership of the Marquis de Laplace and Laplace’s protege, Augustin Cauchy.
 20. This is a point from the (Leibnizian) science of physical economy. The continued existence of any society, even one of fixed population, must deplete natural conditions upon which the existing standard of *per-capita* and *per-square-kilometer* productivity depends. This depletion must be offset by an at least equal margin of growth of *per-capita* productivity. Hence, a minimal rate of advancement of employed technology is required.
 21. The Brothers of the Common Life was a religious community founded in 1376 by the Dutchman Gerhard Groot. Based on a rule of personal piety known as the *devotio moderna*, the movement followed the precepts expressed by Thomas à Kempis in his *The Imitation of Christ* and *The Christian’s Exercise: or, Rules to Live Above the World While We Are in It*. À Kempis also wrote “The Life of the Reverend Master Gerard the Great, Commonly Called Groot.” Nicolaus of Cusa received his early education from the Brothers of the Common Life community at Deventer. See Albert Hyma, *The Brethren of the Common Life* (Grand Rapids: Eerdmans, 1950).
For Wilhelm von Humboldt’s educational reforms, see Carol White, “The Humboldt Brothers’ Classical Education System,” *Campaigner*, Vol. 14, No. 5, August 1981; see also, *Wilhelm von Humboldt, Humanist Without Portfolio: An Anthology of the Writings of Wilhelm von Humboldt*, trans. by Marianne Cowan (Detroit: Wayne State University Press, 1963). See also, Wilhelm von Humboldt, “On Schiller and the Course of His Spiritual Development,” in *Friedrich Schiller, Poet of Freedom*, Vol. II, ed. by William F. Wertz, Jr. (Washington, D.C.: Schiller Institute, 1988).
 22. See *A Manual on the Rudiments of Tuning and Registration*, Vol. I (Washington, D.C.: Schiller Institute, 1992), chap. 11, “Artistic Beauty: Schiller vs. Goethe.”
 23. See Francis A. Yates, *The Occult Philosophy in the Elizabethan Age* (London: Routledge and Kegan Paul, 1979).
 24. See LaRouche, “Metaphor,” *op. cit.*; also Lyndon H. LaRouche, Jr., *A Concrete Approach to U.S. Science Policy* (Washington, D.C.: Schiller Institute, 1992), chap. IV, “The Cathar Root of Cartesianism.”
 25. Cardinal Nicolaus of Cusa, *De Docta Ignorantia (On Learned Ignorance)*, Book I, trans. by Jasper Hopkins as *Nicholas of Cusa On Learned Ignorance* (Minneapolis: Arthur M. Banning Press, 1985); also, “De Circuli Quadratura” (“On the Quadrature of the Circle”), trans. into German by Jay Hoffman (Mainz: Felix Meiner Verlag).
 26. LaRouche, “Mozart’s Revolution,” *op. cit.*
 27. *Ibid.* For musical score of the “Haydn” string quartets, see Wolfgang Amadeus Mozart, *Complete String Quartets from the Breitkopf & Härtel Complete Works* (New York: Dover Publications, 1970), K. 387, 421, 428, 458, 464, 465. For recordings, see Amadeus String Quartet, *Mozart Complete String Quartets*, Deutsche Grammophon; Budapest String Quartet, *Mozart’s Haydn Quartets*, Sony Classical.
 28. *Ibid.* For musical score of the “Russian” string quartets, see Joseph Haydn, *String Quartets Opus 20 and 33, Complete Edition*, ed. by Wilhelm Altmann (New York: Dover Publications, 1985). For recordings, see Tátrai Quartet, Hungaraton HCD.
 29. *Ibid.* For musical score, see J.S. Bach, *Musikalisches Opfer—Musical Offering—Offrande musicale*, ed. by Carl Czerny (New York: Edition Peters, No. 219). For recordings, see Leipziger Bach-Collegium, Capriccio, CDC10032; Cologne Musica Antiqua, Deutsche Grammophon (Archiv).
 30. See LaRouche, *Science Policy*, *op. cit.*, chap. IV.
 31. For Averroës see, for example, Oliver Leaman, *Averroës and His Philosophy* (New York: Oxford University Press, 1988).
 32. Paolo Sarpi (1550-1623), a former Procurator-General of the Servite religious order, was appointed state theologian of Venice in 1606. He was a leading theoretician of the “new houses” (*i nuovi* or *i giovani*—“the young”) of the Venetian aristocracy, which took power in 1582. The *nuovi* faction proposed: (1) an all-out assault against the Church at Rome and Rome’s allies, Spain and the Hapsburg dynasty; and (2) a major redeployment of Venetian financial power north into England and Holland. See David Wotton, *Paolo Sarpi: Between Renaissance and Enlightenment* (Cambridge: Cambridge University Press, 1985); see also *Sarpi*, ed. by Peter Burke (New York: Washington Square Press, 1967), pp. xv-xvi and *passim*.
 33. See Francis A. Yates, *Occult Philosophy*, *op. cit.*; also *The Rosicrucian Enlightenment* (London: Routledge and Kegan Paul, 1972).
 34. See Aristotle, “Politics” and “Ethics,” in *The Basic Works of Aristotle*, ed. by Richard McKeon (New York: Random House, 1941).
 35. Philo (“Judaeus”) of Alexandria, “On the Account of the World’s Creation Given by Moses” (“On the Creation”), in *Philo*, Vol. I, trans. by F.H. Colson and G.H. Whitaker, Loeb Classical Library, (Cambridge: Harvard University Press, 1981).
 36. On Descartes’ *deus ex machina*, see LaRouche, *U.S. Science Policy*, chap. IV.
 37. Immanuel Kant, *Critique of Pure Reason*, trans. by Norman Kemp Smith (New York: St. Martin’s Press, 1965); *Prolegomena to a Future Metaphysics*, trans. by Paul Carus (Indianapolis: Hackett Publishing Company, 1977); *Critique of Practical Reason*

- son, trans. by Lewis White Beck (Indianapolis: Bobbs-Merrill Company, 1956); *Critique of Judgment*, trans. by J.H. Bernard (New York: Hafner Press, 1951).
38. Carol White, *The New Dark Ages Conspiracy* (New York: New Benjamin Franklin House, 1980), *passim*.
 39. LaRouche, "Metaphor," *op. cit.*
 40. Cf. Norbert Wiener, *Cybernetics, or Control and Communication in the Animal and the Machine* (New York: John Wiley, 1948); 2nd ed. (Cambridge, Mass: M.I.T. Press, 1961); also, *The Human Use of Human Beings* (New York: Avon Books, 1967).
 41. Cf. Ludwig Boltzmann, *Vorlesungen über Gastheorie*, vol. i (1896), §6.
 42. LaRouche, "In Defense of Common Sense," and "The Science of Christian Economy," in *Christian Economy*, *op. cit.*, pp. 31-41, 318-323.
 43. LaRouche, "Project A," chap. II, "The Crucial Fact," in *Christian Economy*, *op. cit.*, pp. 104-109.
 44. LaRouche, "Common Sense," chap. II-IV, *op. cit.* pp. 8-26.
 45. Gottfried Wilhelm Leibniz, "Society and Economy" (1671), *Fidelio*, Vol. I, No. 3, Fall 1992, pp. 54-55.
 46. See Philip Valenti, "A Case Study of British Sabotage: Leibniz, Papin, and the Steam Engine," *Fusion*, Vol. 3, No. 3, Dec. 1979, p. 26.
 47. Understand the phenomenon corresponding to "technology" as typified by the following illustrative example. Given, two machines, performing the same operation in production of a specific quality of net work-output, powered to the same degree, and operated, alternately, by the same operator. Yet, one of these two machines produces a larger quantity of the same work-output, of equal or better quality than the other. That difference in the *design* of the internal organization of the machine is the phenomenon of *technology*.
 48. See footnote 36. Sir Isaac Newton, in his *Mathematical Principles of Natural Philosophy*, states "*hypotheses non fingo*" ("I don't make hypotheses"), and explains his reasons for this on grounds of *induction* versus hypothesis. See *Sir Isaac Newton's Mathematical Principles of Natural Philosophy and His System of the World*, revised trans. by Florian Cajori (Berkeley: University of California Press, 1960), General Scholium, pp. 546-547.
 49. Data for Chart 2 are taken from Colin McEvedy and Richard Jones, *Atlas of World Population History* (Middlesex: Penguin Books, 1978).
 50. Philip Callahan, "Insects and the Battle of the Beams," *Fusion*, Vol. 7, No. 5, Sept.-Oct. 1985, p. 27.
 51. Lyndon H. LaRouche, Jr., *So You Wish To Learn All About Economics? A Text on Elementary Mathematical Economics* (New York: New Benjamin Franklin House, 1984), chaps. 4 and 8.
 52. Friedrich Schiller, "The Legislation of Lycurgus and Solon," in *Friedrich Schiller*, Vol. II, *op. cit.*
 53. Isocrates (of Plato's adversary, the Athens School of Rhetoric) and Isocrates' protege, Aristotle, were agents of Athens' enemy, King Philip of Macedon. Plato's Academy at Athens, shortly after Plato's death, backed Philip's son, and political adversary, Alexander the Great, against Philip's agent, and Alexander's mortal foe, Aristotle.
 54. On oligarchism and pantheons, see text, below. The Delphic Cult of Apollo was the chief usurer of the Mediterranean littoral, and, as sponsor of Rome among the Latins, the key backer behind pagan Rome's step-wise advancement to imperial power.
 55. See footnote 32.
 56. Although there is no generally accepted crucial evidence against the opinion that Aristotle wrote these books, there is reason to suspect that much of the content may have been the work-product of others, notably Aristotle's Peripatetic collaborators. Either way, the moral assessment of Aristotle's thinking remains essentially the same.
 57. William Golding, *Lord of the Flies* (New York: Coward-McCann, 1962). Two motion picture versions of this title have been issued: 1963, directed by Peter Brook, produced by Allen-Hogdon-Two Arts; and 1990, directed by Harry Hook.
 58. This signifies Christian as opposed to John Locke's definition of "natural law." Cf. LaRouche, "The Science of Christian Economy," chap. VIII, *op. cit.*, pp. 301-359.
 59. The liberator's trumpet is heard, and Rocco exclaims, "O, what is that? Almighty God!" Ludwig van Beethoven, *Fidelio in Full Score* (New York: Dover Publications, 1984).
 60. See the cited passage from Adam Smith's *The Theory of the Moral Sentiments* (1759), in LaRouche, "The Science of Christian Economy," *op. cit.*, pp. 291-292.
 61. Presumably, this "earthly paradise" is that of U.S. State Department ideologue Francis Fukuyama's *The End of History*. See Fukuyama, *The End of History and the Last Man* (New York: Free Press, 1992).
 62. See H. Graham Lowry, *How the Nation Was Won: America's Untold Story, 1630-1754* (Washington, D.C.: Executive Intelligence Review, 1987), pps. 74-76, 158-201.
 63. The well-known "free market" economist Adam Smith was a paid retainer of the British East India Company throughout most of his career. According to the family biography of William Petty, Earl of Shelburne (1737-1805), during a rather famous carriage ride to London in 1763, Lord Shelburne, a member of the East India Company's ruling "secret committee," commissioned Smith to prepare the research outline for an ambitious study of the rise and fall of the Roman Empire. The outcome of that Shelburne-Smith discussion was Edward Gibbon's *The Decline and Fall of the Roman Empire*.
Smith's most famous work, *The Wealth of Nations*, was also written on commission from the East India Company, and was an attempt at regrouping Britain's empire following the loss of its crown colony in North America. In that latter study, which was harshly criticized by American System economist Henry Carey in his *The Slave Trade: Domestic and Foreign* (1853), Smith advocated the development of the opium trade from India as a means of securing hard currency. See Lyndon H. LaRouche, Jr. and David P. Goldman, *The Ugly Truth About Milton Friedman* (New York: New Benjamin Franklin House, 1980), pp. 97-124; see also Carol White, *New Dark Ages*, *op. cit.*, pp. 312-321. For further details on Smith's relationship to the Earl of Shelburne, see Edmond George Petty-Fitzmaurice, *The Life of William Petty, Earl of Shelburne, Afterwards First Marquis of Lansdowne* (London: McMillan & Co., 1912).
 64. Jeremy Bentham served as resident philosopher and counterinsurgency specialist for the British East India Company from 1776 through his death in 1830. He was one of the principal propagandists of the Enlightenment concept of the "pleasure-pain calculus," which posited the idea that human beings are merely animals driven by the desire to seek pleasure and avoid pain. An avowed enemy of the American Revolution, Bentham, operating out of the Earl of Shelburne's estate, ran a "radical writers workshop" which produced many of the speeches and pamphlets for the Jacobins in France. He later entered into a close collaboration with the American traitor Aaron Burr, and was part of the Burr plot to establish a new British colony in what was later the Louisiana Territory. When Burr fled North America, he took up residence at Bentham's estate in England. Among Bentham's most noteworthy economic writings is his essay, "In Defence of Usury."
 65. Aristotle, "Organon," in *Basic Works*, *op. cit.*

66. LaRouche, "Metaphor," *op. cit.*
67. See LaRouche, "Mozart's Revolution," *op. cit.*, footnote 41 on the priests of Apollo.
68. On "hereditary principle," see LaRouche, "Metaphor," *op. cit.*, pp. 32-36.
69. See footnote 35.
70. LaRouche, "Mozart's Revolution," *op. cit.*
71. *Ibid.*, p. 12.
72. *Ibid.*, p. 17.
73. Giammaria Ortes (1713-1790), influential Venetian economist, whose works were plagiarized by various of the British school of political economy (Adam Smith *et al.*, emphatically including Karl Marx), following the consolidation of Venetian control over England. His "Calculus of the Pleasures and Pains of Life" (1757) formed the basis for the Benthamite hedonistic calculus (see footnote 64); the economic models he based upon this philosophy of "man as beast" are developed in the works of "Free Traders" from Adam Smith to Milton Friedman, including today's illiterate Jeffrey Sachs. His *Reflessioni sulla popolazione delle nazioni per rapporto all'economia nazionale (Reflections on the Population of Nations in respect to National Economy)* (Venice: 1790) was plagiarized and popularized by Parson Thomas Malthus in his "On Population." Ortes was the only Italian economist cited by Karl Marx in his *Capital* (Vol. I). See *Scrittori classici italiani di economia politica*, ed. by P. Custodi (Milan: 1802-16).
74. We are using the term "empiricist" here in its "generic," rather than more narrowly proprietary definition. Specifically, we are including British liberal philosophy and Franco-Viennese positivism under the same rubric.
75. *Freude, schöne Götterfunken, Tochter aus Elysium: Götterfunken equals "God's sparks."* The reference is to Beethoven's famous Ninth Symphony setting of Friedrich Schiller's "Ode to Joy" ("An Die Freude").
76. William of Ockham (Occam) (d.1349). A radical Averroist gnostic, forerunner of empiricists such as John Locke and David Hume, and, later, Ernst Mach and Sigmund Freud, the lowest intellectual form of neo-Aristotelianism.
77. Roughly speaking, Georg Cantor's work equates his notion of *transfinite* to Plato's *Becoming*, and places the idea of an *absolute infinite* beyond both transfinite and becoming, in the domain of Plato's *the Good*.
78. This is the formulation from Gottfried Leibniz which drove the author of *Candide*, the gnostic Voltaire, into his frenzy of hatred on the subject.
79. Leopold Kronecker (1823-1891), professor of mathematics at the University of Berlin, student of the great Lejeune Dirichlet; but a fanatical, cabalistically inclined formalist, famous for the savagery of his vendettas against mathematicians Carl Weierstrass and Georg Cantor. See Uwe Parpart, "The Concept of the Transfinite," *Campaigner*, Vol. IX, Nos. 1-2, Jan.-Feb. 1976, pp. 54-56.
80. Bertrand Russell (1872-1970), grandson of British-empiricist Prime Minister, and anti-American foe of President Abraham Lincoln, Lord John Russell. Bertrand is regarded by some well-informed circles as not only a savage racist mass-murderer against people of darker complexions, but one of the most evil political figures of the twentieth century. In mathematics, a radical empiricist, early author of a bungling but hateful text (*Lectures on Geometry*) attacking Karl Gauss, Wilhelm Weber, and Bernhard Riemann. His influential misrepresentation of Cantor's work is a travesty.
81. The commonplace worst case of this classroom problem is the radical-positivist "New Math," popularized since the close of the 1950's.
82. Satan equals Lucifer, Apollo, Python, Dionysus, Osiris, Baal, Shiva, *et al.* Satan's mother: Shakti, Ishtar, Isis, Gaia, Cybele, *et al.*
- The best-organized Satanist forces currently operating in the United States include the Lucis Trust. This putatively respectable, United Nations-accredited Satan cult—it worships Lucifer—operates in New York City out of the United Nations, and also the Episcopal Cathedral of St. John the Divine. The Lucis Trust runs the "Temple of Understanding" at United Nations headquarters, the only religious chapel so located. It was originally founded in London in 1922, as the Lucifer Trust. The Lucis Trust associated with the U.N. is the New York affiliate of the British organization; the name was changed from Lucifer Trust to Lucis, to make the nature of the organization less conspicuous. For a review of the spread of satanism today, see Carol White, *Satanism: Crime Wave of the '90's*, EIR Special Report (Washington, D.C.: Executive Intelligence Review, 1990).
83. See LaRouche, "Metaphor," *op. cit.*, pp. 18-22.
84. A humorless obsession with nominalist literal, "dictionary" meanings, is associated with schizophrenic tendencies in language behavior. In professional and related work, this is a destructive phenomenon, and plainly, functionally a pathological disorder of the mind.
85. Cf. LaRouche, "The Science of Christian Economy," chap. IV, *op. cit.*, pp. 229-240.
86. Cf. Nicolaus of Cusa, *De Docta Ignorantia*, *op. cit.*, *passim*.
87. Georg Cantor, *Beiträge*, *op. cit.*, *passim*.
88. See Friedrich Schiller, "On the Aesthetical Education of Man," in *Friedrich Schiller, Poet of Freedom*, Vol. I, ed. by William F. Wertz, Jr. (New York: New Benjamin Franklin House, 1985); also "What Is, and to What End Do We Study, Universal History?" in *Friedrich Schiller*, Vol. II, *op. cit.* For Wilhelm von Humboldt's educational policy, see footnote 21; see also Joachim H. Knoll and Horst Siebert, *Wilhelm von Humboldt, Politiker und Pedagoge (1767-1867)* (Bad Godesberg: Inter Nationes, 1967).
89. Unfortunately, the term "neo-Platonist" has been pre-empted by a collection of quasi-Aristotelian, anti-Plato, gnostic cults of Byzantine origin. Such cults have nothing to do with Plato or Christian Platonism.
90. Friedrich Schiller, "The Legislation of Lycurgus and Solon," *op. cit.*
91. The so-called "Second Law of Thermodynamics," or "Law of Entropy," concocted by Kelvin and Clausius during the 1850's, is essentially a rewarmed Newton "clock-winder" fallacy. Entropy occurs, of course; it is the gnostic dogma, a so-called "law of universal entropy," which is the kookery in question.
92. See footnote 48.
93. See Alfred North Whitehead and Bertrand Russell, *Principia Mathematica*, 2nd ed. (New York: Cambridge University Press, 1927), 1968-1973 printing.
94. Georg Cantor, *Beiträge*, *op. cit.*
95. The LaRouche texts referenced include the cited *Christian Economy*, "Metaphor," and "Mozart's Revolution."
96. Nicolaus of Cusa, "De Circuli Quadratura," *op. cit.*
97. Nicolaus of Cusa, "De Non Aliud" ("The Not-Other"), in *Towards a New Council of Florence: "On the Peace of Faith" and Other Works of Nicolaus of Cusa*, ed. and trans. by William F. Wertz, Jr. (Washington, D.C.: Schiller Institute, 1993).
98. The pseudosphere is the rotation, as around the abscissa of a three-coordinate system, of the tractrix. Therefore, the area of the surface of the pseudosphere differs from the area of the

surface of the corresponding sphere by an infinitesimally discrete, but not eliminable discrepancy. See diagrams below.



99. Cf. LaRouche, *Christian Economy*, *op. cit.*, Appendix XII, pp. 426-431.
100. "Humanist" is employed here in its original, Renaissance meaning, as "Classical humanist" or "Christian Classical humanist," not the modern atheistic, "secular humanist."
101. LaRouche, "The Science of Christian Economy," *op. cit.*, footnote 8, pp. 471-473.
102. Christopher Marlowe, "Doctor Faustus," in *The Works of Christopher Marlowe*, ed. by C.F. Tucker Brooke (London: Oxford University Press, 1910).
103. See H. Graham Lowry, *How the Nation Was Won*, *op. cit.*
104. See footnote 32.
105. See Barbara Tuchman, *A Distant Mirror: The Calamitous Fourteenth Century* (New York: Knopf, 1978); see also Carol White, *New Dark Ages*, *op. cit.*, *passim*.
106. *De Docta Ignorantia* was completed on Feb. 12, 1440. A major attack on the work, written by the Aristotelian John Wenck and entitled *On Unknown Learning (De Ignota Litteratura)* was written between March 26, 1442 and mid-summer of 1443. Cusa's response, entitled *A Defense of Learned Ignorance*, was completed on Oct. 9, 1449.
- For Nicolaus of Cusa's role in reconstituting the Christian Church in this period, see Helga Zepp-LaRouche, "Nicolaus of Cusa and the Council of Florence," *Fidelio*, Vol. I, No. 2, Spring 1992, pp. 17-22; and Nora Hamerman, "The Council of Florence: The Religious Event that Shaped the Era of Discovery," *ibid.*, pp. 23-36.
107. Principal writings on the subject of scientific topics by Cardinal Nicolaus of Cusa, composed after *De Docta Ignorantia*, include: "On Conjectures" ("De coniecturis"), "On Beryllus" ("De beryllo"), "On the Game of Spheres" ("De ludo globi"), "On Quadrature of the Circle" ("De circuli quadratura"), "On Mathematical Complements" ("De mathematicis complementis"), "On Geometrical Transformations" ("De geometricis transmutationibus"), "Quadrature of the Circle" ("Quadratura circuli"), "The Golden Proposition in Mathematics" ("Aurea propositio in mathematicis").
108. Scolarius's A.D. 1453 treason against Greece was rewarded by the Ottomans appointing him, as Patriarch Gennadios, as patriarch for all the non-Muslims of the Byzantine Empire under

an Ottoman dynasty. Venice, for its part, shared the spoils of the 1453 conquest with its Ottoman partner.

109. See H.R. Trevor-Roper, "The General Crisis of the Seventeenth Century," in *Crisis in Europe: 1560-1660*, ed. by Trevor Aston (Garden City: Doubleday, 1967).
110. The Venetian Francesco Giorgi (Szorzi) was the founder of a gnostic cult in England during the period of the 1518 fight in which Henry VIII voided his marriage to Catherine of Aragon. It was Giorgi, Venice's premier cabalist scholar, who provided the justification that Henry's marriage to Catherine was never valid, as the Pope had had no right to grant dispensation for the marriage in the first place. This marked the beginning of the direct Venetian takeover of England.
- Writing in his 1540's *Harmonice Mundi*, Giorgi attacked Nicolaus of Cusa's *De Docta Ignorantia* as follows: "Those who retreat from the direct knowledge of the universe will retreat into the Docta Ignorantia" (as quoted in Yates, *Occult Philosophy*, *op. cit.*). Hence, Giorgi's gnostic cult, which claimed Robert Fludd and John Dee as members, and which formed the basis for the Rosicrucians and later, by way of the influence of Francis Bacon, inspired the Royal Society of Isaac Newton, had been the enemy of Nicolaus of Cusa from the beginning.
111. *I.e.*, William Gilbert. For Gilbert's investigations of the electromagnetic and gravitational fields, see William Gilbert, *De Magnete (On the Magnet)*, trans. by P. Fleury Mottelay (New York: Dover Publications, 1958).
112. LaRouche, "The Science of Christian Economy," *op. cit.*, footnote 18, pp. 481-482.
113. LaRouche, *Science Policy*, *op. cit.*, chap. IV, "The Cathar Root of Cartesianism," *passim*. See also, "Metaphor," *op. cit.*, *loc. cit.*, *passim*.
114. See Edward Gibbon, *The History of the Decline and Fall of the Roman Empire*, ed. by J.B. Bury, 7 vols. (London: Methuen); reprinted (New York: AMS Press, 1974). See also Boris Primov, *Les Bougres: Histoire du Pape bogomile et du ses Adepts* (Paris: Editions Payot, 1975).
115. The Phrygian Satan-figure's Indo-European name signifies "day-night," indicating the yin-yang and other affiliations.
116. Philo, "On the Creation," *op. cit.*
117. Once a Cathar effected the rite of passage to the ranks of the elect, he could not place his semen in the vagina of a woman; he was permitted almost any substitute form of recreation. Hence the name Bugger.
118. The substitution of "stewardship" for "dominion" in Genesis 1:28, is the hallmark of the anti-Christian, gnostic "Bible." The Delphi of the Cult of Apollo was originally the site of the Gaia-Python cult. In the case of Python, like that of Shiva, Osiris, *et al.*, the customary "Satan" of the interchangeable serpent/penis imagery: Gaia was ambiguously his consort or mother.
119. Immanuel Kant, *Critique of Judgment*, *op. cit.*, *passim*.
120. Friedrich Schiller, trans. by George Gregory, "On the Use of Chorus in Tragedy," article this issue, page 60; German original ("Über den Gebrauch des Chors in der Tragödie") in *Friedrich Schiller, Werke in Drie Bänden* (München: Carl Hanser Verlag, 1981), vol. III, pp. 471-477. See also unpublished trans. by George Gregory of Schiller's "On the Reasons We Take Pleasure in Tragic Subjects," German original ("Über den Grund des Vergnügens an tragischen Gegenständen") in *Friedrich von Schiller, Sämtliche Werke in Sechs Bänden* (Stuttgart: Phaidon Verlag, 1984), vol. 5, pp. 127-140; and of "On Tragic Art," German original ("Über die tragische Kunst") in *ibid.*, pp. 141-162.
121. Aeschylus, "Prometheus Bound," in *Aeschylus Two, Four Tragedies: Prometheus Bound, Seven Against Thebes, The Persians, and The Suppliant Maidens*, ed. by David Grene and Richmond Lattimore, trans. by David Grene (Chicago: University of Chicago Press, 1969).