Feature

TURNABOUT!

The New Strategy for Space

by Lyndon H. LaRouche, Jr.

Friday, November 22, 2013

I had just concluded a most recently presented document with a section of that piece entitled "What should we actually do about Mars?" This new publication, just presented here below, may tell you.¹

Since some time later than the August 8, 2012, successful landing of Curiosity, on Mars, I had spent a good part of less than a recent year, nursing a growing conviction, that the idea of actually sending human beings to live, even briefly, on Mars, would have been the result of a mistake in choice of priorities. It was, ironically, the brilliant success of both Curiosity's landing, and of its operating design, which actually supplied me with one of the two factors which have combined to prompt my present conclusions reached on those accounts. The additional, ultimately still far more important consideration, has now been, the apparently increasing accumulation of evidence for the existence of an accumulation of a deadly threat of lurking "killer asteroids" seeming to await their launch of an attack against a mankind now living on Earth.

I speak from experience, as follows:

Since the late 1980s, I had been personally committed, over the course of most of this intervening time, to

1. The Secret of Poetry, November 14, 2013 (unpublished manuscript).

a prospect for a future manned landing on Mars. What has convinced me to abandon that Mars-landing perspective recently, was, ironically, a batch of some rather stunning, crucial facts respecting the achievements of the evidence which **Curiosity** had demonstrated itself to have achieved, as having been a relatively far more important achievement than I might have anticipated it to have become, when all were considered in light of the present evidence available to us now.

What had actually convinced me to that effect, had been my own presently accelerating awareness of the urgency of a need for a defense against asteroids and kindred threats to some nearby regions within our Solar system. This now requires, most urgently, a defense against presently deadly threats to Earth represented by those asteroids which are now, apparently, likely to hit Earth with great destructive force. We are, therefore, to be committed to an effective defense, accordingly: "necessity is, again, the mother of invention."

I mean prospective strikes which, now, already threaten the destruction of human life on either entire regions of Earth, or, even the human species in its entirety. That knowledge of such an increasing danger to Earth's inhabitants, is an awareness which had been prompted, on our associates' part, to a presently very large degree, by the work-in-progress which is both, currently the work of a few of my relevant associates, as, otherwise, but also by some other specialists known to us as qualified in the subjects of these matters.

For example, worrying threats of such collisions might be considered as to be *possibly earlier* than we might have previously estimated. A similar concern bearing on such possible facts, had been adopted, in recent times, by some among our own "basement team." However, up to this time, much of what I may now present in this report, will be limited, for this moment, to the basis of supplementary conclusions such as those my associates and relevant others will

have drawn, and will have now soon adopted as a matter which has been, in some part, a judgment based on my own personal responsibility, but, that in the context of the discussions also provided by the setting of discussions among my "basement" associates, and by relevant others.

The facts on which I had based my adoption of possibly earlier forewarnings, had been already presumed for some significantly early, present, or future generation of mankind on

Earth. These have been, primarily, more or less than what relevant leading specialists have recently recognized, in their discovery of ever-more-advanced studies of patterns of the scientific evidence for which such evidence has been accumulated for a future span of relatively early decades for Earth's possible *collisions with what are, in presently suggested effect, "deadly asteroids.*"

As to what has been, or should have been well-known indications bearing on the matter of which I am presently informed, it is as follows: this is what should have already become some relatively long-standing, leading qualifications among the relevant categories of economists of our time, had it not been for the effects of the gross mismanagement under such as both the now failed President George W. Bush, and the worst case, the now disintegrating reign of President Barack Obama. The subject of my report here, is, now: "What can we do; and what we must we do; and, when we must do it." That is to say, as concerning these cumula-

tive threats to the existence of mankind. We must deal, both immediately and practically, with the deadly threats now represented by relevant types of asteroids and also other relevant types of threats from within, or near our galaxy!

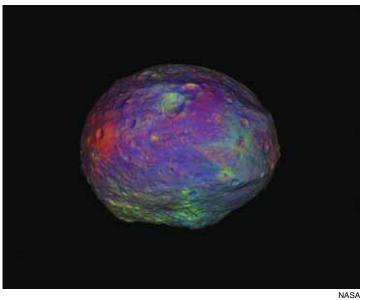
It is never too early to begin to become prepared to meet the kind of indicated threats which I have in mind. What, therefore, must be our current policy for a capable strategy of defense against "attacks" from relevant

asteroids?

To begin, consider some very elementary kinds of relevant comparisons, as follows.

Thence, the question, as I had written it, is: "What should we actually do about Mars?"

I have not overlooked the importance of presenting a reference to the particular importance of the warning of the late Dr. Edward Teller on this specific category of evidence of proposals on asteroids, and closely related matters, on this same account. Unfortu-



The asteroid Vesta. "There is no price we should not be willing to meet" to deal with the threat to Earth of asteroid impact, LaRouche writes.

nately, Dr. Teller's most relevant treatment of the subject of relevant kinds of threats, as had been stated to me, had been "turned down" by some among other relevant professionals. By the way, after all, the threats came not only from asteroids; there are also possible threat-potentials from some types of comets to be considered as related other matters of priority on this account. Now, I focus here, for the moment, on this more limited case.

What Had Gone Wrong?

Opposition to what had been proposed measures of Solar system defense against deadly asteroids, has now been shown, practically, to have been wrong-headed. What had been rejected as Dr. Teller's warning respecting asteroid threats, has been recently substantiated as now very significant, that in a relatively much larger degree than earlier. The contrary, silly-minded opinions about such matters, have come from such as the ex-

pressed policies presented by the Obama administration, as had been demonstrated forcefully by some more recent evidence, evidence more ominous than any ordinary incompetence in risk-taking. Considering officials of the inclination of the Obama Presidency of our nation-state, Obama's babbling on this matter of the "questions of space," has now far surpassed the category of "utterly fraudulent" on all notable accounts.

That much just spoken: the core of the matter at hand (i.e., defense of Earth from such threats as those of human-killer-scale asteroids, or the comparable types of cases), might be presented, if only for purposes of immediate illustration, as that might be done with no more than my use of a mere touch of therapeutic irony: "Which is faster: the speed of light

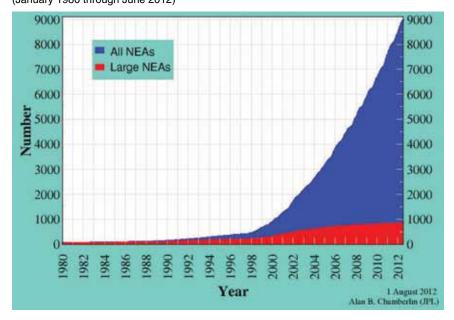
(and its equivalent), or fast-moving asteroids moving within relevant regions in nearby space?" Therefore, which of the relevant elements should be the bullet, and which the target? That is an appropriate example of the kind of proposition which confronts mankind now. To illustrate that point, compare "the speed of light" as radiated between the orbits of Earth and Mars (e.g., "the rabbit versus the tortoise"), as an example. How might we, in such a case, divert a deadly category of asteroid, or asteroids (or comparable case) within the time and space sufficient to prevent a deadly collision with Earth? That presents us with a useful "first approximation" which the layman-citizen might be asked to consider very carefully.

The Shirker Factor

To understand the source of the failure to recognize the threat-potential of relevant streams of asteroids, we must re-examine certain evasions of reality dating from the 1970s, evasions which, in principle, have come to haunt us now. The point is the following.

During the course of the 1970s, there had been both an emphasis on studying applications of thermonuclear

FIGURE 1 **Known Near-Earth Asteroids**(January 1980 through June 2012)



fusion principles, but also a still presently stubborn resistance to the promotion of the natural implications of a "full throttle" thermonuclear fusion program. We have had repeatedly persisting, if dubious promises that thermonuclear fusion was to come within a perpetually promised thirty-odd years delay, now, still later, thirty years yet to come.

Therefore, orchestrate a map of simultaneous elements of the trajectories of the known elements engaged in the process of Solar system's objects generally. How must we intervene to regulate those trajectories to be considered simultaneously? From there on, the subject becomes "ever more interesting."

In other words, the ability to develop scheduled "machines" to deal with what might be otherwise considered as vagrant asteroids, were better assigned to the precision required and expressed by the defensive system for dealing with the detecting, and either diversion, or destruction of the targets to be either "shot down," or moved into an adjusted direction. (Diverting or destruction of the relevant targets, are only the most obvious among the alternatives.)

Obviously, we should be making ready for all-out measures for diverting threatened types of such catastrophes. On that account, responsible governments will now prepare themselves for dealing with whatever may be possible; there is no price we should not be willing to

Take relevant exemplary cases of method from the discoveries of such as Bernhard Riemann, and also those of Max Planck, and Albert Einstein.

meet in terms of efforts needed on that account; but, we must commit ourselves to develop means which would make what is necessary possible.

Once that much were made clear, there is, then, the matter of more profound facts of the matter to be brought into view, as follows. There is the galaxy's role as a factor to be considered along the Solar course, as well. A Solar system, like the Galaxy which contains it, is not a set of interacting collections of separate objects, but, rather, an array of the unified subjects of complexly interacting, unifying processes, as Nicholas of Cusa and his successor, Johannes Kepler, had come to approach such subject-matters, in their succession then, or, centuries later, as such as Bernhard Riemann, and then Max Planck and Albert Einstein, had understood the more recent of the relevant foundations of modern physics.

The Fag End of the Twentieth-Century Crisis in Science

The assassinations of U.S. President John F. Kennedy, and his brother, Robert Kennedy, must be viewed against the background of the comparable effect of the shift of the identity of the U.S. Presidents from the benefit of the leadership under President Franklin D. Roosevelt, in contrast to the ruinous, British-Empiredirected, lackeyship of the disgusting President Harry S Truman.

Thus, before opening the specifics of the subject of statecraft essential to our purpose here, we must expose the most important error which blocks our necessary understanding of the underlying issues of the defense of mankind within a relatively nearby Solar space. As now.

There have been two most crucial moments since the death of President Franklin D. Roosevelt on this account. The first of those was the death of President Franklin D. Roosevelt himself; at that moment, Britain's Winston Churchill, and his virtual flunky, then formerly Vice-President Harry S Truman, had taken over. The change in the content and direction was sweeping in character and scope, and came with sometime hurricane-like qualities of what is expressed as an international force. A related pattern had come into play, later, with the assassinations of President John F. Kennedy, and a relatively short interval later, John's brother, the then-probable Democratic Party nominee for President, Robert.

In fact, a careful tracing of the trend of the U.S.

economy has been actually a long wave of persisting economic decline, that from since the assassination of President John F. Kennedy, to the present moment.

For those who are both actually competent economists and historians, there should be nothing properly mysterious about that pattern. The recurring agony of European and nearby cultures, since ancient times, has continued to be what is known as the history of "the oligarchical principle," as typified by such an outstanding example of oligarchism as the mass-murder at Troy, the Roman Empire, or the Dutch invasion of the British Isles which became known as our own U.S. republic's intrinsic foe, the so-called "British" empire. The actual assassinations of what had been leading, actually patriotic U.S. Presidents, are typical of the pattern of assassinations and other ousters of Presidents by the British agent Aaron Burr and his like, as to be traced through the assassinations of such extraordinarily important Presidents as Abraham Lincoln, President William McKinley, President John F. Kennedy, and also John's murdered brother Robert.

The relevant pattern of conflict with what we often reference as the mass-murder of the people of Troy, or trace down through such as the murderous Roman Empire, and by the dominant oligarchical systems of the world generally, had been often defeated since the victory of the founding of, first, the Massachusetts Bay Colony, and then the vindication of that Colony's principle, as the continuing struggle for the defense of a stubborn existence of the Constitution of our United States. So, came the great President, Franklin Roosevelt, and, then, his wife's, Eleanor Roosevelt's choice for President, the soon-murdered President John F. Kennedy.

The Test of Truth

Put aside what has been the commonplace gossip which is all too common to not only our misguided citizens generally, but also reject the customary jabber of news media and political leaders generally. What is the usually misrepresented, but remains despite that, as the actually essential interest of the nation and people of our United States, in fact? Most opinion on that matter is, speaking frankly, foolish; and, our citizens, for the most part, are the victims of such commonplace propaganda.

However, there is an elementary, and fully proven class of human knowledge which provides us with a degree of pretty clear certainty: the true principle, nature and interest of our human species. Any opinion contrary to that, has been shown with scientific certainty, as a hoax against humanity, whether that were intended, or not.

The essential principle which distinguishes the natural qualities of the actual human mind from that of all among the beasts, is the characteristic factor of an attempted steady and progressive increase of energy-flux density per capita and per unit of territory, a factor which distinguishes the human species from all known other species (when it is permitted!). This most remarkable potential, is unique to the human species. That function, itself, defines the inherent increase of power wielded by the progressive self-development implicitly available to powers so-far known as unique to the human mind.

Thus, the net decline in the U.S. economy's net output per-capita, represents a degeneration of the actual human population in the affected regions of habitation. The fairly given practical expression of progress of the human species, is that the human species' sustainable existence depends upon a persisting factor of the increase of the effective energy-flux density per capita, as that might be measured in terms of progress to higher intensities of physical chemistry. Any failure to meet the standard of increased energy-flux density, represents an intrinsic degradation of the human species' populations. Such a degradation has been often familiar to the history of European civilizations (among others), as that kind of trend towards recurring, or even permanent decline, as has been specific to the U.S. economy since the assassination of Mrs. Eleanor Roosevelt's choice of President, John F. Kennedy; the facts of performance show the relevant effects.

It follows from a careful study of the history of such factors of development, or decline, of the human species, that we have reached the point of mankind's indispensable entry into management of sets of inter-planetary domains, whether we had understood this, or not, a point reached, from which we could never turn back successfully.

I. The Principle To Be Considered

Therefore, the explanation of my own personal intentions for such a defensive operation within relatively nearby Solar space, has been unavoidably complicated for most of the currently relevant specialists,

not only in design, but for the lack of a set of progressively evolving, hopefully corrected notions of what had once been simply accepted as the ostensibly elementary, (frankly) more simple-minded challenges. Consider the cases of that quality of scientific progress which had been lately permitted to slip into a certain kind of decadence, a decadence reflecting the transition from the leading roles of such, earlier, as the work of Nicholas of Cusa and his follower Johannes Kepler, to such more recent geniuses as Bernhard Riemann, Max Planck, and Albert Einstein, and the subsequent slipping into the virtual sodomizing of science under Britain's Bertrand Russell.³

What had been substantially ruined by the influence of such as Bertrand Russell, was a science thus degenerated into the destructive, new post-World War I generations' access to the destructive effects on the most crucial features of both Classical science and Classical artistic composition. The fault thus incurred, had a strictly specific origin, which had been the source of the loss of regard for the underlying principle which is essential to all understanding of the actual (noëtic) principles of human creativity.

For me, the nature of such forms of systemic error, had been made clear to me by my growing experience and insight into the folly of the prevalent practice of "repeat-after-me" programs of the educational practices of the respective post-Word War I and World War II worlds, as I had experienced my recollection of those faults, after my own fashion, and in my own time.

So, even more so today, a "discovery of truth" had been often displaced in favor of a doctrine of a dubiously predetermined collection of "right answers:" today, worse than ever, to my present knowledge.

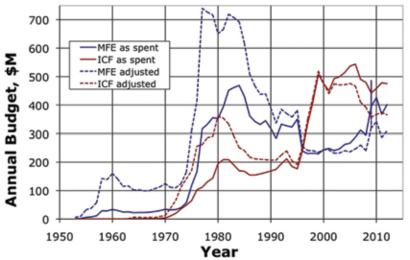
My Personal History, for Example:

Ironically, that referenced doctrine of education which I have condemned, had become almost instantly clear for me, and that with sustained intellectual force, during the particular instance of a certain first session of a reductionist's class in secondary school plane geometry of my time. My brief, volunteered, opening exposition on the subject of the meaning of the principle of geometry as a subject, was the occasion for the contrast of my own "right answer," an "answer" based on my experience during a series of visits to the Boston re-

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^{3.} The role of the actual "creativity principle," is a subject which I have reserved to a later part of this report.

FIGURE 2
U.S. Annual Fusion Budgets for Magnetic Fusion Energy (MFE) and Inertial Confinement Fusion (ICF)



Source: U.S. Department of Energy, U.S. Energy Information Agency

gion's relevant Navy Yard, an experience contrary to the traditional (but "actually wrong") answer of Euclidean geometry. At that time of my encounter with the geometry class, I had simply "not bothered" to submit to what I was properly certain was a mistaken, if prescribed doctrine taught to the class.

There were others from my generation, whose world-outlook showed a kinship to my own outlook on that account; the late President John F. Kennedy has emerged in history on the record as a typical such case.

The relevance of that reflection for our purposes here, is to be located in the mind's successfully actual creations of the heretofore absent discoveries of a true new physical principle. My own, consequent habit respecting matters of science, has lain exactly there, as in this present case now just set before us. The only expression of actual "truth," is that which has been successfully discovered, as in the case I now set before you here.

I should insist, however, on attention to what has been "unnecessarily" complicated by society's toleration of the foolishly motivated, broadly downward trends in the economics of science policy which had been underway since the assassination of President John F. Kennedy. For example: the recent failure to hasten progress in development of thermonuclear-fusion applications, a goal which had already been an available option since, now, about forty-five years ago.

Such a goal could have been set into motion no later than the mid-1980s, when I had been on the verge of succeeding in my efforts on behalf of crafting the Strategic Defense Initiative ("SDI"), as that could have been done, but for the role of the ruinous intervention by such as a combination of the Prescott Bush dynasty and the gravely misguided Soviet leader Yuri Andropov (and certain of his British and related "Western accomplices") at that time.

The history of that latter development, is to be traced from, earlier, the crushing defeat of the nuclear adventurism of Nikita Krushchov's abortive thermo-nuclear showdown. The defeat of Krushchov's moments of adventurism, then, had been largely the work of the team of U.S. President John F. Kennedy and his

brother Robert. It was the assassination of President Kennedy, which had cleared the pathway for the wholly unnecessary, virtual half-century of military adventurism and drug addiction launched under the Anglo-Dutch accomplices of President Kennedy's assassination, and also by the related would-be assassins like the mortal enemies of France's Charles de Gaulle during that same interval of time culminating in the assassinations of President John F. Kennedy, and also his brother, Robert.

The manner in which only certain U.S. Presidents from U.S. actual history, were assassinated, calls for serious attention, still, or still more today. The fact most to be emphasized, is the fact of the role of the accomplices of Anglo-Dutch finance also stationed in New England and in nearby areas around Manhattan, such as the British banking masters operating substantially on top of President Andrew Jackson and Martin Van Buren, who had continued to do much to wreck the U.S.A.'s patriotic mission, that continued to such a degree that it had prompted what the British sponsored as the launching of the U.S. Civil War. Those are facts which illustrate aspects of this matter which had been a set of either the wittingly treasonous, or simply foolish accomplices of treason-in-fact against the United States, generally.

The subjects which I had just sampled here, a few moments past, are to be recognized as the prolonged conflicts shared, unevenly, among the relatively rarer true national patriots, and a more prevalent collection of either oligarchical gangsterism or simple-minded foolishness. Such has been the setting of abominations such as that of the Roman Empire, or the Anglo-Dutch imperium today, which underlies the super-abundance of the frauds which had been, for example, perpetrated in the name of doubtful selections of Presidents of the United States, or by the cabals of the likeness of Wall Street, which have made credulous dupes of our own citizens most of the time, despite a startling few Presidents being actually both honest and competent, apart from the pack as a whole.

The cheap presumption, that bad Presidents come in blank innocence of their actually practiced bad intentions, was always pretty much myth; more often, the corruption started much earlier than its visibly manifest incumbence. It need not be so; but the exceptions to opportunism, or worse, among our Presidents, have been relatively rare, if you had actually known your own nation's history.

The Factor of the Future

What, then, of the future?

We have presently entered a time in history, when the means of warfare had long since reached a state of development, at which the thermonuclear means of war now prohibit the continued use of the currently available, effective means of general warfare. (Indeed, General Douglas MacArthur had been among the leaders of foresight on this account, as this was shown in MacArthur's role in the submission by the government of Japan: the nuclear attack on Japan had never been justified!) This fact chooses its own consequences. The consideration of those consequences leads us, in turn, to define the end of general warfare as history has known it heretofore. Unfortunately, the evil is continuing, when thermonuclear-fusion technology has something now much more important to say.

II. War Against the Asteroids?

Speaking generally, "combat" against "errant" asteroids, had not been, heretofore, the customary general policy of mankind's daily awareness, even among most top-ranking circles. Nonetheless, the proper development of the effects of management of our duties in Solar space, is now a properly leading concern for our aroused awareness; the leading question now, is "When?" This

notion of management, so applied, is to establish a system of general management within an appropriately assigned part, or apartness of the functioning of the Solar System. The present goal in sight for this part of the history of the Solar System, reaches from the outer range of the inner elements of the region of the Solar system so defined, by Mars, to those inner bounds adjoining a permitted proximity of other elements of the Solar system to the Sun. That range within such a domain, should be considered the "pasture" within whose bounds, mankind should now aim to manage for what might be considered fruitful purposes within a reasonably estimated future prospect.

Besides such "territories" within the Solar System, our future principal tasks now will be concentrated on mining and managing the elements of the asteroid "fields, and their harvests."

"What this intention presumes," is that, whereas, planets such as Mars and Earth, will be the "homesteads" of this interior region of the Solar system set aside for our defenses, the asteroids will serve as the mines and other fields of harvest. The perspective for that system, is already indicated, by the perspective of "harvesting" and related functions, by aid of the means of the methods of thermonuclear fusion, and, subsequently, more potent means. In short: mankind must learn to manage this, his present Solar homestead, and that productively.

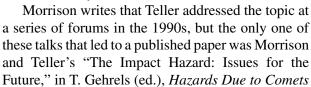
We must shape our destiny in a direction of development along such lines. This means, chiefly, that mankind must live in conditions suited specifically to our biology; and, that that, therefore, means, that we shall often create the means for our safe existence, as if by means of "remote control." If we require additional habitats, we must create them by the means suited for the work of science-driver methods and conditions.

Pending the arrival of such preconditions as I have just broadly outlined, conditions as being still yet distant, to come, what confronts us in respect to general outlooks on mankind's future, is a notion of production which reaches successfully, to technologies more or less far beyond anything actually being currently undertaken in the name of present conditions of human living and work. In the past, mankind has produced; in the future, mankind will orchestrate production of the future itself, as within the system as a whole, rather than simply producing specific products: as the very principle of application of thermonuclear fusion prescribes this for our relatively near future.

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Edward Teller on Defense From Asteroid Impact

Toward the end of his life, Nobel Prize-winning physicist Dr. Edward Teller was an advocate of experiments and international cooperation to head off the danger from Near-Earth Objects that could pose a threat to Earth. He believed that an international test project would be especially important if the options for defense included nuclear explosives, according to his co-author David Morrison of the NASA Astrobiology Center ("Defending the Earth Against Asteroids: The Case for a Global Response," Science and Global Security, 13:87-103, 2005).

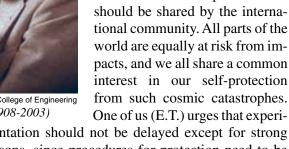


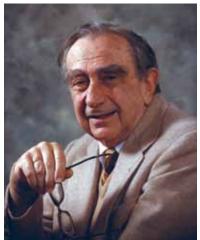
and Asteroids (Tucson: University of Arizona Press, 1994). Here are excerpts from that paper:

"We believe that it is appropriate to advocate the application of technology to eliminate terrestrial im-

> pacts [by Near-Earth Objects]. Individuals can formulate their own answers to this question, but we cannot imagine society generally retreating from the opportunity to protect itself from such natural hazards....

> "[B]oth the decisions and implementation of any programs to deal with the impact hazard should be shared by the international community. All parts of the world are equally at risk from impacts, and we all share a common interest in our self-protection from such cosmic catastrophes.





Creative Commons/UC Davis College of Engineering Edward Teller (1908-2003)

mentation should not be delayed except for strong reasons, since procedures for protection need to be decided on the basis of data on comets and asteroids, part of which can be obtained only through experimentation."

The Political Objectors

The practiced idiocy among all too many of our recent Presidencies, as since the death of a great President such as President William McKinley, through the subsequent two World Wars, and beyond the choice of the Vietnam War and its sequels, demonstrates my concern beyond any actually reasonable doubt. Witness the miserable failure of the Presidency under President George H. W. Bush, the worse obscenities of, successively, President George W. Bush, Jr., and, worst of all, this far, President Barack Obama.

It has been particularly notable, most recently, that the soaring and sauntering hyperinflation under Presidents George W. Bush and Barack Obama, have brought us all to the presently very brink of a simmering threat of a global trans-Atlantic genocide, all according to, presently, the Anglo-Dutch imperium aimed brutishly at a reduction of the human population from seven billions, to quickly one billion persons (or less), all that according to

the currently still-stated global policies of Queen Elizabeth II. Those cases exemplify such immediately current, onrushing trends into global genocide, even toward terminal human extinction wrought by thermonuclear warfare on an approximately global scope.

For us, in the United States, we are, apparently (I stress "apparently") currently experiencing a presently accelerating, plunging decline of the mere means of existence, which has now has reached a point of crisis now brought to bear immediately under the disgracefully fading reign of President Barack Obama. Should President Obama be dumped, now soon, that should be-must become-accompanied by an intended rescue of not only our United States, but much of civilization in general.

Such a fortunate occurrence should be a basis for a general recovery of our United States (in particular), and also other nations which participate in such an intention. However, the upward turn will begin as a "very tough



recovery." The damage to the mental habits of our own population has acquired since the assassinations of President John F. Kennedy and his brother Robert, must be regarded as having been catastrophic in the general effect of the resulting, continuing trends in the economies of not only the United States, but the trans-Atlantic regions generally. The damage to the generations born under two terms of President George W. Bush, Jr. and, even worse for those born under the influence of five years of President Obama, has been no less than catastrophic, morally, psychologically, and otherwise.

Looking back to the years since the deaths of John F. Kennedy and his brother Robert, the economic and cultural trends have been ones of an accelerating rate of degeneration of both the economy and its culture: an accelerating rate of decline, especially within the trans-Atlantic sector.

The optional difference of what may come now, will

be either a continuation of an accelerated rotting decadence of national cultures, or, a rather suddenly rising trend toward recovery. The most important factor in the shaping of history lies in the options of a continued decline of morality, or a rising, upward-leading culture. The difference in the trends, will be ultimately decisive, but an upward trend now, if it will be really upward-directed in cultural characteristics, shall be the decisive characteristic of mankind's available choice of a better future.

"Practical people" and their opinions must often be avoided, if possible. Their habitual inclination to folly would make everything that has been recently bad, worse. That means, for example, that the boosting thermonuclear fusion must be viewed as the leading edge of the policy-making of nations which committed now to survival and, therefore, progress. So, the suppression of the needed

levels of energy-flux density, respecting the attitude of practice of nations, will provide a highly probable present indication of whether we shall make respective nations become fruits of success or disaster.

The war against the misguided asteroids which now threaten mankind, will tend to shape mankind's future, one way or the other, on Earth, as in our adopted part of the Solar System.

III. The 'Greenhorns'

The leading obstacle to an effective insight into what most ordinary folk might wish to claim as a standard of truly objective scientific practice, actually often remains as what has been occurring, still presently, as the witless plunge of a common blind faith into the government of mere "sense perception." That has been the

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often chosen standard of evidence which has been employed on behalf of a hoped-for "proper approach" to what is customarily named as what is defended by the name of "sense certainty;" or, in other words, what is frequently misnamed as a "linearized" sort of "physical evidence," or, if more honestly, also what is to be foolishly misunderstood as to be named as the folly of "common sense."

Bernhard Riemann's profoundly ironical conclusion to his own habilitation dissertation, 4 had been delivered in the presence of Carl Friedrich Gauss and other members of the philosophical faculty in Göttingen. Then, and there, Riemann had concluded that chosen address of his, with a richly ironical single sentence: "This leads us into the domain of a different science, the domain of physical science, into which today's proceedings, here, do not permit to intrude under the conditions of the present proceedings." The same spirit of science expressed by Riemann on that occasion, was later to be met with a vigorous resonance radiating from the revolutionary advances by Max Planck and Albert Einstein, as, for example, in their deeply entrenched opposition to that massive corruption of science produced under the essentially fraudulent, but, since the close of "World War I," nonetheless a virtual dictatorship of Bertrand Russell, a Russell-steeped corruption from which trans-Atlantic academic life, in particular, has still yet to escape.

Certain conclusions must flow from that immediate aspect of what has been my view of the history of that immediately foregoing subject-matter.

The Irony of Human Sense-Perception

The fact of the matter is, that animal sense-perception, which naive persons mistake for the actually dubious role of "sense-certainty," presents us with habits which create an essentially doubtable relationship between the opinions attributable to human sense-perception, and the systems of relations among the bodies of the galaxies and Solar systems, respectively. This complexity zooms into perspective when we recognize the distinction between the principle of life and what is ostensibly non-life (or, deceased life) within the respectively attributed domains.

The plausible solution for that complexity, was, no-

tably, addressed in a significant degree by both Nicholas of Cusa's **De Docta Ignorantia**, and certain subsequent, and related considerations of Johannes Kepler, and of those modern scientists who followed the same course of ongoing processes of discovery. The already mentioned special achievements of Max Planck and Albert Einstein, and the relationship of those works to the roots presented by Bernhard Riemann's **Hypothesen**⁵ are notable.

What we might wish to identify is the needed correction for the paradoxical implications of the popular notion of a meaning of the principle of life, as mistakenly purported to be in conflict with the notion of "nonlife." This apparent conflict need only be approached for the location of a solution to the apparent contradiction; but accepting the notion that the universe itself, must have been an expression of the principle which our familiar conventions must regard as equivalent to a universal principle whose effective source is "creativity per se," as to be absolutely distinguished from the systemic folly of Euclidean geometry. Or, Shakespeare's use of his notion:

... With this regard, their currents turn awry And lose the name of action...⁶

Defining Human Creativity

The commonplace expressions of popular incompetence in the notion of human physical science, have rested on the commonplace, but incompetent presumption, that the human mind itself can not actually forecast the events to occur during the future. Nicholas of Cusa, most notably, and Johannes Kepler brilliantly, have been, therefore, the great pioneers of modern science. It is fairly said, that their mental processes expressed the generation of the foresight into mankind's access to a comprehension of an actual future, but also the creation of the future progress to a higher quality of our species' existence. All among those like them, on this account, have expressed that quality of foresight into that which had not yet been experienced, yet each belonging to a relatively tiny minority of those, from history lived this far, who have been enabled to foresee the actual future efficiently before the relevant effect had actually occurred. The greatest among physical scientists have defined themselves by their expression of that power for fore-

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^{4.} Bernhard Riemann, Über die Hypothesen, welche der Geometrie zu Grunde liegen, Bernhard Riemann's Gesammelte Mathematische Werke (Heinrich Weber, ed.) 1902.

^{5.} See footnote 4.

^{6.} Hamlet, Act III, Scene I.

casting the future which their minds' powers of forecasting will be able to bring into actual effect.

I have chosen to typify the point to be made, by reference to the discoveries of such moderns as Filippo Brunelleschi, Nicholas of Cusa, and Cusa's heir Johannes Kepler. All of that class of persons have succeeded in predefining the relevant universal principle of action in its existing future. That is a matter of fact, meaning a form of event which had been foreseen as a universalizing principle: *foreseen* prior to the occurrence of an experience of the relevant type of event. A significant portion of the human population has shared such experiences with me, for example; my forecasting experiences have become a rather widely notable fact of my contemporary practice, as, for example, publicly notable during, and since the Summertime through December of 1971, and since that time, to the present date.

The systemic conflict in method between the true genius of the followers of Plato and those "others" of the reductionist followers of Aristotle and Euclid, is typical. The reductionist methods of the followers of Aristotle and Euclid, for example, are typical of what is otherwise properly known as *The Oligarchical Principle*, as since such as the approximately more than four recent centuries under the virtually global domination of the planet under the reigns of the imperialist Anglo-Dutch system, as opposed to the systemic intentions of the original American principle of the founders of the United States.

However, those just stated facts, when considered barely in and of themselves, have nothing much to do in an effective way with simple differences on matters of mere dogma as such. The most effective approach to outlining the most essential matters to be considered, in regard to these facts, may be fairly summarized as follows.

Stating the Essentials at Issue

The difference between animals generally, and actual members of the human species, can be traced, in both the simplest and most essential terms of reference, as follows: *civilized mankind cooks its food!* In other terms of reference: the characteristic distinction of the human species, is that it creates systemically new states of matter in the universe. This distinction, when honestly understood, is typified by mankind's creation of new species in states of matter. Any rather ordinary academic handbook of chemistry implies that as such. For our purposes here, that is to be translated as the creation

of higher states of matter than had existed heretofore. It is useful to identify the distinctions as referring to newly created states of matter.

Not only does the human species secure its continued means for existence, through the generation of higher states of chemistries, especially the chemistries essential to the states of living matter, as the great Vernadsky had spoken, but it does so through the humanly voluntary creation of higher states of quality of existence of the human species, generally. Not only is mankind endowed with such qualities of creative ascension to higher states of its abilities and species-qualities of human life, but such evolutionary progress is a precondition for the truly effective perpetuation of the human species.

The particular irony of that inherent characteristic of a healthy state of the human species, is that, without a progressive increase of the energy-flux density of human life, the human species will degenerate, perhaps toward an oligarchically determined pre-extinction, such as by means of unleashing thermonuclear warfare on this planet, or simply by failure to conquer the threat of human-species extinction by malicious comets or asteroids.

The Human Intention

The most significant aspect of the powers of achievement of the human species is as a species with characteristically systemic powers of upward physical progress of our species, (rather than merely an individual discoverer), but the successfully continued existence of that species requires human individuals who create invented, qualitatively higher states of nature which would not have come into existence, without the particular genius of a significant ratio of the human species.

On this account, there has been a long-standing conflict between two categories of human species. The one creates a new, higher state of the nature of the existence of the human species; the other is, in one sense or another, a virtual (or actual) cannibal. The present Anglo-Dutch imperialist system is such a virtual "cannibal." Hence, the Queen of England, proceeding from that tradition, has recently prescribed, for this planet, a reduction of the human species, from its recent level of approximately seven billions human beings, to what has been stated by her as an intended goal of a rapid reduction of the human species to one or less.

Whence then the source of human progress, and even, ultimately, human survival?

Simply stated, the human individual's importance to his, or her continued existence, depends upon the consequence of physical economic progress in a revolutionary mode of the increase of the energy-flux-density of the modes of the growth of the human species. Thus, all essential human progress depends upon mankind's willfully wrought, effective discoveries of physical principles which lift the mentally productive powers of human labor to successively higher states of effectively "brand new" physical states of relatively higher existence.

Thus, the present demands for human progress must now include leading emphasis on the obligation of the human species, to prevent the extinction, or other very great harm to our species. We live in a creating universe, and without devotion to that outcome, we do not continue to deserve to exist, and the outcome would be so.

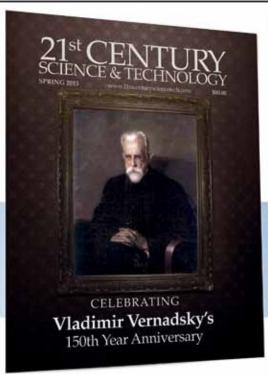
What Is Human Creativity?

All that I have said here, on my stated account in this report, depends upon the fact, that the individual member of the human species has been given the option of actually creating: the making of the discoveries of

newly known mental powers through whose means mankind is enabled to enjoy the fruits of seemingly magical powers of discovery over the universe which he inhabits. The discoveries of universal principles by great scientists, such as the Nicholas of Cusa who prefounded the existence of our United States, like his follower, Johannes Kepler, and their relevant successors as physicists and poets, are appropriate illustrators of that fact.

Fortunately, a relatively few members within our societies are actually enabled to make such original discoveries of universal physical principles operating within our universe as we have known it. To accomplish that fact, individuals of such specifically, relatively unique capabilities are required. These discoverers are distinguished by the fact of their discoveries of such relevant leaps of insight, the insights of original discovery of new principles, upon which the very survival of the human species depends.

The so-called "practical" person who insists: "You can not know the future," is, unfortunately, not only being foolish, but, as recent decades' practice has demonstrated, he is often also a fool dangerous to himself, and to his fellow-man.



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