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Today's Global Crisis:

The Truth of Bretton Woods Lies Within Physical Science

by Lyndon H. LaRouche, Jr.

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As I had forecast, at the close of July 2007, the world as a whole had entered a great financial-economic breakdown-crisis. Yet, even after sixteen months of this crisis, few among the leading figures of contemporary Europe, have shown any relevant comprehension of what are still, for today's policy-shaping, the strategically crucial features of that specific period of actual history of Europe since the seminal interval between the 1890 ouster of Germany's Chancellor Otto von Bismarck and the 1901 assassination of U.S. President William McKinley.[1] For that and related reasons, few leading economists and other prominent political figures in Europe, or elsewhere, today, retain any competent knowledge of those bitterly fought issues between U.S. President Franklin Roosevelt and the British imperialist system, since the time of President Roosevelt's first Presidential campaign of 1932. Thus, true knowledge of the meaning of "Bretton Woods" virtually died out about the time of the deaths of the Fifth Republic's President Charles de Gaulle and his relevant German collaborator, Chancellor Konrad Adenauer.

So, recently, a 2008 event organized in Modena, Italy, produced what was falsely alleged there to have been the principle employed by U.S. President Franklin D. Roosevelt in defining the principle of a Bretton Woods System, during his 1944 conference.

Contrary to the baseless views prevalent at that Modena affair, what President Roosevelt had actually proposed was, in all essential features, an anti-British-imperialist, anti-monetarist system. His proposed system excluded any defense of that British empire's predatory interest. The British

[1] The ouster of Bismarck, the assassination of President Sadi Carnot of France, the Dreyfus case, the British Royal family's launching of Japan against China, Fashoda, and the assassination of President McKinley: these events of 1890–1901 set the stage for the 1905–1914, British launching of what became known as "geopolitical" World War I, which became, in turn, the 1922 launching of fascism and the road into World War II. These dates are not particular, Cartesian events; rather, these apparent events are symptomatic expressions of *a dynamic (e.g., Leibnizian-Riemannian) form of process of unfolding phase-shifts in global warfare,* conducted by the Anglo-Dutch Liberal empire, leading from 1890 into the presently ongoing, global breakdown-crisis of the present year-end.

imperial interest was that which had been presented to that same Bretton Woods conference by President Roosevelt's adversary of that occasion, the same pro-fascist British banker John Maynard Keynes, that of Keynes' 1937 Berlin edition of his General Theory.

What was resolved at Modena was, sadly, a pilot-design for a global disaster. It was an inherently failed scheme adopted in an effort to lure influential Russian figures whose ignorance of the actual issues of 1944 Bretton Woods was being exploited by certain swindlers known to me, swindlers who were playing a catalytic role within the organizing of the Modena affair. Essentially, as a result of the clear case of their ignorance of the relevant history of the matter, the participants in the Modena conference were lured into a potentially fatal, Keynesian trap.

As a matter of currently notable historical ironies, Josef Stalin of 1944–1946 had been wiser. Now, a folly similar to that of Modena has been organized in Brazil, this time under the open direction of the international, British drug-trafficking interests deployed into Brazil.

The motive behind the earlier attempted swindle of Russian and other participants at that Modena conference, had relatively deep roots in a frankly Fabian, fascist, post-World War II plot, a morally and culturally depraved "Cold War" plot known as the Congress for Cultural Freedom (CCF). The root of that particular, 2008 swindle attempted at Modena itself, is to be traced to events of nearly forty years earlier, in August-September 1971, when I had emerged suddenly as the one who was to be recognized as the only known economist who had repeatedly forewarned economist and related circles in the U.S.A. of that probable, early breakdown of the Bretton Woods system which had just occurred in August 1971. Since that time, I have remained, worldwide, the leading economist in the defense of the actual policy proposed by President Franklin Roosevelt at the 1944 Bretton Woods conference. Opposite to that, the ill-informed scheme presented at Modena, had the makings of what could have become a great tragedy, not only for Russia itself, but the world generally.[2]

There has been a decent minority of professional economists who have had certain competencies within their limited field of work, but even those have failed, and that systemically, in the larger field of my own special competence, the physical science of long-range economic forecasting. In fact, France's Jacques Cheminade and I had been the only professional economists, internationally, to date, who have expressed an actual grasp of the essential significance of President Franklin Roosevelt's 1944 reform. The contrary view expressed by Modena 2008 was essentially a hoax foisted upon those credulous persons who had been misled by witting swindlers, misled into failing

[2] The conspirators in this hoax included two scoundrels who had fled from my own international association in response to my intention to pursue serious charges against their scheme's principal associate. The way that figure's cronies jumped ship, when I was about to press those charges, should remind us of François Rabelais's case of "the sheep of Panurge." The use of the pair of scoundrels notable for their role at Modena, is a typical echo of the dirty methods specific to such veterans of the Congress for Cultural Freedom as John Train and his Fabian friends from the ranks of the Tony Blair ministry.

to consult the readily available, only competent authorities on the subject of Bretton Woods today. I had been the authority who, uniquely, introduced the Bretton Woods policy to the Parliament of Italy during earlier years. What the two scamps produced, fraudulently, in my name, was not merely a hoax, but implicitly a deadly one for any government duped into adopting the erroneous view of the matter presented in the resolutions reached at that conference.

The essence of the model folly unleashed at Modena, is, simply, the fact, that the Modena resolution was a foredoomed catastrophe based upon mere monetarists' presumptions. Whereas, President Franklin Roosevelt's design was based on a Hamiltonian credit-system, rather than the implicitly pro-fascist, British imperialist system of mere monetarist Keynes.

Bretton Woods Today

The presently relevant aspects of the history of the actual Bretton Woods issue since a relevant August-December 1971 turning-point, have been, summarily, the following.

From August 15, 1971 on, I had challenged all of those academic economists of the U.S.A., who had previously repeatedly rejected my standing forecast of such an apocalyptic event. After that event had occurred, I had challenged them to reply to my charge, that the monetary events of August 1971 showed that they had acted as hardened "quackademics" in their foolish insistence that "the built-in stabilizers" would prevent any possible breakdown of the then present Anglo-American monetary system. Months after I had condemned those failed economists on this point, my repeated, well documented insistence on that point had driven the pained "quackademics" to the point they moved to select their champion to meet my challenge. Therefore, the putatively leading Keynesian economist Abba Lerner, had been recently brought from London to assume the status of a "super-professor" at a New York university campus, where he was chosen to defend the flawed American academic economists generally against my standing charges.[3]

Thus, near the close of 1971, shortly after I had defeated the chosen Fabian advocate of the Congress for Cultural Freedom, Professor Abba Lerner, in the then celebrated debate at New York's Queens College, I received news of a threat against me from that Congress's spokesman. The threat from that spokesman, Professor Sidney Hook, was: Your champion has defeated our champion (Lerner), but we shall cause your man to be blacklisted, forever, from every public forum, permanently, for what he has done.

Notably, the issue which resulted in Professor Lerner's exposing himself, fatally, in the matter of that debate, was Lerner's voluntary defense, on that occasion, of the policies of the Hjalmar Schacht who had been the Bank of England's special asset in bringing Adolf Hitler into power in Germany. This sympathy for Hitler's Schacht, as expressed by Lerner, was an echo of both Schacht

[3] The term "quackademics" was minted and circulated by me, then, for that occasion.

himself, and of Keynes' 1937 apology for the economic methods of Nazism, Keynes' General Theory.[4]

The "we" of Professor Hook's threat against me proved to include another notorious international figure of that same "Congress for Cultural Freedom (CCF)," "Cold War" veteran and banker John Train. Hook and Lerner are now long deceased, but, at last report, Train is not. The very Congress for Cultural Freedom itself had seemed, finally, to have passed away (formally) with the fall of the Berlin Wall, but Train's active role in this affair against me, so to speak, rolls on, deploying his gutter-scum, typified by wretches such as assets in Train Dennis King and John Foster "Chip" Berlet, and by elements drawn, liberally, from former British Prime Minister Tony Blair's circles, still today.[5]

Back more than sixty years ago, the actual target of that same faction's hatred, then, had been U.S. President Franklin Delano Roosevelt and Roosevelt's followers within associations such as the war-time Office of Strategic Services (OSS). To the best of my knowledge, the post-war leaders from OSS chief General Donovan's faction, such as one-time CIA chief Bill Casey, who had been part of OSS, have died out over the course of the 1980s and early 1990s; but, some post-war recruits to those intelligence circles from a younger generation, who had been adopted by "Donovan's boys" later on, have been active, under other auspices, still today. In spirit and tradition, those of us who were, or became later a part of this specific heritage of President Franklin Roosevelt's Presidency, look back to such Nineteenth Century "birth-right" leaders of the Society of the Cincinnati as James Fenimore Cooper. War in defense of that U.S.A., by such patriots among us, goes on, thus, still today.[6]

Sometimes, as now, defending that U.S. legacy against London's Wall Street gang, means smoking out the present heirs of those pre-1942 Anglo-American and other one-time backers of the rise of

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[4] It must be recalled, that in 1937 the leading British Liberals of that time were, as King Edward VIII had been, deeply involved in support of the Adolf Hitler project in Germany.

[5] Train assumed a visibly leading position in the covert operations against me personally shortly after President Ronald Reagan's televised presentation of the Strategic Defense Initiative (SDI). Train was, in fact, involved in every principal, covert, legal and related operation against me into 1989, and has continued that same activity up to most recent report on the matter received.

[6] This is typical of U.S. patriots recruited to such private, patriotic associations. In my own case, my earliest U.S. antecedents are dated to the U.S.A. and Quebec of the first half of the Sixteenth Century, those settlers who had defended their adopted America as patriots should, especially since their revolt against the 1763 launching of imperial oppression by the imperial British East India Company of Lord Shelburne *et al.* Adam Smith, personally a creature of Lord Shelburne, represents British imperialist dogma in economics to the present day. Opposing Smith *et al.*, the Society of the Cincinnati is a typical case of such "sons and daughters of the American Revolution" who recognized Adam Smith as an embodiment of the enemy of civilization in his time. Since that same development of 1763, the enemies from within the U.S.A. have been centered around the Wall Street gang's role as a continuation of those "American Tories" associated with the British East India Company's Judge Lowell. *Cf.* Anton Chaitkin, *Treason in America* (New York: New Benjamin Franklin House, 1985).

Adolf Hitler, such as the grandfather of U.S. President George W. Bush, Jr., the Prescott Bush who typifies those who had changed their political trade-marks, but not their inner character, when the Nazi fortunes had changed with the entry of President Franklin Roosevelt's U.S.A. into that war. The same pro-Hitler gang typified by Brown Brothers Harriman then, lives on, if under new banners, still today, as the same organization operating under what passes now for a "respectable, conservative" cover. All of my own personal adversaries of any relevant, weighty significance, are drawn from precisely those offshoots, such as President George W. Bush, Jr., of what had been the Wall-Street-linked fascist sympathizers of Mussolini and Hitler from back then.[7]

Now, a menaced humanity must win that war against those British and American-Tory interests descended from such as Judge Lowell and the traitor Aaron Burr who founded the Bank of Manhattan. If we do not, the presently ongoing lurch into a threatened, planet-wide "New Dark Age," will soon virtually eliminate each and all among the contending parties throughout this planet. To understand the two Bush U.S. Presidents and their role in this ugly present reality, one must remember who and what Prescott Bush of Brown Brothers Harriman had really been, back when Adolf Hitler was enjoying the backing of the British monarchy, of the Bank of England's Montagu Norman, and of Winston Churchill, too.

Once you abandon that popular delusion which denied the essential fact, that Adolf Hitler and his role had been that of an originally British creation, top-down, rather than a specifically German one; and, once you take into account former German Chancellor Bismarck's prophetic warning, that Prince of Wales Edward Albert's motive for causing the firing of Bismarck by the incredibly foolish Wilhelm II, had been an intended replay of the Seven Years' War, you were on the way to understanding how the Anglo-Dutch Liberal empire of Paolo Sarpi's descendants, has been playing virtually all of the nations of continental Europe, as if each dupe were fish for the catching, most of the time, most among them still dupes up through the present minute I write this report.

Thus, today's strategic reality behind the scandalous features of what might appear to some to be the relatively obscure Modena event, is as follows.

Introduction: What Is This Brutish Empire?

To those who, in science as in war, gave a full measure of their devotion.

I say again, as in relevant earlier locations, that the subject with which any political report on this matter of the Brutish Empire should begin today, is that of the strategic role played by

[7] Their names are "Legion," and include all of the principal sources of legal and major press harassment, since the early 1970s, to the present day, on both sides of the Atlantic.

the Venetian marriage-counselor of England's King Henry VIII, Francesco Zorzi,[8] a role which led to that division of Europe, between its northern and Mediterranean coastal settlements, which has continued to dominate the long wave of global developments, since 1689–1763, as in the present outbreak of an existential form of global strategic crisis.

As I have already emphasized this point in locations published earlier, the Venetian faction behind the religious warfare of 1492–1648 Europe, had split, meanwhile, into two parts, following the Council of Trent. Out of this, the followers of the Servite monk Paolo Sarpi emerged as relatively triumphant, in the guise of a predominantly Protestant current, a current based, chiefly, away from the Mediterranean maritime bases, into bases along the coasts of northern Europe. The relatively victorious party led by Sarpi, was characterized by its shift from the Aristotelean tradition maintained by the Mediterranean-based faction, to the rabid irrationalism of the medieval William of Ockham. Ockham's irrationalist faction became known, for that reason, as expressing the reductionist dogma of modern Anglo-Dutch Liberalism (i.e., empiricism, positivism).[9]

Thus, since that interval, the dominant role of the Anglo-Dutch Liberal oligarchies arrayed along Europe's Northern coastlines, has been countered, in effect, by the division of the English-speaking powers of the world between the essentially usurious, Anglo-Dutch Liberal financier oligarchy (the so-called "free trade" party) and the so-called "protectionist" spirit of the American patriotic faction. All major wars in the world since that February 1763 outcome known as the "Peace of Paris" which concluded the so-called "Seven Years' War," and included the Napoleonic wars, have been radiated reflections of the essentially existential conflict between the already emerging American System of 1620–1763 and the Anglo-Dutch Liberalism of the period since the 1688–89 role of William of Orange.[10]

That crucial feature of all modern world history since the turbulent transition, from Stuart to Orange, of 1688–89 England, was echoed, for today's reference, in a celebrated remark by (then) former German Chancellor Otto von Bismarck, who emphasized that the motive behind what was to become known widely as "World War I," was the British monarchy's intention to ruin continental Europe through a new "Seven Years' War." The British imperialist faction of that time was already referring to that 1763 tradition which would come to be identified, later, following President Abraham Lincoln's defeat of Lord Palmerston's effort to break up the U.S. Union, as "geopolitics."[11]

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[8] Pronounced, and spelled, in England, as "Giorgi."

[9] I.e., "de-constructionist."

[10] *Cf.* H. Graham Lowry, ***How the Nation Was Won: America's Untold Story*** (Washington, D.C. Executive Intelligence Review, 1988). For a brief period, during the reign of England's Queen Anne, Gottfried Leibniz played a leading role in turning the history of Europe in a better direction.

That crucial, February 1763 Peace of Paris, has two principal implications for reading the implications of the presently onrushing, global breakdown-crisis of the present world monetarist system.

The first implication, which would tend to be understood more easily, is that Britain's strategic policy since the Dutch role in orchestrating the self-inflicted ruin of French "Sun King" Louis XIV, had been to ruin all durable challenges to the intentions of Paolo Sarpi's Anglo-Dutch imperialist followers, through orchestrating new applications of the strategy of the Seven Years' War. That ruin had been done to prevent any effective challenge to Anglo-Dutch imperialism from within the continent of Europe. The way in which the London of Jeremy Bentham's British Foreign Office played the unsuspecting, virtual puppet-emperor Napoleon I at that time, is an illustration of the point, as is also the case of the rise and fall of the British policeman who came to be called Napoleon III. World Wars I and II, later, were organized by the British Foreign Office in the same mode.

The second implication, rarely understood by outsiders, even among insiders who have been high--ranking in governments, or in academic political science, is the following.

The essence of the British empire, while apparently territorial in its included effect, is not really the empire of a nation-state (e.g., the United Kingdom), but is, actually, primarily, a continuation of that financier-imperial, monetary system of the Venice which emerged as an independent imperial power through hegemony over the financial affairs of Europe (and beyond) since about 1000 A.D. Empires have come and passed, but, until now, like the legendary Phoenix, new empires have arisen, not autochthonously, but from the very ashes of the fallen predecessor. So, for example, today, the Anglo-Dutch Liberal swindle known as the combined dynamic of "globalization" and the fascist "environmentalism" of both Britain's Duke of Edinburgh and Philip's late accomplice and Nazi-SS veteran Prince Bernhard of the Netherlands, is essentially a cloak for the actual imperial, monetarist system of international finance, so-called "free trade," which is the heritage of the Ockhamite Liberalism established by the faction of Paolo Sarpi.

Leibniz & the American System

In the longer skein of American history, the essential difference in philosophy and government, between the founding American patriots and their immediate British adversaries, has been the American patriots' adherence to the legacy of Gottfried Leibniz, whereas the British and their co-thinkers in North America and Brazil are, systemically, followers of the pro-slavery John Locke. This philosophical difference was the crucial issue of

[11] The most notable issue behind British "geopolitics," was the threat to British imperial maritime supremacy from the development of the transcontinental railway system in the U.S.A., and its echo in the similar developments within continental Eurasia.

law between U.S. patriots and the racist scoundrels of the Confederacy. The latter insisted on basing their constitution of the Confederacy on the perverted John Locke, whereas the 1776 U.S. Declaration of Independence based itself on the specifically anti-Locke "pursuit of happiness," as this concept had been taken from Leibniz's ***New Essay***'s rebuttal of Locke. Leibniz's attack on Locke, as it was quoted to crucial effect in the U.S. Declaration of Independence, was the central point of reference for the members of the circle of Benjamin Franklin who crafted the ***U.S. Declaration of Independence***. The same Leibnizian principle is the cornerstone of ***The Constitution of the United States***, as presented in the Constitution's statement of intention of constitutional principle, its Preamble.

The difficulty which many present-day, post-1968 European political figures suffer in their customarily failed, recent-times' efforts to explain away the U.S. constitutional system, is that the European systems, to the extent they are still presently corrupted by the influence of British ideology itself, or as the relics of the Habsburg legacy, are premised on an axiomatically imperialist conception of society and of the nature of the human individual soul. *The essence of this pro--oligarchical element of corruption in European culture, is expressed most clearly in the European habit of preference for what are, in fact, imperialist monetary systems, rather than a credit-system, such as the principle of a credit-system which inheres as a principle of government and natural law in the design of the U.S. Declaration of Independence and Federal Constitution.*

The defective element met in European traditions of today, relative to the implications of the origins and crafting of the U.S. Federal constitutional system, is expressed most concisely in *the idea of monetary systems*. In ancient through modern history at large, this element is not a specifically European, but, rather, a Eurasian tendency, rooted in such examples as the monetarist roots of the decline and fall of Sumer and other west Asian systems, and in that specific fusion of such Asian and emerging European imperialist systems following the decline of Greece in the Peloponnesian War. For precisely such reasons, Plato's principal target for eradication in his plan for the redemption of Athens from the Sophists' folly underlying the Peloponnesian War, was the cult of Delphi, a crucial center of monetarist and related forms of depraved, implicitly Satanic practices.[12] It should be the target for any fully witting promoter of civilized forms of life on this planet for today.

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[12] The site of Delphi includes adjoining small "temples" of usury, each representing the monetary interest of a corresponding Greek city. The road down from the site reaches to a port, and into the Mediterranean markets for the practice of usury and kindred abominations. European cultures were rooted in maritime traditions and modalities. Modern European imperialism since the time of Plato, has been a blending of models of Asian imperialisms with European maritime authorities, forming thus into a single imperialist form of "oligarchical model," from the ancient Roman Empire, Byzantium, the Venetian-Norman systems, and British imperialism today. Hence, the characteristic of British imperialism, and British imperialism's organization of what became known as Prince Edward Albert's design for "World War I," as British imperialism's reaction against the victory of President Lincoln over Lord Palmerston's Confederacy puppets.

Here lies the essential, principled issue of President Franklin Roosevelt's systemic opposition to that intrinsically imperialist system of monetarism defended, and promoted by John Maynard Keynes.

1. The Myth Called Money

In beginning this present chapter of the report, I present a set of illustrations for the purpose of identifying some of the terrain I shall examine in a more rigorous way, either later in this same chapter, or later in this report.

Begin the following points of illustration with samplings from the experience of studies of some features of the presently defunct Soviet economy.

The common intellectual root of recurring ruin of the recent century's trans-Atlantic and Russian economies, has been the influence of the characteristically Sarpian dogma of Adam Smith, an influence from which both western Liberal economies and the Marxian practice of the former Soviet economy have suffered *liberally, and systemically*.[13]

As the effects of presently spiraling, global hyperinflation, or deep economic depression-collapse, should be sufficient to illustrate that point: in reality, *there is no intrinsic value in money as such, other than the usefulness of money as a medium of circulation of those goods and services which do in fact represent the expression of real wealth*. The practical social value of a system of uttering and circulating money, lies in that function, not in the relative money-valuation attributed to the objects which are circulated by aid of a money-system. There is no coincidence between economic value and price, except for pathological ones. Moreover, money-systems usually do circulate many kinds of objects and forms of services which, in fact, contribute no net wealth to society, but, often, as in monopolistic abuse, "recreational" drug-trafficking, prostitution, or forms of gambling such as trafficking in so-called "financial derivatives," represent a purely destructive value for which money has been paid, often at a fool's fantastically exorbitant high price.[14]

A money-system is useful only to the degree that it is very, very modest in putting forward ontological claims. Money must not be considered as defining value; rather, sound notions of relative value must be crafted and adopted by society as valuations to be superimposed upon objects which might be bought and sold. "Free trade" is worse than being simply lunacy, and usury is, systemically, a crime against humanity. To restate the point: economic value must be defined according to relevant physical principles of dynamics, that within systems treated

[13] Once you accept the notion that Adam Smith defines economy, everything else you believe, however correct, or simply innocent in itself, is corrupted by the rot which inheres in the disease of Smith himself.

[14] Such financial instruments should be simply outlawed, and thus cancelled in their entirety as they were to be considered as inherently fraudulent transactions.

as integral wholes. In other words, the only competent basis for a study of relative economic values is Riemannian dynamics.[15]

In any case, economic value for society does not repose in objects as such, but, in even the best of cases, in the effect of their consumption. (Naturally, to be consumable, they must, first, be produced.) What must be measured is the gains in productivity of the society as a whole over time, *gains obtained through consumption of that output, as by the successful application of scientific progress*, that for the cases that the effect of consumption more than offsets the attrition associated with the entropy inherent in continued reliance on any fixed level of scientific technology.

For example: a true wealth effect may be expressed in terms of Academician V.I. Vernadsky's notions of Biosphere and Noösphere: as increase of the Biosphere relative to the abiotic domain, and as increase of the Noösphere relative to the Biosphere, all on the condition that the Biosphere is increased, relative to the abiotic domain, as an expression of the increase of the Noösphere relative to the Biosphere.

Thus, for example, Soviet science tended to prosper, relatively, in its accomplishments in the military field, while Russia was often, at the same time, relatively, a catastrophe in the domain of economic policy otherwise. This irony of the Soviet case was, essentially, that Soviet military and related science was driven by concern for relevant, science-driven technological strategic advantage; whereas, the Soviet economy otherwise tended, culturally, toward technological stagnation or kindred expressions of that incompetence which is inherent in the doctrine adopted by the dupes of Lord Shelburne's toady, Adam Smith, such as Karl Marx. In the domain of economy, the Liberal ideology copied into the writings of Adam Smith, had, wittingly, or not, banned actual science from the practice of economy.[16] No fanatic is more dangerous to humanity than one, like a believer in Adam Smith, who believes fervently in such as paying tribute to such a nothing as the god of money.

In that case, advances in science (i.e., the Noösphere) are gains for society if this apparent gain is accompanied, and thus supported, by relative gains in the Biosphere.

The explanation for that Soviet military exception itself, should be considered to be elementary, in the best sense of the use of the term "elementary." It is the transformation of physical economic output, upwards, through the successful application of discovered principles of physical science (or, their likeness) which is the sole source of net gain (excepting looting, of course) in a physical economy,

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[15] I am not suggesting that Riemannian dynamics has been used for this purpose in society so far. I am stating that actual valuations should be a fair approximation of values which could be defined better by aid of Riemannian dynamics.

[16] Adam Smith, ***The Theory of Moral Sentiments***, 1759; ***The Wealth of Nations***, 1776.

So, it must be emphasized, that effective forms of active modern military strategic requirements are rooted, since Niccolò Machiavelli, in the dynamics of Nicholas of Cusa and Leonardo da Vinci, and are science-driven.[17]

In contrast to that, modern economic practice infected with the disease of Adam Smith's hoax tends, axiomatically, toward "zero technological growth," stagnation, and, as in the U.S.A. and western and central Europe today, the verge of an economic break-down-crisis in the international economy. The science-driver influence associated with World War II continued, although wavering, on both sides, until the 1962 "missiles crisis." The 1963 advent of the first government of Britain's Prime Minister Harold Wilson, signaled the onset of what would become, over decades, a massive, degenerative wrecking of the productive sector of the economy of the United Kingdom. The launching of the U.S. official war in Vietnam, signaled the unleashing of the destruction of the U.S. economy, a trend which had fallen to below a net-zero, physical balance during U.S. fiscal year 1967–68,[18] and fell at an accelerating rate from that time to the present verge of a general breakdown of almost everything, under the present last gasp of the administration of President George W. Bush, Jr., the grandson of the man who had financed Hitler's career at an historically crucial moment.[19]

This fact will be resisted, as it already has been, by those who insist that price is a measure of value, or who count short-term gains as progress, even when the loss from physical-economic

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[17] E.g., ***The First Ten Books of Livy***; ***The Art of War***. Although the concept of dynamics was introduced into modern Europe, by name, by Gottfried Leibniz, it was already, as emphasized by Albert Einstein, the implicit method of Johannes Kepler's ***The Harmonies of the World***. That is, a method which Kepler rightly attributed, in fact, to Nicholas of Cusa (e.g, ***De Docta Ignorantia***) and to the method adopted, from Cusa, by Leonardo da Vinci. *Dynamics*, by that name, was introduced to modern Europe by Leibniz in his ***Dynamica*** (1691), his exposure of the hoaxes of Descartes (1692) and his ***Specimen Dynamicum*** (1695). This subject is treated in publications of the LaRouche Youth Movement, as in an important, recent 50-minute video recording of an interview with Sky Shields (see note, infra). Dynamics is a revival of the ancient principle of *dynamis* of the Pythagoreans and Plato. Modern dynamics, as so defined by Einstein, is intrinsically Keplerian in its core-principle.

[18] It is most notable at this point, that it was never accidental that I emerged, repeatedly, as, in point of fact, the most successful long-range economic forecaster over the 1957–2008 interval to date. My forecasts were not based on statistical trends, but trends in relevant aspects of economic policy, especially physical-economic policy. I explain this and its significance below.

[19] It must be emphasized that Prescott Bush, the grandfather of President George W. Bush, Jr., was the official of Brown Brothers Harriman who conducted the rescue of Hitler's Nazi Party at a crucial moment. Brown Brothers Harriman was the private firm associated with the head of the Bank of England, the same Montagu Norman who was the Hitler supporter who had deployed Hjalmar Schacht to launch the economic-financial program required to prepare Hitler's regime for the intended military destruction of Russia. The right-wing financial support for the regime of President George W. Bush, Jr., has been from the present generation of the same Anglo-American social-financial set which had previously supplied Anglo-American backing for Adolf Hitler. Russian leaders, or other continental European leaders, today, who overlook that fact, need their political rear ends kicked.

decadence and depletion far exceeds the nominal short-term gains perceived through the folly of mere financial-accounting practices. On this and related accounts, most financial and related forecasting has been not only misleading, but essentially fraudulent as a matter of principle, and that fraudulence has become increasingly willful, especially since the aftermath of the wrecking of the U.S. economy under the post-1976 influence of the David Rockefeller-backed Trilateral Commission.

U.S. President Richard Nixon's *in flagrante* adoption of Adam Smith, converged upon, and was augmented by the neo-malthusian, anti-science ideology often found among the 68er terrorists' ranks, as this decadence was expressed in efforts of that modern Dionysian cult's obsession, in the name "of nature," or the name of "the environment," not only to block, but stamp out, even reverse economic progress in physical science's investments in the increase of the productive powers of labor.[20]

Kepler as an Economist

That which I have just summarized, so, is a reasonable explanation; but, it is only a useful explanation. The essential truth of the matter is already located in those relevant Egyptian and Classical Greek antecedents of modern science associated with the names of *Sphaerics* and *dynamis,* as these topics appear in the works of the Pythagoreans and Plato. Those ancient sources' wisdom reappeared in modern science with, principally, the founding of modern science by Cardinal Nicholas of Cusa, as in his seminal ***De Docta Ignorantia***. As Albert Einstein emphasized this fact, all *competent* modern, applied physical science is premised upon the unique accomplishment of Cusa's intellectual heir, Johannes Kepler, in defining the harmonic composition of the Solar system.[21] The corollary is, that a science which rejects, or simply ignores that principle, the principle typified by the work of Kepler, Riemann, and Einstein, is, in that degree, not competent.

Examine these crucially important points more closely. Consider the matters pertaining to the subjects of *Kepler, Sarpi,* and *The Protestant Ethic*.

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[20] If "fair is fair," then it were "fair" to pay such modern dionysiacs in kind; since they take pride in producing less than nothing, they deserve a fair share in that less than nothing which their enterprise produces.

[21] Since I began this composition, on November 24th, I have received the already referenced, video presentation by Sky Shields, in which he presents extremely important, added elements which I had not heard reported by him earlier. Some among his reported points on his investigations are highly original, valid, and of exceptional importance. Insofar as those elements of his presentation bear on my subject here, I shall make some reference to their content here. His report, which should be studied on its own account, implies some extremely important points bearing on my previously outstanding emphasis on the relationship of the work of Max Planck and Albert Einstein bearing on any reading of the deeper implications for all physical science of Kepler's referenced discovery. The reader who has heard Sky's report will recognize my comments on those topics here, below (see www.larouchepac.com).

As I have stressed in other locations, competent modern Europeans science was launched through the leading influence of two outstanding, seminal figures arising from the wreckage of a preceding Fourteenth Century, European "new dark age": Filippo Brunelleschi (1377–1446), and, more significantly, Nicholas of Cusa (1401–1464).

Brunelleschi's manifold, true significance was expressed most precisely in the case of his use of the principle of the catenary as the unique physical principle, without which the construction of the cupola of Santa Maria del Fiore would not have been possible at that time. This notion of the catenary, which was not adequately grasped until the work of Gottfried Leibniz in defining the principle of universal least action, had already appeared, nonetheless, as an important principle of physics, after Brunelleschi, in some work of Leonardo da Vinci. Since the fraud by Galileo on this subject, later, has been made clear, one can be confident that Leibniz's discovery of the concept of a universal physical principle of least action, in this matter, also demonstrates the quality of the mind of Brunelleschi shown by use of the catenary for the construction of the cupola.

Otherwise, Nicholas of Cusa, with his avowed followers such as Leonardo da Vinci and Johannes Kepler, is outstanding as the greatest genius of his century, not only for what he accomplished then, but in respect to the consequences of his work for centuries to come thereafter, to the present day.

I emphasize these just stated considerations here, because they go to the heart of the issues to be exposed as the prevalent, politically motivated, empiricist and kindred, deconstructionist frauds which have been deployed in the name of physical science today. I mean, most emphatically, the fraud of liberalism introduced, by Paolo Sarpi, as what became the universal hallmark of British (i.e., Anglo-Dutch Liberal) imperialism, globally, still today. It is these frauds which must be examined, if one is to locate the source for the incompetence, of British influence on the U.S.A. and continental Europe, which, chiefly, has led the world as a whole to the verge of a presently onrushing general breakdown-crisis of the entire world's economy now.

To come directly to the crucial point at hand: the brand of so-called "science" associated with worship of Isaac Newton, is not to be treated as science, but, rather, as a very nasty sort of pagan religion, called "Liberalism." It is only after we have considered Liberalism as a lunatic variety of pro-Satanic religious belief, that we can understand the way that widespread type of madness affects economy. Karl Marx, for example, became an avowed Liberal, a faithful, if perhaps unsuspecting follower of Paolo Sarpi, but, nonetheless, an

avowed believer in the witchcraft cult of Adam Smith, and an unwitting, but nonetheless dutiful servant of Lord Palmerston's Young Europe and Young America swindles.[22]

Economics & Science

Without emphasis on relevant issues of physical science, there is no competent treatment of the subject of economics.

Please do not make the terrible error of assuming that the immediately preceding remarks are to be assessed as a deprecating criticism of that Creator presented in Chapter 1 of *Genesis*. Like the Albert Einstein who praised Kepler's genius and that of Bernhard Riemann on precisely this account, I am absolutely certain of the Creator's efficient existence, as every competent scientist is—which is to say that "I am not a Liberal." The point is, that since the Liberals absolutely do not believe in, or worship the actual Creator, nor do the so-called "fundamentalists," either, why are either of them wasting their time sitting in churches? (What awful thing, what earthly tyrant are they attempting to please?) Neither actual universal principles, nor an actual notion of a lawful process of Creation, exist for either of them. Kepler and Albert Einstein, for example, did understand. In saying these things, I am stretching nothing, nor am I wandering from the principal, stated subject matter, economics, of this report. The foundations of competent economic studies exist essentially in the physical-scientific implications of man to man in the relationship of society to the physical universe as defined, in fact, by Academician V.I. Vernadsky.

There are two leading points involved in reporting what I have referenced here as the character of Liberalism. First, those who deny Johannes Kepler's unique originality in discovering the principle of universal gravitation, are implicitly denying the existence of a Creator as being a Creator, as all followers of the myth of Isaac Newton's fraudulently claimed discovery of gravitation have done with their utterly fraudulent claim that Newton had "independently" discovered gravitation. This issue of theology, stated as I have introduced it here, is, therefore, on this account, the key to all competent insight into a science of economy.

If one listens carefully to the arguments made, on this subject of Newton's alleged discovery, by typical science-department academics over the past century, the critically significant expression in their apology for Newton, the positivists, and the existentialists, as, still today, has been "We have been taught to believe," an assertion made with the accompanying

[22] Britain's Engels was always an anti-American influence on Marx, as in the matter of Friedrich List, and, later, also Henry C. Carey. It was natural that Engels would appear in the 1890s as an agent of the Fabian Society, as in the case of the recruitment of Alexander Helphand (Parvus) to life-long service on behalf of the British Foreign Office. Helphand's role as a Balkans-based British arms dealer, and the orchestration of a time-sensitive, war-time trip to Finland by V.I. Lenin, did not work out fully as the British Foreign Office had intended.

suggestion that the laying on of Laputan academic hands in blind worship of current taught opinion, proves that it is not the Creator of the universe, but silly fraud Isaac Newton, who embodies a final authority on the subject of the way in which our universe is organized.

Essentially, the discovery of the general principle of Solar gravitation was made, uniquely, by Johannes Kepler, as this discovery was presented in rigorous detail in his work whose title is properly translated into English as "The Harmonies of the World." The evidence on this point is conclusive and widely available to those who actually seek truth, rather than contemporary, prevalent, academic voodoo practices.

Kepler, a student of the work of the founder of modern scientific thought, Cardinal Nicholas of Cusa, and also of the brilliant follower of Cusa, Leonardo da Vinci, had begun his attack on the subject of the organization of the Solar system from the standpoint of the concept of *dynamics* as dynamics is presented by the ancient Pythagoreans and Plato.

At the start, Kepler had therefore adopted the view that the ordering of the bodies within the Solar system must be a rational expression of a dynamic (e.g., Pythagorean, Platonic) universe, and, therefore, must have some root-connection to the ordering principle underlying the appearance of an array of the Platonic solids. Foolish commentators propose that Kepler had later abandoned that view. Rather, being an honest and very hard-working fellow, Kepler shifted his line of investigation to other aspects of the matter, for a time, but was then compelled to return to an approximation of something functionally reflecting the Platonic solids' series. It is on the basis of that principle of harmonics that Kepler derived the exact formulation, which was rudely plagiarized, without even an attempt at supporting evidence, by the circles of Isaac Newton.

At that point, the usual gossip had abandoned all serious attention to the detail of Kepler's actual discovery of the principle of gravitation, as if Albert Einstein had not traced out the empirical evidence developed by Kepler, evidence which depended upon the ironical juxtaposition of the human senses of sight and hearing. Neither sense, as a sense, could represent the experimental result of the evidence. Human sense- perceptions are merely scientific instruments, as a thermometer is a scientific instrument, which senses usually come with the package delivered with the infant at birth. Gravitation, for example, as a principle, actually exists, as Kepler demonstrated experimentally; it lies outside sense-perception as such. An instrument "counts," so to speak; what is it that is being counted?

The importance, for economy today, of this aspect of Kepler's contribution to the founding of modern science, is that Kepler came to relegate the powers of sense-perception to the status of instrumentation (e.g., harmonics), rather than an expression of the silliness of naive ontological sense-certainty. Thus, on this account, the evidence of both these senses, when correlated, reflected the physical science of the Pythagoreans and Plato, and expressed the

same approach stated later in the opening two paragraphs of Bernhard Riemann's 1854 habilitation dissertation.

To appreciate that aspect of Kepler's work, it is essential to take into account the deeper implications of his concept of the infinitesimal as already determined, for Kepler's work, by the evidence of "equal areas," "equal times." This evidence had shown that the adducible infinitesimal of the orbital action was not, as the foolish Leonhard Euler was to presume later, a metrical, mathematical smallness, but an ontological matter *per se*, as Albert Einstein emphasized this later: something acting efficiently as if from above, and containing the motion which it expresses, always and everywhere. The principle of action is not located within the apparent evidence, but, as Einstein argued, is to be identified as the "hand" which controls the action everywhere, apparently as if "infinitesimally."

This consideration, already evident experimentally in the study of the planetary orbit itself, is to be applied to deriving a harmonic formulation for the organization of the relationship within the Solar system.[23] More significant than the fact of the harmonic determination of the function of Solar system gravitation, is the fact that the principle of action thus manifest empirically, as Kepler had shown, lies as if outside any hypothetically imaginable boundary of the system as a whole. This was stated by Einstein as defining the universe as both Keplerian and Riemannian, and as representing a universe which is self-bounded.

Since, for Einstein, the finiteness of the universe is that of an anti-entropic, expanding universe of experimental effects, we must describe the universe as either self-bounded, or *as self-bounded and also not externally bounded*. This pointed Einstein and other competent scientific thinkers, from outside the Babylonian cults of academia, to a universe as conceived as a matter of Keplerian harmonics, that in a sense of harmonics coherent with the work of Max Planck and Einstein, rather than the habits of Planck's adversaries from among the followers of Ernst Mach and later reductionist (e.g., "de-constructionist") advocates of "quantum mechanics."

These considerations, just summarized so, bring us back to a fresh view of the implications of both the influence of Paolo Sarpi, and the way in which a true science of economy, on which I rely, must situate mankind within a Keplerian universe, a universe which is to be viewed in the large from the standpoint of Kepler, Planck, and as the living universe of Russia's Academician V.I. Vernadsky. This is the framework within which any truly competent economist must situate his thinking if he, or she is to be better than very, very modestly useful in the affairs of mankind today. These considerations must be considered so before discussing the meaning of "money" under the global crisis-conditions of today.

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[23] Put aside the silly Laplace's (and Cauchy's) feverish passions for attempting to get three bodies into the same astronomical bed.

These matters identified in this chapter will now be addressed in a relevantly more fulsome way in the course of the chapters to follow.

2. It Is Called 'Dynamics'

Now, we come to subject-matter which many readers will regard as the "most difficult part" of what I have to report on this present occasion. Despite the apparent difficulties, the matters so presented can not be avoided, if the most crucial issues of our time of crisis are to be competently understood and solved.

At its birth, what could have been called "science" in retrospect today, were better identified as *astrogation*, rather than astronomy. The evidence from an assortment of surviving ancient calendars, including one ancient one attributed to the North magnetic pole, has shown, that this knowledge of cycles of universal change could have been accumulated only through many tens of thousands of years of a fairly regular practice of a form of trans-oceanic navigation, as practiced, more or less regularly, by the maritime cultures which produced the evidence on which those calendars were based. After all that might be considered, the time required for a relevant flotilla of ships comparable to the Viking craft, or those of Ulysses' ***Odyssey***, or larger, to sail from approximately the coast of present-day Portugal to the Caribbean, about six or seven thousand years ago, would have been about the same required by Christopher Columbus' first act of discovery. A habit of such odysseys, over tens of thousands of years, would have been required to develop the presently validatable, relevant evidence of the ancient mariners' experience.

This compels us to prepare our history of the development of society, by looking back deeply to the indicated onset of that last great glaciation in the northern hemisphere when, for much of that time, the oceans were about four hundred feet lower than presently, and, thus, to trace the development of civilization in the area of what had been a great frozen heap of ice, as steered by migration of ocean-going maritime cultures into the area of the land-mass emerging from under the melting ice of the glaciation, as into the Mediterranean.

No civilized geometry could have been derived from the well-known, "flat Earth" presumptions of the *a-priorist* Euclid, but only from a pre-Aristotelean, maritime culture governed by a practical notion of *Sphaerics* such as that adopted by the Pythagoreans. Thus, in the physical science which emerged from the work of Nicholas of Cusa, Leonardo da Vinci, and Johannes Kepler—as Bernhard Riemann, later, there are no *a-priori* presumptions allowed. Nor, as Riemann warned in that concluding sentence of his 1854 habilitation

dissertation, can any *a-priori* mathematics can be treated as the foundation of a physical science.[24]

The concept of dynamics, when seen in terms of both cycles in ancient astrogation, and of Leibniz's work in modern science, illustrates the absurdity of reductionist schemes such as that of Rene Descartes. On this account, the proofs of this fact already supplied by Gottfried Leibniz during the 1690s, remain conclusive for all occasions to the present moment.

The essential point thus implied by experience with the work of Gottfried Leibniz, and onward, is, that, in the actual practice of physical science, with certain crucially important qualifications, the future has always pre-determined the present, that in a certain way; but, also, that the human will, when acting, presently, under certain conditions and in a certain way, can predetermine the selection of that principle which would change the efficient expression of a future from what it would have been otherwise. Such, exactly, is implicit in the strict definition of any experimentally validatable universal physical principle, such as Kepler's uniquely original scientific discovery of universal gravitation.

One of the simplest expressions of this functional notion of the future is the role of those aspects of basic economic infrastructure which pre-shape the effective expression of productive effort as relative productivity, as distinct from current direct action on the production-process. Another expression, is the effect of employing a newly discovered universal physical principle. Another expression is those changes in practiced education policy which represent an increase of the potential for discoveries of principle within a population so educated.

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[24] It is relevant to the function of this present report, to emphasize, that my devotion to a physical, rather than a merely mathematical geometry, was clearly established in the memories of some among my relevant classmates in both public schooling and university textbooks and classrooms from the first hour of my adolescent, introductory class in plane geometry. Challenged, routinely, by the teacher, to report to her and to the class what I thought to be important about the subject of geometry, I responded without the slightest apprehension of any cause for dispute in my statement: "To make supporting structures stronger" through what could be seen as apparent holes in the supporting structures. What I reported thus, was the fruit of visits to the nearby Charlestown Navy Yard, where construction in progress had clearly conveyed that conclusion to me. My subsequent, decades-long quarrel with taught secondary and university mathematics, first discovered its proper nesting-place in early 1953, in my solid commitment to the outlook and method of Bernhard Riemann's 1854 habilitation dissertation. The true origin of my adolescent views on mathematics was the coincidence of a Navy Yard visit's experience with significant sampling from English translations of the work of Gottfried Leibniz, in my opposition to Descartes at that time. From that point in time on, my standpoint in this and related matters was never formal, but, rather, ontological. During my adolescence and later, I was repeatedly astonished that so many among my classmates could have accepted the classroom sophistries of *"self-evident"* mathematics as science. Hence, my related social discomforts in those schools, were balanced against the greater intellectual rewards of possessing the authority of original discovery of a repeatedly demonstrable proof of principle. For me, the essence of science is standing up for truth, whether the truth were liked by my putative peers, or not.

This definition does not mean that everything in the universe is simply predetermined in that way; rather, it means that mankind may be able to change the effect on the present, of the future state of the universe, as by aid of discovery of universal principles, in the here and now: thus effecting a seemingly miraculous change from that future state which would have been pre-determined, had man not, previously, willfully intervened, once more, in a certain new way, as by introduction of a newly discovered universal physical principle to human practice. This, however, is subject to the condition that individual persons discover the principles which permit this kind of change *in the future* to occur as a voluntary change in principle in the present.[25]

Compare this view with ***Genesis*** 1. The Creator and mankind share existence in the present's ultimate future. This existence must be realized as a willfully efficient connection. We are the presently acting image of an efficient form of ultimately immortal existence in that future which is termed "the simultaneity of eternity." So, we should be judged, we are. On this point, we must not permit blind faith in mere sense-certainty to cause us to deceive ourselves.

The Malthusian Cults

The relevant, great problem for most of mankind, thus far in known history, is that, as the point is illustrated by dramatist Aeschylus' ***Prometheus Bound***, most cultures presently known to us from what are termed ancient, medieval, and modern histories, have had many characteristics of oligarchical systems, in which scientific and related progress is intentionally suppressed, as ***Prometheus Bound*** illustrates the case. Most of these cultures, such as the empires of Southwest Asia, and the Roman and Norman empires, and modern religious cults, have employed prohibitions, such as that of the drama's Olympian Zeus, and created mystery cults and religions, to prevent humanity from gaining access to usable knowledge of universal physical principles.

These prohibitions and related practices to the same intended effect, as in schools and universities in the U.S.A. and Europe today, are intended to suppress those kinds of scientific and related knowledge which would tend to promote what the ruling oligarchies consider undesirable increases of populations, or to lead to cessation of the reign of oligarchies over subject populations. The bans on knowledge are not imposed because such knowledge would not be understandable by the population, but, on the contrary, because, the ruling oligarchs fear that it were much too easily mastered by the population unless the population were prevented from making the discoveries of which it were capable, but for "mass-brainwashing," or other measures to the same general effect by our contemporary, pro-

[25] Note the relevant approach in this direction by Sky Shields, as in the referenced video recording.

genocide dupes of the malthusians Prince Philip of the pro-genocidal World Wildlife Fund, and Philip's dupe and former U.S. Senator Al Gore.

The actual motive for Malthusian and related sorts of cultish practices of induced stupidity among masses of people, such as the cult of "global warming" today, has always been, in known history of mankind, the fear among a ruling oligarchy, that increase of efficient knowledge of universal physical, or related kinds of principles, among the general population, would be a threat to the continued power to rule by the oligarchy. Since technological and social progress of the population is driven by the need of a growing population to increase its level of potential population-density, the increase of such knowledge among the population has always been the cause of great fear, and related rage, among such specimens of the usual oligarchical class as the Duke of Edinburgh, the leader of the World Wildlife Fund, who intends to stupefy the world's population to such a degree that the present world population of about six and a half billions persons, could be rapidly reduced to about two, or even less. Thus, both, speaking frankly, Hitler-like "population reduction" and "zero- technological-growth" cults, such as those of "environmentalism" and "globalization" of Prince Philip and others today, which have become endemically characteristic features of the known oligarchical models of society.

That, for example, is the underlying, oligarchical motive for the lying assertion of Isaac Newton's discovery of gravitation which has been circulated by the virtual Babylonian priesthood governing the leading universities and other institutions still today. It is the model for what the Nazi regime did to Jews within its reach, and also intended to accomplish against other populations, such as Slavs in general.

The oligarchical model, thus, defends itself with what are essentially the twin forces of awful fear and superstitions. That model represents a corruption of mind and morality which often takes the form of Dionysian terrorism, as in the case of the frankly fascist, Dionysiac outbursts of the so-called "Sixty-Eighters." The principal target of those oligarchical chains of fears and superstitions, is the crippling of the cognitive powers of the individual human mind among most members of the populations as a whole.

Thus, as I shall stress, it is with awareness of that implication of oligarchical models, that, in this chapter, my subject is the underlying implication of *dynamic potential* for the population's increasing knowledge of universal principles of practice. At this point in this report, some useful, if preliminary insight, can be provided to the reader, along the following lines.

Economic Forecasting as Such

What I have just identified in these preceding paragraphs, is that this is the principle of *dynamics* which underlines competent approaches to economic forecasting of potential future states of the universe. It has been for precisely this reason, that I have been, repeatedly, a successful long-range economic forecaster where all of my putative rivals have failed, repeatedly. I repeat, therefore: it is the notion of that quality of action on the future, to change it, through which we must foresee a *predetermination* of a future change, rather than the presumption of those incompetent economic forecasters (for example) who indulge in what passes for what is, in practice, the virtually inevitably failed, past-oriented statistical practice, of so-called "statistical forecasting:" I mean forecasting on the basis of considering only the experience of the present acquired up to some present time. It is precisely in this ability of the human mind on which I have come to rely, that we must locate the existence of that quality of creativity's potential which distinguishes the individual member of the human species categorically from all lower forms of life.

We must foresee the consequences of attrition similarly. Not only does technological attrition have the effect of "wear and tear." Failure to advance the level of technology, or failure to increase the capital-intensity of production and infrastructure per capita and per square kilometer, mean attrition, as such negligence turns back the "clock of the future" on mankind.

It is notable, that these aforesaid considerations have been the primary considerations in my method of economic forecasting. Capital-investment cycles, including consideration of the rates of scientific--technological investment in increased physical capital-intensity, per capita and per square-kilometer, have been paramount considerations in the qualitative superiority of my forecasts, when those of all putative rivals have been more or less disastrously wrong.

Albert Einstein would, most probably, agree, and according to a fair reading of the best available evidence, most probably did.[26]

What I have just written in these preceding paragraphs, can, and, probably should be restated in the following way.

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[26] As Sky Shields has reported so ably in his 50-odd minute video report, the internal history of modern physical science underwent a ruinous crisis from the closing decades of the Nineteenth Century to the present. That period of worsening crisis, and flagrant frauds, in the practice of and university teaching of modern physical science as such is centered around the controversy between Albert Einstein and Max Planck, on the one side, and the adepts in the positivist cults of Ernst Mach and the followers of Bertrand Russell on the other.

'A Simultaneity of Eternity'

Nothing I have written here thus far can be read as a denial of an ontologically real, efficient existence of the future's control over the present. In adopting discovered universal physical principles, or the like, we are redefining the future consequences of our present actions. This is to speak of discovered universal physical principles, or the principle summed up in the concluding paragraph of Percy B. Shelley's ***A Defence of Poetry***. In one such type of case, we have introduced the practice of a newly adopted universal physical principle, such as Kepler's uniquely original discovery of the principle of Solar gravitation. In another type of case, we have introduced a change of principle in the way in which a culture thinks about the way it chooses to govern its behavior.

What the reader must take into account, however, is that our definition of an actual future here, is remarkably different than the ignorant, so-called "common sense" reading of that specific choice of language would ordinarily recommend. What I am pointing out is, in fact, not unknown to relevant Christian theologians, for example; it is a conception to which I have frequently referred in my own earlier writings, but also emphasized by relevant other persons. It is the concept of what is named as "the simultaneity of eternity," as such a Platonic principle is illustrated by Raphael Sanzio's "The School of Athens."

The concept may be identified by the following descriptions. This is another mode for stating the notion of the principle of dynamics, as this ancient principle of the Pythagoreans and Plato was revived by Gottfried Leibniz during the 1690s. It is the same principle, as developed further by Bernhard Riemann, which has been the foundation of my relatively extraordinary success as a long-range forecaster in my work of the 1956–2008 interval to date, as my forecasting came more into public view since 1956, especially since August 1971.

The existence of the real future of mankind's universe lies along a physical-dimensional "line" called (human) *creativity*, a notion which might be identified by the technical term *anti-entropy*.[27] In this view, the existence of the universal future exists not at a fixed point in future time, but, rather, as if it were a wave of change in place and choice of ultimate destination, a change over which mankind can exert willful control by the future, on the present. Mankind's inventions to this effect, promote the effect of changing the existing universe, by changing the ultimate destination of mankind's existence. Think of this as an existential wave passing through an expanding universe, a universe whose future is expanding qualitatively, rather than merely quantitatively.

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[27] "Negative entropy" is a misleading term; the appropriate term is "anti-entropy." The idea of a mathematical-physics controversy, over entropy versus negative entropy, introduced by the followers of Clausius and Grassmann, was always, essentially, a neo-Cartesian hoax, a failure to grasp the implications of Leibniz's systematic exposure of the frauds of Rene Descartes.

This can be seen as expressed in terms of new, higher states of existence in the universe, or phase-space of reference. Such qualitative developments are most typical of the conception of anti-entropy.

Restate what I have written, up to this point, here, as follows. Now, however, where the prior definition of "future" had defined mankind's available destiny as relatively fixed, as statistical forecasters do, a correct view, now, is that a new, qualitatively changed "future" is, or will be acting, *as if from the future*, upon the present—for the better, or worse. The principle of dynamics as employed by Leibniz, Riemann, and Einstein holds sway; but we must add the qualification, the "added dimensionality," that the future itself, as future is typified for physical science by Kepler's uniquely original discovery of the principle of universal gravitation, is changing qualitatively, such that the future acting upon us today, is a different future-point than that of the day before. However, we, in turn, are acting upon what had been the earlier future-point, to generate the new, "more distant" future-point in physical space-time, that defined in what may be usefully termed "anti-entropic" (i.e., "actual") physical space-time.

To repeat the point for the sake of clarity: the future does act on the present, and the present does act to change that future which is acting on the present. If that appears to confuse some readers, it is, chiefly, because those readers' minds are still stuck in the proverbial mud of sense-certainty.

Do we actually know this to be the case in practice? As one typical professor said: "Can we actually know it—can we prove it, rather than merely believe it,"[28] as some arbitrary presumption of some odd religious belief, such as those of the true believers in Descartes, Ernst Mach, or the followers of Bertrand Russell? The answer should be, "Yes. We already know it, and could prove it; because the creative powers of the human mind, as distinct from the characteristics of all lower forms of life, practice that effect upon the universe, and, thus, upon the dynamical future-point which locates (generates) the modified universe in which we must exist and act today."

To restate this crucial fact: when mankind adopts a discovered principle of the universe within the embrace of society's practical intentions, the universe is changed in its expressed intention. The future so newly defined, not only as we perceive it, but as our changed choices of methods of actions, now acts to define those effects which the present experiences as the reaction to the present by the future.

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[28] *Cf.* ***The Harvard Yard*** [not currently available].

A Relevant Case

The death of President Franklin Roosevelt, inasmuch as that brought the reversal of his policies, and of the directions of policy-shaping under President Truman, caused a sudden and worsening decline in the future prospects of the United States, and, also, civilization world-wide. The changes in direction of policy made possible through the assassination of President John F. Kennedy, unleashed a downward direction in long-ranging policy-shaping which led into the phenomenon of the gross cultural-moral decadence of international "68ers," with such immediate consequences as the coming of the Nixon Administration, and the consequent long wave of decline in the economy and culture of the U.S.A., the Americas generally, and Europe, which has continued to the present day.

Mankind as such is an integral, willful factor of governing principles in the universe around us. The principle which distinguishes mankind from lower forms of life is an integral part of the physical universe we inhabit. Our choices of principled direction of decision- making, and of institutions, are an integral, willful part of the physical universe which we inhabit.

"How, actually, could we know this character of our future—in economy, or otherwise?" An appropriate answer to that question would be: "We know this if we act on our domain in that way." This is the method which I have employed since I first really began to understand the implications of Bernhard Riemann's work for a practiced science of physical economy, in early 1953. This is the basis on which I forecast the proverbial, hypergeometric "wave of the future;" and, if you read my crucial economic forecasts as I have cast them (not as "predictions" of a Cartesian type), so far, I have never been mistaken in what I actually claimed, and that with an exceptionally careful representation. Once I had also grasped the implications of Academician V.I. Vernadsky's leading discoveries in physical biochemistry a few decades ago, my advantage was greatly amplified by insight into the principled implications of the categorical evidence on which the notions of Biosphere and Noösphere depend.

The choices of direction of policy-shaping, such as changes in popular culture, are the generation of changes in the principled character of the physical universe which we inhabit. These choices change, thus, the way in which our inhabited physical domain acts and reacts upon us.

That much said thus far, I shall now restate the same point somewhat differently, for the reader's sake.

From the Standpoint of Technology

Compare the case as I have just summarily described it, with a view of the same matters from the vantage-point of the historical-line of technological rise in the frontier of technology

represented by increases in mankind's willful command of, and use of increases in what is termed "energy-flux density." That the same number of calories expressed in a leap to a certain higher level of energy-flux density, performs a higher quality of work (effect on the universe) than the number of counted calories at a lower energy-flux density.[29]

So. the rise in energy-density-cross-section per square centimeter, has an effect which is an echo of a "future line" of the sort to which I have referred above. To the degree that society takes advantage of such a gain, the productive powers of labor per capita and per square kilometer, are increased qualitatively. This works to such effect that if we compare the human species' potential relative population-density with that of the higher apes, man's power to raise the intensity of the realized energy-flux-density of human action (qualitatively) per capita and per square kilometer, shows the human species to be free of the principled limits to population-growth of all inferior species.

Vernadsky has been most valuable in emphasizing a comparable phenomenon in the relative increase of living processes over intrinsically non-living ones, and of the human species' Noösphere above the phase--spatial systems of all other living species combined.

When we view these matters as expressing a general principle within our universe, we have the scent of the higher principle which I am discussing here. In other words: there is a principle more or less comparable to the notion of *qualitative anti-entropy* (e.g., new dimensions in physical space-time created), a principle which is also expressed by the potential of the mind of the individual member of the human species, to "expand the universe" qualitatively. This expansion defines the "current wave of the future" which is acting reciprocally, and dynamically upon our present. We, in turn, by aid of those of our potential noëtic powers which are absent in all lower forms of individual life, are able, potentially, to shift that "wave of the future" upward. This works to the effect that all of our actions, even those which appear to be unchanged forms of individual practice, are changed in character *dynamically*, reflecting the change in the character of the universe's future which has been effected by some relevant action upon society generally, by some creative action performed by the individual human will, by means of (speaking theologically) the divine soul, in the likeness of that of the Creator, of the human individual, a soul absent in all other known living creatures.

[29] It is now approximately 418 years since Gottfried Leibniz proved the fraudulent character of the methods and conclusions of René Descartes. Yet, some leading members of the U.S. Congress and many persons misnamed as accredited scientists are still basing their cultish "environmentalist" frauds, as on the definition of "energy," on the fraud of Descartes, still today. Some of these fools are called "scientists."

Mind or Sense-Perception?

The troubling aspect of the case which I have just outlined above, should be recognized as an effect of a Euclidean-like acceptance of belief in mythical notions of the existence of an *a-priorism* attributed to human sense-certainty. Once we accept the experimentally demonstrated actuality, as Kepler did for the effects of universal gravitation, that sense-perceptions are never better than shadows which have been cast by a real universe upon an imagined universe, we are rightly impelled to force our mind—the real, cognitive mind—to block out the habit of blind faith in sensations, and to ask ourselves what kind of an object might have cast those shadows, as Kepler did in discovering the actual principle of gravitation in harmonic orderings. Thus, for example, the succession of the rejection of the principle of harmonics governing the determination of gravitation, was greatly aggravated by the degeneration of modern science brought about through the influence of the respective mechanistic and rabid dogmas of Ernst Mach and Bertrand Russell in degrading the discovery of the harmonic principle by Max Planck.

Essentially, this means, ontologically, defining the real universe as the one which casts those shadows which we can qualify, experimentally, as principles of the same class of types as Kepler's discovery of gravitation.

Now, when that correction of the systemic errors of what is still, presently popular, even most academic opinion, has been made, the human mind is enabled to see matters of scientific principle more or less as Bernhard Riemann, Albert Einstein and Max Planck did, or as Cardinal Nicholas of Cusa did in such seminal writings on modern science as his *De Docta Ignorantia*, or as the follower of Cusa, Johannes Kepler, did in Kepler's uniquely original discovery, in his ***The Harmonies of the World***, of a universal principle of gravitation.

From that higher vantage-point of viewing our universe, the notion of the true universal actuality is typified by the principle which Albert Einstein adduced from his review-in-depth of Kepler's discovery of the universal principle of gravitation. Review that matter as follows.

As I have repeatedly emphasized in earlier locations, the first key to Kepler's uniquely original discovery in the matter of the principle of gravitation, was the measurement of "equal areas, equal times." In the effort to express each single cycle as motion in an arbitrarily small portion of that cycle, there was no satisfactory kind of existing measurement. It was necessary to define the physical function mathematically by what subsumed the cycle, rather than as by a function of action in the small. However, when Kepler attempted to define the subsuming function for a set of physical planetary orbits similarly defined, it was necessary to define a principle which subsumed the organization of the set of orbits of which the Solar System as a whole might be defined. This led Kepler to recognize that no ordinary algebraic

solution existed; rather, it was necessary to define the relevant harmonic function underlying the relationship among the orbital pathways. The required solution was one lying outside the domain of the sensory images of either sight or sound. No sense-organ other than the creative powers of the human mind itself, would suffice.

Einstein's response to Kepler's presentation was that Kepler's formulation for the Solar System's expression of universal gravitation presented the case of a self-contained universe, which was, therefore, finite, but without an external boundary. While this does not exclude the existence of other universal physical principles, which also define a universe similarly, it defines the proper meaning of the use of the term universal principles, as principles which are to be similarly defined as lying outside the domain of mathematics as such. Therefore, Kepler's proof, as presented by him in his ***The Harmonies of the World***, defined the proper meaning of all uses of the term universal physical principle as principles lying outside the domain of mathematics as such. Thus, Einstein emphasized that Kepler's universe was already Riemannian in quality, and that all competent physical science must be premised on that same quality of conception.

3. Physical-Economic, or Other Values? What Is Your Future?

The foregoing considerations must guide the adoption of any principled notion of economic policy by, and among nations presently. After all, we inhabit a universe so defined as to require this approach. We must now translate what has been said here, above, into the language and practice of a science of physical economy. The considerations which have been treated here until now, provide the "platform" from which we are enabled to make a competent entry into that branch of physical science properly named a science of physical economy.

Within the preceding chapters we have considered the elements of physical science as broadly stated in a relatively elementary way. With the successive discoveries of principle by, most notably, such followers of Nicholas of Cusa as Johannes Kepler, Fermat, and Leibniz, modern European civilization gained those notions which formed the uniquely modern scientific method of the Leibniz calculus. These accomplishments, by Leibniz, of the most immediate relevance for our argument here, were, successively: the concept of the calculus as such, circa 1676; at the close of the Seventeenth Century and the beginning of the Eighteenth, the establishing of a competently anti-Cartesian conception of physical science; and, the consequent notions of a principle of physical least action.

All of these stages of Leibniz's discoveries were derived from the general conception of the so-called "infinitesimal." This was the notion, derived from the combined effects of the discoveries of Kepler and Fermat, of universal physical principles as "enclosing" the universe

of our experience, rather than being mere measurements within the framework of an a-priori preconception of a universe. This conception of the "infinitesimal calculus," by Leibniz, depended crucially upon Kepler's discovery of a principle of universal gravitation, rather than a-priori notions such as Euclid's, as enclosing action observed within the universe. This is the conception of an anti-Euclidean geometry, as drawn out more fully in Bernhard Riemann's 1854 habilitation dissertation.[30]

These were the foundations of notions of a science of physical economy which informed the founding of the modern, Leibnizian economic science of physical economy, as developed through the work of the Ecole Polytechnique of Gaspard Monge and Lazare Carnot. The next leap forward in this domain was accomplished, chiefly, by Bernhard Riemann, beginning his 1854 habilitation dissertation; this was the first leap into that "purely physical" anti-Euclidean geometry which had been already anticipated in Kepler's uniquely original discovery of the principle of universal gravitation.

The importance of this point is so crucial for all competent science, including economic science, that we must emphasize the relevant connections once more, here.

As emphasized above, the definition of meaning of "universal physical principle," or, said simply, a "universal principle" of any quality, must be a principle which encloses, rather than merely "connects points within" the universe, or the phase-space of the universe under consideration. It may also connect points within the universe, but that connection may occur only as a subsumed expression of its essential character as enclosing the universe, or relevant qualitative phase-space.

Basic Economic Infrastructure

Typical of this is the notion of the function of basic economic infrastructure. That is a notion which does not exist in the crippled mental processes of today's customary opinion, whether in today's law-making practices, or in generally accepted, but scientifically incompetent, accounting practice. In any competent form of practice of national income accounting, basic economic infrastructure is that which efficiently encloses, functionally, the real action in which particular productive action or a productive effect is generated. This "enclosing" performs the function of amplifying, or diminution, of the action which it "encloses."

Wasteful practices (and expenditures) which do not meet that standard (such as imposition of tolls, as a substitute for public funding, as distinct from taxation to support public infrastructure) are not competently classed as being required infrastructure, since, expressed in that form, they make no assured net, effective contribution to a productive action. So, on

[30] Not non-Euclidean!

this account, tax-revenue derived from legalized gambling, is a destructive form of utter waste.

Similarly, the substitution of solar panels and windmills for nuclear-fission powered sources is inherently a net waste, with no actual net benefit to any economy. It is the relative energy-flux density of sources and application of power which determines the relative value of power produced for society. "Soft energy" is for "Luddites" and similarly "soft-headed" fools. These "soft-headed" modes are not merely foolish; they are viciously destructive, and also actually pro-genocidal in their effects on the conditions of human life.

Riemann & Vernadsky in Economy

It was indispensable for the founding of a modern science of physical economy, that, as Riemann prescribed in his habilitation dissertation, we must free science from the grip of any formal mathematics which depended upon a-priori assumptions. It is properly required that we derive mathematics from physical principles, rather than attributing the authority of physical principles to any a-priori assumptions, such as those of mere mathematics, respecting human individual sense-perceptions. We must think of mathematical representations in purely physical-experimental terms, rather than the other way around. This objective for mathematics, as physical mathematics, was realized in essentials by the discoveries of Bernhard Riemann.

Any mathematical system for physics which evades that challenge presented by Riemann, is intrinsically incompetent, especially so for any attempt to adduce the physical principles governing growth or failure in modern economy. Competence does not permit the way in which ivory-tower fantasists seek a mathematical-statistical rule for economy; competence requires primary attention to the role of implementation of discoveries of universal principles in determining the anti-entropic increase, or entropic collapse of physical economies so defined.

There are, however, certain additional considerations which governments must emphasize now, if a very early, general breakdown of the present economy of the entire planet is to be averted. Most significant is, as I have emphasized this principle in earlier locations, Academician V.I. Vernadsky's notion of three distinct, subsumed categories of universal physical principle: the *abiotic*, the *Biosphere*, and the *Noösphere*. These are the respectively unique categories which presently compose our conscious experience of the existence of the universe as a whole; but, these are also each an essential component of the whole subject-matter of a science of physical economy. No presently competent representation of the subject of physical economy could exist if it did not consider all three distinct categories of functional existence in cohering functional terms of reference.

Therefore, the most important consideration to be emphasized is that living processes can not be derived from non-living, and cognitive processes can not be derived from any known living processes other than the human individual.[31] Most notably, for precisely this reason, any effort to constrain the practice of economy within reductionist assumptions inherent in the empiricist methods of such as Adam Smith and Smith's follower Karl Marx, must lead toward general disaster, and do, unless they are aborted in time to prevent that lurking outcome. Marx's method is just as good, and even significantly better than that of Marx's teacher Adam Smith; but, both share in common certain erroneous axiomatic-like presumptions, as identified by Marx as his adopted views, which must, in fact, ultimately mislead the believer into disaster, as this fact is being experienced on a grandly calamitous scale of mass-insanity, as being experienced throughout most of our planet presently. As in the Soviet case, Marx's influence, like that of the Adam Smith on whom he leaned so much, effectively denied even the bare existence of the function of creativity at the point of production, just as President Richard Nixon's administration joined with its similarly deranged 68ers, in destroying the factor of physical creativity in even maintaining a previously established level of performance in the U.S. economy.

The fact of the hereditary equivalence of the monstrously destructive effect of "green" ideology on the physical economy of Earth, and the correlation of that pathological outlook with the anti-nuclear lunacy, goes to the heart of the way in which the U.S.A. and Europe have destroyed themselves physically-economically during the past forty years. Any continuation of the influence of that "green," anti-nuclear ideology now would send civilization tumbling into the life-expectancies and behavioral characteristics of the baboons (probably, even the baboons would shun us).

Vernadsky's discoveries, when combined with Albert Einstein's and Max Planck's conceptions of the way in which Kepler and Riemann set the conceptual foundations of all competent directions in modern science, are, presently, the unique key to defining a competent direction in organization of a general recovery of the presently disintegrating economy of the planet in its entirety today.

However, another crucial consideration must be added among those which must be taken into account in functional terms. I explain this as follows.

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[31] There is no reported, direct connection between the quality of human reason and those aspects of the human brain-process which are traced to the biology of lower forms of life. For the moment, here, it were safe to proceed as if this distinctly human cognitive power were something into which the human biological apparatus is as if "tuned," but lower forms of life not.

The Role of Man in the Solar System

Science does not simply exist. Knowledge and practice of scientific progress, and of the continued existence of mankind, depend upon the distinctly special nature of the human being, as distinct from any different form of life. It is here, on this view of human nature, that the existence of a science of economy, that any competent accounting for the existence of human economic function depends.

At first glance, the progress of mankind's conditions of life depends upon the Biosphere, which also depends upon the abiotic domain of planet Earth. This dependency includes some extremely ironical aspects. This fact should not -astonish us, once we have recognized that everything respecting mankind's existence and role in the universe, insofar as we know it, is most extremely ironical.[32]

The corollary is located in the following question: to what degree does the continued successful direction in existence of the Solar system depend upon a function intended to be performed by present and future mankind?

For example, the primary source of our day to day power to exist on this planet is the Sun. Not only is the Sun the largest part of the Solar System, but virtually all known parts of the System are products of the Sun's self-development, including the radiation on which life on Earth depends. Yet, on this very account, the Sun tends to be a disappointment for us, since solar radiation would be as much a pestilence as an asset, unless we converted Solar power into products of chlorophyll without ever pausing at a solar collector or quixotic windmill.

[32] As I have referenced this in a note above.