

## EIRFeature

# Benchmarking: Faking as an Art of Self-Deception

by Lyndon H. LaRouche, Jr.

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### ‘Footprints Do Not Make People’

Two related technical matters of special significance, popped up among fresh reports delivered to the desks of *EIR*’s economics section, during the week ending September 30, 2000. One such report, was the belated official admission, that the U.S. government has been continuing what is in fact a decades-old method for faking its official inflation statistics, the so-called “Quality Adjustment Factor.”<sup>1</sup> The second, was the surfacing of a ten-year-old letter, in which certain Ford executives described how they, continuing the “systems analysis” tradition of accounting specialist Robert S. McNamara’s 1950s reign at that firm, had organized the presently continuing, if now tattered cover-up of a willful and deadly design-failure in the firm’s best-selling Sport Utility Vehicle (SUV).<sup>2</sup>

Both cases are to be considered as typical of the way in which a combination

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1. On Sept. 26, the U.S. Bureau of Labor Statistics (BLS) released a report to the media, that it is preparing to revise upward the Consumer Price Index for the 12 months ending in August, based on a “glitch” involving “quality-improvement allowances.” See accompanying article in this *Feature*. *EIR* first exposed the Federal Reserve Board’s practice of hiding inflation by use of the so-called Quality Adjustment Factor in its Oct. 4, 1983 edition. An article by Richard Freeman reported that the Fed, in collusion with the BLS, had been concocting such fraudulent factors, and using them to overstate production levels, while the BLS understated inflation, since 1967. LaRouche presented the QAF hoax in a nationwide half-hour TV show during his campaign for the Presidency, aired on ABC-TV on Feb. 4, 1984. LaRouche stated that he and *EIR* had determined that the rate of inflation in 1983 had been faked by as much as three times, and should have been reported as three times higher than it was.

2. Keith Bradsher, “Ford Memo Restricted Tire Suppliers’ Rollover Tests,” *New York Times*, Sept. 27, 2000. See also Richard Freeman, “Ford SUV, Firestone Tire Share the Blame for Road Deaths,” *EIR*, Oct. 6, 2000; Lyndon H. LaRouche, Jr., “The Coming Scientific Revolution,” *EIR*, April 30, 1999; and Jonathan Tennenbaum, Rudiger Rumpf, and Ralf Schauerhammer, “The Fallacy of Benchmarking,” *EIR*, June 11, 1999.



*"If we reduced costs and expenses to zero, as today's ruling neo-liberal fanatics would tend to do," writes LaRouche, "that would simply collapse the enterprise, and any real profit-margins earned by production, even an entire national economy, could vanish accordingly." Here: The demolition of the steel industry in McKeesport, Pennsylvania, 1985. Steel was deemed "unprofitable" in a post-industrial economy.*

of willful fraud and elementary incompetence has reigned, under current standards of financial accounting practice. I emphasize those standards adopted not only by Wall Street's financial houses and law firms, but also by related official functions of the U.S. government. Both examples, the Quality Adjustment Factor and Ford's reliance on substituting so-called "bench-marking" for engineering, as in the SUV case, when combined, tell us much, if not quite all, about the administrative reasons for the presently onrushing collapse of the global, Anglo-American-dominated financial system.

Follies such as these two aberrations, could not be understood competently by anyone, unless he or she acknowledged the fact, that, since the richly deserved fall of ancient Babylon, no powerful empire was ruined, except by the implied consent of its prevailing popular opinion, or, as it is said in Latin, *vox populi*. The underlying issue expressed by the two cited and related types of practices, is the disaster lurking wherever the standards of today's generally accepted accounting practice, are regarded, by implied consent of popular opinion, as the principal authority for assessing the competence of the management of the real economic affairs by either business or government.

It is neither the Quality Adjustment Factor, nor bench-marking, nor related kinds of current practices, as such, which actually threaten the U.S. economy today. The danger comes from that popular opinion which has tolerated that recent thirty-five years' trend in U.S. policy-making, as a result of which, lunacies in generally accepted accounting methods

have been tolerated, lunacies which are merely typified by the two aberrations I have just cited.

Typically, in angered response to my criticism of today's popular accounting mythologies, some wild-eyed executive might wave a profit-and-loss sheet menacingly in my direction. "Here," he threatens, his finger almost punching through the paper where the report's bottom line is indicated, "is where the profit is made!" He snarls, "Profit is income, less costs and expenses!"

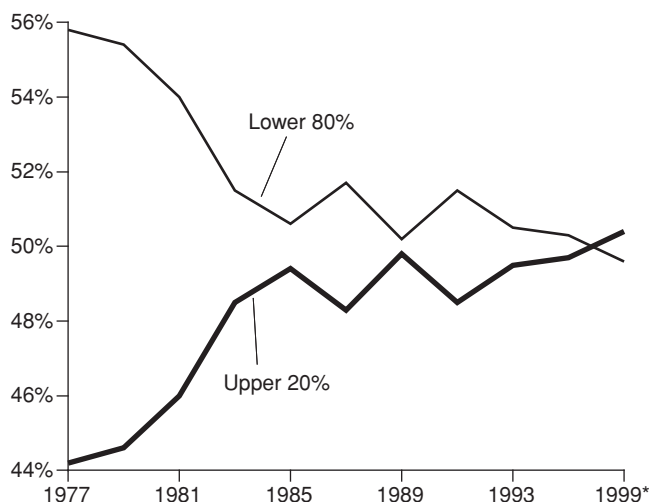
That unhappy fellow would not know what he is actually saying. Simply keeping paid costs and expenses below whatever the reported financial income might be, might appear to be the accountant's definition of profit, but, as we should recognize from the facts of the currently onrushing global financial collapse, this accounting practice does not show us the way in which the real profit of a nation is actually *generated*. Accounting figures are, at their very best, merely statistics, footprints of a passing reality. Footprints do not make people, or economies.

For example, if we reduced costs and expenses to zero, as today's ruling neo-liberal fanatics would tend to do, that would simply collapse the enterprise, and any real profit-margins earned by production, even an entire national economy, could vanish accordingly. So, because of precisely that neo-liberal way of thinking in the practice of both governments and influential private entities, at this moment of writing, the near-term disintegration of the present form of U.S. economy, is looming for the short term immediately ahead.

FIGURE 1

## Since Jimmy Carter: America's Richest 20% Now Make More than the Other 80%

(percent)



\*Projected

Sources: Congressional Budget Office; EIR.

Admittedly, a household must live within its income, if at all possible. However, that is not the same as defining what the level of household and related consumption must be set, set by those who control such levels of expenditure as prevailing wage-rates. Standards of household income, for example, must be set to ensure a real income somewhat better than that required to sustain a currently typical level of potential productivity of the operatives supplied to the economy by that household. If necessary development and maintenance of basic economic infrastructure does not occur, that chiefly by action of government, the best efforts of private entrepreneurs can not save the national economy.

Thus, the shrinking portion of the total U.S. national income received by the lower eighty percent of family households, since the year of President Jimmy Carter's inauguration (**Figure 1**), is correlated with a collapse of the level of real-economic productivity of the U.S. labor-force. Worse, that decline in the ration of total national income assigned to maintaining the potential productivity of the labor-force's households, has been complemented by a willful collapse, to parallel effect, of the basic economic infrastructure and levels of investment in physically productive forms of capital investment during the same twenty-four-year period to date. The lack of control over such matters by the lower eighty percent of family households, is typified by the draconian policies introduced by Carter-appointed Federal Reserve Chairman Paul Volcker, beginning Autumn 1979, a policy-shaping ma-

trix continued, to the present date, by both Volcker and his successor, Chairman Alan Greenspan.

The kind of angry fellow I have described, should have learned some ABCs of real economy, by reading, for example, U.S. Treasury Secretary Alexander Hamilton's 1791 Report to the U.S. Congress *On The Subject of Manufactures*. That fellow should have recognized, as Democrats turned 1980 Reagan supporters did, what a terrible President Carter had been. That fellow should have also recognized, that, apart from some good things Reagan did, Reagan's Mont Pelerin Society-influenced economic policies, complemented the increasingly awful effects of growing power of former Trilateral Commission member, Vice-President Bush. Thus, the trend in economic policies under the 1981-1989 Reagan Administration, was mainly a continuation of the same Carter policies of practice which had turned out so many 1980, anti-Trilateral Commission votes against both Carter and Bush, and for Reagan.

What the angry poor fellow should have begun to recognize, from painful experience over all these years, is that the key to understanding the ruin of our national economy over the course of the past thirty-five years, is that the Clinton-Gore Administration, like those of Nixon, Carter, Reagan, and Bush earlier, were one and all dupes of the leading popular charlatan in economics teaching, the Mont Pelerin Society's silliest neo-liberal fanatic, Professor Milton Friedman. Our angry fellow should have looked back further, not only to the neo-liberal economic-policy bungling of Harry Truman, which caused the 1946-1948 recession, but should also know, that the 1957-1958 U.S. recession was chiefly the direct result of nothing other than the influence exerted upon President Eisenhower by the same Arthur Burns who had sponsored the career of Milton Friedman. Indeed, just as Jimmy Carter's miserable performance elected Ronald Reagan, so, a nation made restive by Harry Truman, had turned to elect Dwight Eisenhower. Sometimes, the more things change, the more they remain the same.

Today, in the case of a ruined, formerly prosperous, major U.S. enterprise, the nature of the sickness controlling the mind of any unhappy victim of his own blind faith in the supposed authority of a profit-and-loss report, is shown by the relevant crucial point in evidence, that he refuses to face a certain very elementary kind of fact. He refused to accept the reality, as the neo-liberal economic policy-shapers behind Truman, Eisenhower, Nixon, Carter, Reagan, Bush, and Clinton-Gore refused, that real profit is not generated by deducting from physical output, but, directly the opposite, by generating real—that is, *physical*—value added, above the nation's incurred, necessary physical costs of production.

This real profit is found in that new capital formation generated in excess of the preceding period's combined profit, costs, and expenses: physical capital, not merely nominal, financial capital. This must be, generally, new capital formation generated either in the form of technological progress, or



*The Clinton-Gore administration, like those of Nixon, Carter, Reagan, and Bush earlier, "were one and all dupes of the leading popular charlatan in economics teaching, the Mont Pelerin Society's silliest neo-liberal fanatic, Professor Milton Friedman" (shown here).*

expenditures made as part of functionally necessary contribution to scientific and technological progress in the process of production and design of products.

Typical of that sick managerial mentality, which has driven our nation into its now looming bankruptcy, is the case of the company which failed because greedy absentee ownership, or the like, preferred to distribute income among the shareholders and their financier partners, as profit, rather than making the indispensable investments in progress which would have reversed what became, thus, ultimately, the threatened bankruptcy of an obsolescence-ridden, looted husk of that firm's former productive prosperity. By cutting back on investments and related costs, rather than investing in modernizing, shareholders' greed and the folly of the accountants and financial specialists who advised them, often brought a once-prosperous enterprise to ruin. Not only firms, but national economies, such as today's ruined U.S. economy, have been brought low by the influence of that popularized sort of accounting mentality, expressed by such laws enacted during the early 1980s as Garn-St Germain and Kemp-Roth.

When these policies had been imposed, top-down, by the cabal of merchant bankers who control both our major banks and corporate manufacturing and related enterprises, the result was a decline in national economic productivity. To compensate for the inefficiencies and looting thus accomplished by the controlling financier interests, the households from the lower eighty percent of the family incomes were commanded to assume the burden of the result, in such forms as reduced real incomes from their labor, and reduction of the basic economic infrastructure supplied to the households and communities of the nation. The collapse in productivity was not

caused by the operatives and their households; the collapse was induced, almost entirely, by the financier and associated interests which controlled the economy top-down.

As physiocrat François Quesnay explained his principle of *laissez-faire* to any French farmer, or others, who happened to overhear the preaching of that doctrine, the underdogs must suffer, all for the sake of the pleasure and enrichment of even the bungling wastrels among those landed feudal aristocrats and others, who rule over them.

Thus, in some other cases, what should be counted as Value Added, may be honestly reflected in some financial accounting statements, but, in no case, is the Value Added reported actually created according to the "ivory tower" schemes which are characteristic of contemporary standard financial accounting practice. Real Value Added is supplied from a different universe than financial accounting describes. Footprints do not cause people. *Real value added is generated by cost- and expense-incurring actions, which increase the productive powers of labor, as those powers are defined in physical-economic, not financial terms.*

### **What Went Wrong?**

So, the credulous devotee of financial accounting statements, will go all the way to bankruptcy court, insisting, "I don't know how it could have happened. I ran my company according to the textbooks, just as the best Wall Street experts advised me. Something just went wrong. It might have been those greedy union members, who would not allow me to slash their pay and fringe-benefits as I wished." Indeed, something did go wrong; that is precisely the reason that U.S. economic recovery which President Franklin Roosevelt had

made possible, was subsequently brought to its present ruin.

*Franklin Roosevelt—FDR, like all great American leaders before him, mobilized an increase in the U.S. productive powers of labor, as measured in physical, rather than accounting terms, and as measurable in physical results, per capita of labor-force and per square kilometer of the nation's surface area.* Since the middle of the 1960s, especially since the awful crisis of mid-August 1971, more and more of those types of actions which FDR had mustered to make the U.S. economy more powerful than ever, were torn out, melted down, or simply left to rot. By not paying for the upkeep of those infrastructure, education, health-care, and other essential public and entrepreneurial functions, on which U.S. economic success under FDR had depended, the detractors of FDR deducted, and deducted, and deducted, all for the sake of a merely nominal, financial-accounting profit, a drunken carpet-baggers' orgy of incompetence, waste, and pilfering of national legacies, all done in the self-righteous pursuit of a combination of "fiscal conservatism" and sundry, related neo-liberal countercultural fads.

So, the devotees of Professor Milton Friedman's and Adam Smith's perverted notions of "free trade," and "the right price," have dragged our nation to the door of the poorhouse. What these glassy-eyed ideologues have miscounted as a growth in National Income, a growth which they claim has been produced by aid of their deductions, was, in fact, a mere accounting fiction, the footprint of a man who never walked. Without their blind faith in the eternal magic of financial accounting's market-place, we could not have come to enjoy that wonderful ruin which grips both our national economy, and most of the world, today.

The cruel and persisting decline in the share of total nominal National Income received by the lower eighty percentile of U.S. family-income brackets, since President Jimmy Carter's inauguration, is among the key facts which demonstrate the methods by which our nation's economy has been ruined (**Figure 1**, above). That increasingly savage decline in the payment of the incurred costs of maintaining the net physical productivity of the national labor-force, including household income required, is what is reflected in that decline in the ration of National Income shared by the lower eighty percent of family-income brackets. All of those expenditures which had caused a real increase in the average productive powers of labor of the U.S. labor-force as a whole, were stripped away, clump by clump, especially since the rampage of ruin, sometimes praised as "fiscal austerity," unleashed by Presidents Nixon and Carter.

To "balance the books" according to nothing different than Carter's notion of fiscal austerity, a foolish and desperately hungry man might have decided to feast himself and his family on his own, roasted left leg. In principle, such were the measures by which Prime Ministers Harold Wilson, Margaret Thatcher, and Tony Blair, have purported, in succession, to feed the economy of Britain, while in reality ruining it. So,

the U.S. Federal budget and National Income accounts have been, in fact, increasingly unbalanced, since the Presidencies of Nixon and, especially, Carter. In the name of cutting costs from the budgets of the Federal, state, and local governments, and our farms and industries, we gutted the infrastructure and Federal regulatory measures upon which the health of the national economy, and productivity of our labor-force, had depended. We slashed investment in sustaining technological progress, and lost per-capita physical productivity as a result of the ensuing technological attrition.

Thus, the skyscrapers grew taller, suburbia sprawled, while the work-places of the factories and farms were shrunk or even abandoned, and while the slums and the ranks of the nation's homeless and destitute grew more crowded and worse. Soon now, those skyscrapers will be recognized as the great monuments of the folly they represent, as the veritable tombstones of a deceased prosperity.

To help bring about that magical transformation of a powerful economy into a ruined one, the Federal Reserve System, with complicity of the U.S. Government, concocted the accounting fraud known as the Quality Adjustment Factor. Similarly, the once-proud industrial giants of North America and Europe increased accounting profit-rates by eliminating those categories of costly, but indispensable engineering departments and related capital improvements, upon which the earlier excellence of those industries, and quality and reliability of their products, had depended more or less absolutely. This latter accounting fraud became known as "bench-marking."

It was not the accountants themselves who caused this ruin; the accountants merely did as they were told. Rather, as in the case of the U.S.A. since the assassination of President William McKinley, the axiomatic standards of accounting imposed upon government and general business practice, were those which had been introduced under, chiefly, Presidents Theodore Roosevelt and Woodrow Wilson. It was the financier interests represented by those Presidents, which demanded and orchestrated the ruinous actions which the bungling accountants dutifully carried out.

Not only did those two Presidents represent, personally, the social and related prejudices of the defeated Confederacy. Like their predecessor in folly, the Democratic President Grover Cleveland who had prepared the way for introduction of a racist "Jim Crow" doctrine, Theodore Roosevelt and Ku Klux Klan booster Woodrow Wilson represented that New York Wall Street interest which had been the most deadly domestic enemy of the U.S. Constitution since that treasonous agent of the British Foreign Office's Jeremy Bentham, Aaron Burr, had founded the Bank of Manhattan.

It was under those gravely immoral Presidents, and their notable successor, Calvin Coolidge, that the ruinous trends in institutions of government and public financial practice were consolidated. This was done under the direction and control of the rentier-financier oligarchy which has dominated the financial world, increasingly, from London, for most of the

centuries since the reign of Britain's King George I. In more recent times, this has been done to the U.S. economy more directly, by Wall Street's leading financial houses and their associated law firms, a collection which top-ranking Wall Street insiders of this century have named the "British, American, Canadian" cabal. That cabal has been the British monarchy's chief partner and ally, especially since the Presidencies of Theodore Roosevelt and Woodrow Wilson.

Thus, during almost the entirety of the Twentieth Century, excepting chiefly the 1933-1945 Presidency of the patriot Franklin Roosevelt, and, briefly, under President Kennedy, the institutions of the U.S. have been under the increasing control of that type of continuing rentier-financier alliance among London, the legacy of the defeated Confederacy, and Wall Street.

It has been that specific circumstance, under which the current standards of prevailing accounting practice were established. Accountants, to qualify for continued employment in their practice, were obliged to adapt to the standards so imposed, standards imposed through the combination of institutional interests represented, since President Theodore Roosevelt and Woodrow Wilson, by the permanent bureaucracies of the Wall Street-controlled Federal Reserve System, U.S. Treasury, and U.S. Department of Justice. All of this developed under the immediate control of the same leading Wall Street financial houses and their associated law firms which, together with the British monarchy's London, Canada, and Australia, control all of the leading U.S. mass news and entertainment media today. Today's generally accepted, corrupt standards of accounting practice, have been purely and simply the result of that corrupt oligarchical arrangement. The accountants, to remain accepted in their chosen occupation, simply did as they were told: "I was just doing my job," the accused bureaucrat whined.

In other words, what went wrong with the U.S. economy, has been, most immediately, the combination of Wall Street's management and its corrupting influence over the policies of both the U.S. government, and general financial accounting practice. What went wrong, was chiefly blind faith in what has been considered lately as generally accepted, "bottom line" standards of accounting practice. Taking the controlling role of London and Wall Street's merchant-banking interests into account, the following point is fairly stated.

Our nation has been undermined, thus, by the influence of the kind of accountants who were experts in subtracting, but had not yet learned how to add competently. They did not understand, that footprints do not make people. So, the U.S. was misled, not so much by those accountants, as by its own popular opinion which those accountants have usually shared. So, under the influence of that trend in popular opinion, our nation fell prey, more or less inevitably, to such clumsy frauds as the Quality Adjustment Factor, and the fatal flaw embedded intentionally in the design of the Ford Explorer. So, out of blind faith in a nominal increase in financial asset-values,

values which did not exist in physical reality, but only in the delusions of current financial accounting practice, the greatest financial bubble in history was inflated to the degree that bubble is, at this moment of writing, about to pop. I shall now show how such wonderful outcomes were achieved.

Once again: what really went wrong, was the influence of recent trends in popular opinion, which controlled the minds of most of the lower eighty percent of our family households, and others, during these decades. Just as it was the popular opinion of ancient Rome which destroyed it from within, so today's current Romantic trends in U.S. popular opinion have been decisive, in causing the submission of our people to the policies which have ruined our economy, and most of them besides.

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## 1. The Lesson of Plato's Cave

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Let us turn our attention, if only for a moment, to a time and place a few years beyond the present. Presume that the U.S. of that time had come safely up and out of the presently onrushing world-wide depression. In that case, we may be certain that my recovery-policies for a New Bretton Woods would have been adopted, and that, therefore, in a battered but wiser U.S.A. thereafter, no one would graduate to become a certifiable professional accountant or economist, unless he or she had mastered a certain lesson to be learned from the fable of Plato's Cave.

That said, return attention to the present mess, carrying the contrasting thought about a possible, happier future in mind. The fundamental difference in method, between the incompetence of today's financial-accounting practice, and competent methods in economics, is, as I shall show here, a real-life illustration of the profound scientific truth underlying Plato's allegory.

Very soon, even most of the nominal financial assets still being counted at this moment, will be wiped from the books, as surely as Weimar Germany's 1923 *Reichsmarks* were wiped from the books. The choice of the exact way in which that eradication will occur, remains undecided for the moment, but the fact that the financial catastrophe of the present, global magnitude, and internal composition, is fully underway, and overripe to happen, is a fact no longer to be doubted by any adult who is both tolerably literate and also sane.

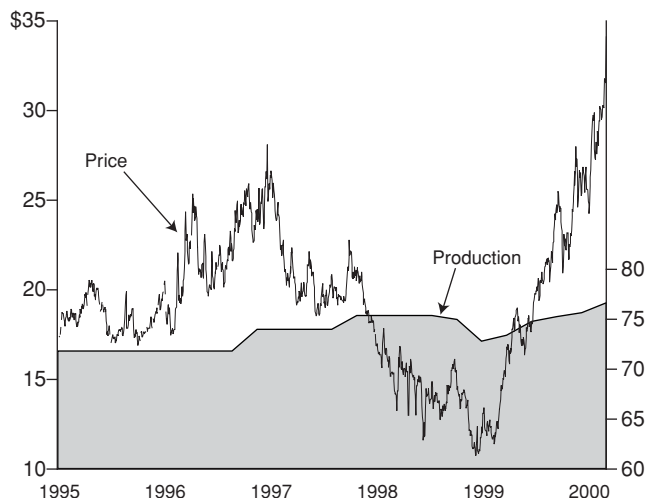
As the accompanying figure (**Figure 2**) shows, the recent years' hyperinflation in financial-asset values, has recently begun to spill over into the area of commodity-price inflation, is typified in petroleum and many other crucial areas (**Table 1**). This shows the approximate rate at which an outer limit for the present global financial system, and also the U.S. dollar, is being reached. At the present moment of writing these words, both the U.S. dollar and world financial system are operating along a curve which is related, in mathematical form, to a Riemannian shock-front; the world is currently in an increas-

FIGURE 2

## Oil Price Soars, Regardless of Production Level

Oil price, West Texas crude  
(\$ per barrel)

World Oil Production  
Millions of Barrels Per Day\*



\*Yearly average, 1995-1998; quarterly average, 1999-2000 Q3.

Source: U.S. Department of Energy; International Energy Agency

ingly turbulent “transsonic” region, approaching the discontinuity associated with entry into the “supersonic.” Any effort to postpone the financial collapse by more financial pumping, has the effect of accelerating the rate at which either a reversed-leverage financial implosion or an hyperinflationary explosion, strikes. The more energetically Wall Street and Washington try to delay the general collapse, the quicker and harder the catastrophe becomes.

In that onrushing, terrible moment of truth, when perhaps even most of the world’s present financial holdings suddenly vanish, and when a large portion of what are presently the upper twenty-percentile of the U.S. family-income brackets will be plunged into reliving the early phase of President Herbert Hoover’s Coolidge-built Great Depression, there will be, nevertheless, certain real, and relatively sound economic values, values which remain standing, at least for that moment. These real values include people, their talents, places of production, technologies, and so on, each and all physical realities of a far more durable quality than the mere paper of any financial asset.

Presuming that nations choose to survive at that moment of crisis, how might governments sort out the mess? How should we put real values back to work, and how shall we measure the relationship between those real values and the nominal financial values we assign to that portion of the financial paper, which prudence dictates that we allow to survive in one degree and form or another?

The immediate task, in that moment, on which all good which might follow depends absolutely, is to bring our presently ruined U.S. and world economies out of the wreckage caused by the presently onrushing crisis, with some sort of workable economic system newly in place. At that time, if governments still standing are reasonably sane, the kind of energetically protectionist economic system which nations will seek to organize, will be recognizably consistent with the best periods of the U.S. economy, such as that described by Treasury Secretary Alexander Hamilton, or by the Henry C. Carey who played a leading role in the 1861-1876 emergence of the U.S. as the leading agro-industrial nation of the world, or the U.S. economy revived from its ashes under the leadership of FDR. There will be certain differences in the design, but the fundamental principles would be recognizable by Benjamin Franklin, Alexander Hamilton, Friedrich List, Carey, or that great admirer of the American System of Carey et al., Russia’s scientist-industrializer and railway builder Mendeleyev.

Sane nations will prefer this model of reference for chiefly two reasons. First, it typifies the best model of a functioning nation-state economy which has existed previously on this planet, and, second, it is the model which best matches the surviving building-blocks out of which the rebuilding of the world’s economies must be initially assembled, under conditions of crisis such as the one currently onrushing. It is necessary to rely as much as possible upon those kinds of radical changes which have a well-established precedent as having been successful. So, for the purposes of the present discussion, let us agree upon that general direction of measures to be taken, thus simplifying the terrain on which the discussion of today’s topic is to be situated.

The leading practical question of policy then becomes: Under those kinds of circumstances, what yardstick shall we adopt for setting a standard of measurement for financial values, including money itself?<sup>3</sup>

The crucial point, once again, is that people leave footprints, but that footprints do not make people. That is the lesson of Plato’s Cave. That is a fact which few among our present generations of accountants have ever really understood, until now. That is key for understanding how and why the so-called literate portion of the general population of U.S. adults, failed to recognize the nature and importance of such typical frauds of accounting practice as the Quality Adjustment Factor and “bench-marking.”

Unless, and until our citizens are aroused to recognize the importance of the fact, that footprints do not make people, the actual making of people in local communities and family households, is now going to become suddenly very, very much more difficult than it is already. Until the importance of that fact is understood for practice, that miserable state of

3. See, Lyndon H. LaRouche, Jr., “Trade Without Currency,” *EIR*, Aug. 4, 2000.



TABLE 1

## The Global Commodity-Price-Inflation Spiral

Product or Raw Material	Period Covered	Unit Price	Initial Price	End Price	Percentage Increase
<b>Metals*</b>					
Hot-rolled steel sheet	May '99-May '00	\$/ton	270	325	20%
Aluminum (primary ingot)	May '99-May '00	cents/lb	65	76	17
Copper (wirebar)	May '99-May '00	cents/lb	70	89	27
Nickel (melting cathode)	May '99-May '00	cents/lb	275	373	37
<b>Pulp, Paper*</b>					
Pulp (bleached softwood)	May '99-May '00	\$/metric ton	425	660	67
Boxboard	May '99-May '00	\$/metric ton	470	590	25
<b>Chemicals*</b>					
Benzene (spot)	May '99-May '00	cents/lb	73	132	81
Chlorine	May '99-May '00	\$/ton	161	249	55
Sulphuric Acid	May '99-May '00	\$/ton	38	52	37
<b>Plastics*</b>					
Polypropylene	May '99-May '00	cents/lb	30	49	63
Poly vinyl chloride	May '99-May '00	cents/lb	22	48	118
LDPE (liner grade)	May '99-May '00	cents/lb	29	58	100
Ethylene (spot)	May '99-May '00	cents/lb	19	35	84
<b>Electronic components*</b>					
Capacitors	May '99-May '00	cents/each	2.5	7.5	200
Memory (4M Flash)	May '99-May '00	\$/each	4.75	6.50	37
<b>Housing</b>					
Home in Santa Clara County, California	2nd Q '99-2nd Q '00	thousands \$	402	558	39
Condominium in New York City	July '99-July '00	thousands \$	601	855	42
<b>Agricultural inputs</b>					
Ammonia	May '00-June '00	\$/ton	110	190	73
<b>Energy</b>					
West Texas Crude Petroleum	Jan. 1, '99-Aug. 31, '00	\$/barrel	12.33	33.33	170
California Utility Cost of Purchasing Electricity	July '99-July '00	\$/megawatt	30	175	480
San Diego Customer Monthly Electric Bill	July '99-July '00	dollars	55	110	100
Iowa home heating propane	July '99-July '00	cents/gallon	44	84	91

\* Prices that U.S. industrial managers pay for goods used in production.

affairs will be the condition throughout this planet, during the years immediately ahead. Therefore, the chance of U.S. survival depends on the number of persons who finally understand the importance of the allegory of Plato's Cave.

To that purpose, the paradox of Plato's Cave may be fairly restated and summarized as follows.

Not only accounting statistics, but all of that experience which we may attribute directly to our powers of sense-perception, are merely the footprints left by the real universe, in its passing from one place and time to another. Plato likens such sense-perceptions to the distorted shadows which a fire's light projects upon the irregular surface of a cave's interior. Sense-perception is not knowledge of the real universe, but knows only shadows of reality. Knowledge is not perception; knowledge is what we are able to prove, experimentally, to be the reality which the mere shadows reflect.

To acquire knowledge, we must experiment, thereby to discover how our behavior can willfully, predictably *change the patterns of change* among those shadows.<sup>4</sup> The simplest true example of such knowledge, is given to us by an experiment of the type which demonstrates the reliability of what is for us a newly discovered physical principle of our universe.

The term *knowledge*, as properly used within the practice of physical science, means just that. It means, therefore, the experimentally demonstrated, willful ability of persons to cause a predictable change in the physical behavior of the universe, a change from what the result would be were we

4. This, for example, is also an allusion to a crucial paradox of that fabulous Crab Nebula from which Earth receives most of its cosmic-ray showers. The relevance of such anomalies to the problem of methods of accounting to be used by economists, will become apparent below.



acting contrary to, or without knowledge of that discovered, experimentally demonstrated, universal physical principle. *What we actually know, is limited to those changes in our own mental habits, by means of which the action of our hands increases the power of human beings to exist, per capita and per square kilometer of the Earth's biospherical area, in our universe.* Knowledge, so defined, is typified by the definition of universal physical principles which physicist Bernhard Riemann's habilitation dissertation premised upon the preceding, related work of Carl Gauss on the principles of physical-space-time curvature.

The term knowledge has a broader, more inclusive meaning than merely knowledge of universal physical principles alone, but that, as I shall indicate a bit later here, is entirely coherent with the short definition I have just stated.

That definition, in short, points out, implicitly, the fundamental absurdity in today's faith in present standards of both accounting in particular, and statistical analysis in general. That definition, looking back from the definition of so-called hyper-geometries by Riemann, through sundry predecessors, all the way back to Plato, is key to a modern, rigorous appreciation of the practical application of the paradox of Plato's Cave. That is the reason that no competent scientists, or other clear-thinking persons, would ever claim to have knowledge based on mere personal sense-experience, or upon mere statistical evidence.

That is why competent production managers of former times, seldom believed what accountants said in the latter's attempts to explain how, or what kinds of real economy actually work. The statistics used by the accountants are merely the footprints left on the pavement, left by a creature whose species and behavioral characteristic remain essentially unknown to that accountant who is speaking merely as an accountant. Sometimes accountants told important truths about economic processes, but when they did, they were not speaking as representatives of currently practiced accounting dogma, but "off the record," so to speak. Under the influence of the Teddy Roosevelt-Woodrow Wilson-Calvin Coolidge legacy, most notably, the problem has been, that the accountants, when speaking merely as accountants, were instructed to speak only of the shadows of Plato's Cave. Like today's CEOs and financial race-track touts of the increasingly bankrupt "new economy" bubble-structures, they were neither allowed, nor inclined to concern themselves with matters of the real world.

The problem with today's accounting practice and its credulous clients, may be compared, therefore, with playing children's unreal-world sorts of games. In this case, the style of the game is too often akin to that of the hate- and violence-promoting Pokémon and other Nintendo-style games, which have been used to transform even pre-adolescent children, and also increasing rations of law-enforcement officers, into unthinking, programmed killers. Accountants, too, are often, if unintentionally, killers of an almost mindless quality: "Just

doing my job."

The working point in that comparison, is that accounting relies upon rules which apply only to an imaginary universe, an "ivory tower" world, whose premises lie outside the reality of physical cause and effect, but, nonetheless, a form of mysticism commonly used to pass judgment on the real world. The rules applicable only to that imaginary, "ivory tower" universe, are thus imposed as external standards of conduct, as these are dictated to the minds of the real people acting with their hands in a real universe. In other words, financial accounting today has become a mystical form of mass insanity, a kind of pathology akin to the superstition which causes some mental cases to avoid, that more or less hysterically, putting their foot down over a crack in the pavement on which they are walking: "Step on a crack; break your mother's back!"

Today's rules governing modern financial accounting, are not the first such widely practiced form of insanity to have appeared in history.

The modern practice of financial accounting according to Wall Street's standards today, has its roots in feudal society, with the introduction of the doctrine now seen in double-entry booking, by the so-called "Lombard" merchant bankers, such as the Bardi, Peruzzi, and Medici of the Thirteenth and Fourteenth Centuries. These methods of accounting, used during that earlier period of globalization of economic and other affairs, were those which shaped directly, what became known as the Fourteenth-Century "New Dark Age," the worst demographic, social, and political calamity which Europe has suffered since that time. The vast financial bubble which is in the process of bursting out at this moment, is essentially a product of nothing other than a modern resurrection of those principles of accounting which feudal merchant bankers such as the Bardi and Peruzzi, used to bring about the New Dark Age of that time.

In the modern world, there are relevant kinds of mass-insanity, not only in current financial-accounting practice, but in sundry forms which are similar to those to be seen in present-day accounting practice.

Among the most relevant such cases for present discussion, is that of the crude variety of philosophical materialism known as empiricism. The latter was introduced to Seventeenth-Century England from Venice, by the Paolo Sarpi who exerted decisive influence on Sir Francis Bacon, the Sarpi whose personal lackey, Galileo Galilei, taught mathematics and philosophy to Bacon's intimate, Thomas Hobbes. This form of empiricism is an expression of exactly the same underlying mental disorder characteristic of both modern accounting practice, and of the doctrines of political-economy prevalent in today's universities.

This form of empiricism, and its radical outgrowth, logical positivism, was the basis used by the founders of the British East India Company's accounting doctrines, to defend their version of the system already developed in essentials by

merchant bankers such as the Bardi and Peruzzi. Followers of John Locke such as Bernard Mandeville, Adam Smith, and Jeremy Bentham, are typical of the empiricists who have served as apologists for the modern forms of the old feudal merchant-bankers' accounting systems.

Modern Wall Street practices are, without question, rooted in a wild-eyed sort of mysticism; but there is nothing mystical in the connection between the Wall Street financier oligarchy's continuation of the same axiomatic assumptions which caused the Fourteenth-Century collapse of Europe into a general New Dark Age. The merchant bankers of today's Wall Street, for which the leading banks are, in turn, merely puppets, are, like their cousins, the merchant bankers of tyrant William of Orange's Netherlands and London, nothing other than a continuation of the tradition of the merchant-banking practices of the *fondi* of the same ancient Venice, which plunged Europe into a cultural, demographic, and moral decline of more than a century. This was the decline culminating in both the New Dark Age of the Fourteenth Century, and also in the subsequent succession of the Hundred Years War, and the English Wars of the Roses.

Admittedly, there have been certain changes in the system of merchant banking since the Fourteenth Century, but as in the case of any deadly virus which has made the species-jump from beast to man, the merchant-banking tradition of old imperial, Thirteenth-Century Venice, is a stubborn type of infection, which has adapted itself to the new institutional conditions which had emerged as the modern species of nation-state. The essential features of today's generally accepted financial practices and accounting methods, are the presently specific expression of that same, ancient principle of parasitism.

The most efficient way to recognize the essential folly of today's standards of accounting practice, is to recognize their inherently pathological features, as expressed by modern philosophical empiricism. Galileo's fraudulent approach to issues of modern physical science, is among the simplest and best examples of the kind of folly which Plato attacked through the presentation of the Plato's Cave allegory.

## When Economics Was First Discovered

A key historical fact, which must be made clear, is, that contrary to popular opinion, the practice of political economy did not exist earlier than Europe's Fifteenth-Century Renaissance. Although we may, and must look at earlier forms of society from the conceptual standpoint of a qualified modern economist, we must not misuse such comparisons as an excuse for the illiterate's blunder often committed by readers of Aristotle, for example. We must not commit the folly, of assuming that earlier forms of society had any practical knowledge whatsoever of the kind of economic policy-shaping, or practice of actual national economies, which first emerged during the course of Europe's Fifteenth Century. The reason for making that distinction is not a matter of debat-

ing mere descriptions; the distinction to be made is functional, and axiomatic.

Take into account what I have written, at considerable length, in numerous published locations, respecting the uniqueness of the beginning of the modern nation-state, and modern economy, in the setting of Europe's Fifteenth-Century Golden Renaissance.

As I have emphasized in those locations, two writings from inside that century were the most significant in identifying then, the principles which made that revolutionary form of society distinct from, and superior to all others. As I have elaborated in those locations, both revolutionary changes had been prescribed by the Cardinal Nicholas of Cusa who had played a key role in the organizing of the celebrated great ecumenical Council of Florence. It was Cusa who set forth the principles for founding the modern form of a community of individually sovereign nation-states, in his *Concordantia Catholica*, and who founded the functionally related existence of modern physical science, that beginning with the publication of his *De Docta Ignorantia*. The functional interdependence of those two writings, typifies the axiomatic changes in the organization of society, which separates modern European from ancient and medieval history. It is only in the context of those changes, that actual political economy came into existence.

It is from this standpoint, that we can best understand the lack of any meaningful coincidence between the principles of today's "ivory tower" methods of financial accounting, and real-world economics. The latter two occur in the same place, and in the practice of the same persons, but they are not only different forms of behavior, but, in fact intrinsically antagonistic forms. Insofar as the term economics is used as a way of expressing the belief that there are ascertainable natural principles, governing the kind of growth unique to the successful cases of the development of modern European civilization since the Fifteenth Century, and that these principles ought to inform the policy-shaping of governments, the intentional practice of modern economics did not exist prior to that century.

The very name of economics becomes *functionally* meaningless, if we attempt to attribute its intended practice to earlier times than the Fifteenth-Century revolution in statecraft which was centered initially in Italy, and which spread from there into France, and then England. I say again, as a matter of needed emphasis, that, in other words, while we may describe earlier societies through the eyes and methods of the modern economist, those societies themselves, including the celebrated Aristotle, had no competent notion of the practice of economics as a branch of knowledge. As I have stressed in earlier locations, the combination of the notion of the modern sovereign nation-state with the notion of a generality of application of experimental physical science, was associated with the adoption of the notion of the *general welfare* as that century's King Louis XI of France and Henry VII of England intro-



*The Church of Santa Maria Novella in Florence, Italy. The modern nation-state and the science of political economy did not exist, prior to the Fifteenth-Century Golden Renaissance.*

duced this principle of the modern sovereign form of nation-state into Europe's practice.

The following point, which has been the central feature of my classroom and published writings on the modern state for more than thirty years, I have emphasized from a somewhat different starting-point than my late friend, Professor Friedrich von der Heydte, but our respective arguments on this character of the Fifteenth Century, converge on the same core conclusion. The appreciation of the significance of the Fifteenth-Century Renaissance for all modern statecraft and law, is broadly identical. It is crucial for all modern study of political economy, and also crucial for the particular issues under consideration in this present report.<sup>5</sup>

In all known cultures of the Mediterranean region, from most ancient until modern, the prevalent form of existence of societies and of practice of law was imperial. That is, only to a personality with the qualities of an emperor, was attributed the authority to define principles of law. Kings and others might rule, but only under supervision by the code of law defined by an emperor or an analogous kind of relevant official, one with the attributed imperial authority to define law. It was only within the setting of the Fifteenth-Century Renaissance, with the birth of the institution of sovereign nation-state, that a new, anti-imperialist principle of law was estab-

lished in practice.

It was through the British monarchy's global overreach, combined with the successive aftermaths of the nuclear bombing of Hiroshima and the 1989-1991 dissolution of the Soviet system, that the presently ongoing return to the feudalistic barbarism of an imperial system of "rule of law," has become general practice, under the name of "globalization," that among what had become earlier, modern sovereign nation-states.

The imperial system in law is characteristic of both the Latin Roman Empire and its Byzantine successor. The same notion of imperial law, as adapted from the Code of the Roman Emperor Diocletian, ruled feudal Europe through the period of the Guelph League wars and the New Dark Age which Venice's Guelph League puppet and the merchant bankers brought about. During the entire span of history, there were certain changes, each for better or for worse, in the notions of imperial law, but the principle of the "global authority" of some imperial (e.g., "global") "rule of law" persisted in all leading forms of political society. It was not until the Fifteenth-Century Renaissance, that the Christian, natural-law principle of the general welfare was introduced as an alternative to the hitherto prevalent, imperialist notion of "rule of law."

In the region of Europe and related parts of the Mediterranean littoral, under all systems of empire, from ancient Mesopotamia until the Fifteenth Century, the majority of humanity was treated in practice, as human cattle, as slaves, serfs, and other forms of subjects, rather than actually as persons. They were used, or culled, according to the perceived advantage in

5. Friedrich Freiherr von der Heydte, *Die Geburtsstunde des souveränen Staates* (Regensburg, Germany: Druck und Verlag Josef Habel, 1952). My point of departure was my contributions to the resurrection of Leibniz's science of physical economy; Professor von der Heydte proceeded from his expertise in the history of law.



*The Colosseum in Rome. "In the region of Europe and related parts of the Mediterranean littoral, under all systems of empire, from ancient Mesopotamia until the Fifteenth Century, the majority of humanity was treated in practice, as human cattle, as slaves, serfs, and other forms of subjects, rather than actually as persons."*

doing this of a ruling oligarchy. The institution of the emperor was an inevitable, thus characteristic tendency of all oligarchical systems; it was an institution responsive to the requirement that the stability of a naturally immoral and anarchic system such as oligarchical society, will inevitably tear itself apart unless it imposes an order upon itself from above.

Thus, the so-called systems of law prior to Fifteenth-Century Europe, represented a rule of law without, and contrary to any moral principle, merely a way of setting rules, either based on perceived custom or imposed as positive law, arbitrarily, from above. The function of the emperor was therefore always implicit in such oligarchical systems; for that reason, it was the tendency in such societies, that oligarchies would submit themselves to someone performing the arbitrary function of emperor, an emperor who was accepted as the only legitimate source of law throughout the portion of the world so ordered.

Such were the empires of Mesopotamia, Rome, Byzantium, and the European feudal system under the modern Caesars sometimes called Kaisers, Czars, or simply emperors. The attempt, especially since the 1989-1991 actions of Prime Minister Thatcher, President François Mitterrand, and President George Bush, to establish a global "rule of law" at the pleasure of an English-speaking cabal composed of both the British monarchy's United Kingdom, Canada, Australia, and New Zealand, and a Wall Street-controlled U.S.A., is a new form of the same old imperialism, and essentially nothing else. It is all, like Shelley's famed Ozymandias, a doomed empire, already, presently, at the verge of toppling, shattered, into the dust.

These imperial forms of society are systemically alien to the sovereign form of modern nation-state. The latter is defined by two distinguishing, universal principles, both, in turn,

derived from the notion that the only morally tolerable form of government, is the authority which government enjoys solely on the basis of its efficient commitment to serve the general welfare of all of the people and their posterity.

The opening three paragraphs of the 1776 U.S. Declaration of Independence and the Preamble of the 1789 U.S. Federal Constitution, are a typical reflection of that principle. Under the government of a sovereign nation-state republic, no law or law-making process can be tolerated, which puts the claims of a self-interested oligarchy, especially a feudalistic or financier oligarchy, above the interest expressed by any individual person. No code of law is allowable, which violates the axiomatic basis for the very existence of the modern sovereign nation-state republic, the supremacy of the principle of promotion of the general welfare of the living and posterity of human beings who are, in turn, defined as made in the image of the Creator of the universe. That latter is the natural law, the law upon which the United States was founded, and thus the only legitimate law of the U.S.A. That law is absolutely opposed to the notion of a "rule of law" as such a revival of old imperial law has been demanded from among the supporters of the post-1989-1991 form of the English-speaking monarchical imperium.

The crucial two points of law and science, bearing upon our topic of accounting here, are that *the notion of modern political-economy is inseparable from the notion of a modern form of European civilization, as that civilization is defined, as a whole, by the existence of sovereign nation-states within that civilization as a whole.*

Although only a relatively few modern nations are truly sovereign nation-state republics, the impact of the mere existence of the form of sovereign nation-states brought into being by the influence of that Renaissance, was so powerful, that



*Statue of Jeanne d'Arc in Paris. From her contribution to the establishment of France as a sovereign nation-state, there is a direct continuity of statecraft extending to the founding of the American Republic in 1776.*

even imperial governments most violently hostile to that new kind of institution, have been forced to reckon with the practical implications of this new form of society. The impact of the existence of even the idea of the modern sovereign nation-state republic upon this planet as a whole, is not collateral, but pervasively systemic, even among nations which are avowedly, like the British monarchy, deadly adversaries of that institution.

If we trace the modern history of statecraft from the impact of Jacques Coeur and Jeanne d'Arc on the establishment of the first modern sovereign nation-states, those of France's Louis XI and England's Henry VII, and if we trace the origins of the pre-1688 Massachusetts Bay Colony and the later United States to those Renaissance developments, we are able to show how and why the creation of the U.S.A. of the Declaration of Independence and 1789 Federal Constitution, has shaped the course of all modern European civilization since 1776. So, as avowed British agent of influence Henry A. Kiss-

inger has specified in his public addresses and writings, the alliance of the British monarchy with Prince Metternich's Holy Alliance, was contracted with the intent to destroy the U.S. republic, ruin the emerging nation-states of Central and South America, and eradicate the influence of the American Revolution within Europe. Modern civilization was dominated, even in this perverse way, by the British monarchy's and Holy Alliance's shared fear of the powerful influence of even the mere existence of the intellectual tradition of that U.S. republic.<sup>6</sup>

Thus, the effort of the post-1988 global financier oligarchy, to establish, at last, a world-wide English-speaking global empire, centered on London and Wall Street, as imitation of and successor to the ancient Roman Empire, is itself a process entirely governed by fearful reaction to the mere fact of existence of the model of society implicit in the 1776 Declaration of Independence and 1789 Preamble of the Federal Constitution. The birth of the modern nation-state and its specific quality of law, within the womb of the Fifteenth-Century Renaissance, has defined the permeating issue of all modern European civilization, and its world-wide impact, ever since.

The correlated expression of this Fifteenth-Century revolution, is the unprecedented trend for increase of the potential relative population-density, a modern trend which has been shaped entirely through the institutional changes associated with the birth of the modern form of sovereign nation-state.

This revolutionary change in demographic and related characteristics of human existence, is, in all essential respects, a product of the interacting relationship between the principles set forth in Cusa's two cited writings: the basing of a form of society upon the principle of the modern sovereign nation-state, the principle of law associated, as I have said above, with the term *general welfare*, and the fact that the general welfare could be promoted only through the fostering of those increases in the productive powers of labor, per capita and per square kilometer, which depend upon the intention of fostering forced-draft programs of scientific and technological progress, to effects which promote the general welfare. Thus, in essentials, we have the functional interdependency of Cusa's *Concordantia Catholica* with his *De Docta Ignorantia*.

The two principles are, in fact, a single principle. There could be no efficient service of the general welfare, without a commitment to the specific benefits unique to scientific and technological progress. To impose that principle upon gov-

6. Henry A. Kissinger, *A World Restored: Metternich, Castlereagh and the Problems of Peace 1812-1822* (Boston: Houghton-Mifflin, 1957), and "Reflections on a Partnership: British and American Attitudes to Postwar Foreign Policy, Address in Commemoration of the Bicentenary of the Office of Foreign Secretary," May 10, 1982, Royal Institute of International Affairs (Chatham House), London. Excerpts are published in *EIR*, Sept. 22, 1995, p. 33.

ernment and law-making, a state of the form implied by *Concordantia Catholica*, or Dante Alighieri's argument in *De Monarchia*, earlier, is indispensable. The dependency is reciprocal; without the one principle, the other could not efficiently exist. The notion of modern political economy, came into existence and practice solely as a result of that Fifteenth-Century revolution in statecraft.

Since that time, the essential political, social, and related issues within now globally extended modern European civilization, have been the persisting defense, by oligarchical interests, of the imperial tradition of globalization consistent with the perpetuation of systems of feudal and merchant-banking oligarchy, and with a correlated determination to eradicate the institution of the modern sovereign nation-state republic. So, modern, globally extended European civilization, has been essentially a continuing mortal conflict between the legacy of ancient pagan Rome, Romanticism in philosophy and law, against the Classical Greek legacy as expressed in the corrected form supplied by the early Christian Apostles and reaffirmed by the Fifteenth-Century Renaissance.

Thus, the oligarchical tradition expressed by proposals for "globalization" and "world rule of law" today, have been and remain the most deadly enemy of the continued existence of our U.S.A. That oligarchical enemy, including its advocates among us, is determined, as were the satanic pair of H.G. Wells and Bertrand Russell, and accomplices of such moral degradation as Secretary of State Madeleine Albright, who has stated her allegiance to Wells publicly, to eradicate those forms of political economy consistent with the notion of that modern sovereign nation-state. The modern oligarchs are opposed to the continued existence of any political or economic institution which is committed to promotion of the general welfare, through emphasis upon scientific and technological progress in the modes of production.

The attempt to subvert and ruin the emergence of modern physical science, by the promotion of the empiricist hoax introduced by Paolo Sarpi's lackey Galileo, is typical of the forms of the oligarchical, Romantic legacy which have emerged as part of the effort to halt the spread and development of the modern form of sovereign nation-state republic. Sarpi's use of Galileo, in launching the latter's and Fludd's efforts to discredit the scientific revolution unleashed by Johannes Kepler, is merely typical of this conflict. That role of Galileo's hoax, in corrupting the way in which most among today's university-trained ideologues, for example, think about physical science and accounting, is the best choice of topic for investigating the intellectual roots of the way in which today's popular opinion has fostered the onrushing global financial catastrophe. The corruption represented by Galileo, is the most efficient example of the importance of Plato's allegory of the Cave for present-day society.<sup>7</sup>

7. Let us be clear, that the inquisitional charge made against Galileo, was evil, and a shame upon Christianity at that time. Unfortunately, the fact that

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## 2. Science Versus Accounting

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I have documented this argument in sundry published locations. The revolutionary quality which is characteristic of the global influence of the modern form of sovereign nation-state, is expressed by a moral commitment to a certain patriotic trend in U.S. thinking. Thus, until the recent three-and-a-half decades, the morality of existing national policy of economic practice, was judged by the standard of what was, in effect, a commitment to a general increase of the potential relative population-density of humanity. Similarly, this expression of sanity was to be found, wherever the world had been efficiently touched by the influence of that modern sovereign nation-state set into motion by the Fifteenth-Century Renaissance.

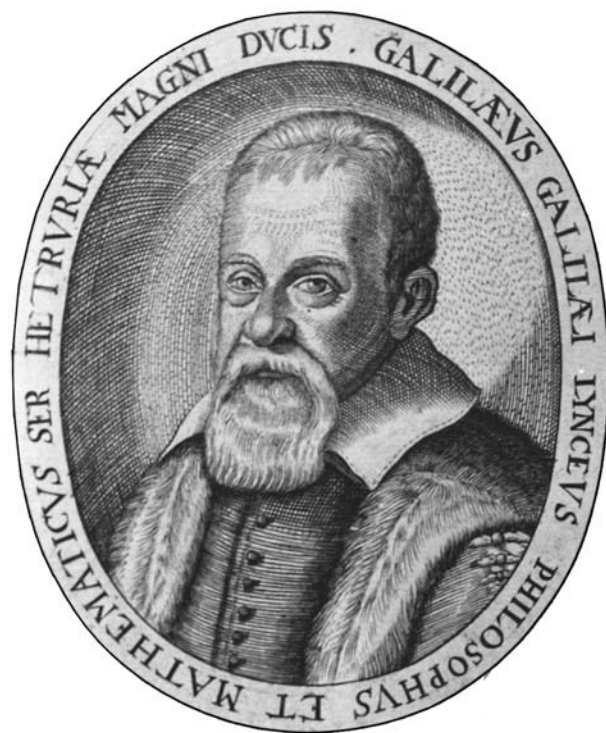
Implicitly at least, this increase in potential relative population-density, was understood to require a correlated improvement in the demographic characteristics of entire populations and their component family households, or, in other words, what is signified by any rational use of the terms "improved standard of living." Any contrary impulse, such as that of the "ecology" myths popularized during the recent thirty-five years, is to be recognized as expressing a return to the superstitions which had prevailed under the most oppressive forms of ancient and medieval society.

As I have stressed in locations published earlier, the efficient existence of a notion of universal human rights, depends absolutely upon the role of the sovereign nation-state in fostering the economic policies consistent with generalized scientific and technological progress in the welfare of a growing human population. The notions of human rights and of sanity, are congruent in the terms I have just summarized.

On this account, there could be no competent practice of theoretical and applied political economy, which is not premised upon the axiomatic foundation of the fostering of the discovery and application of newly discovered universal physical principles. As I shall show in the following pages, it is inevitable, that Galileo's widely-spread hoaxes respecting the physical organization of our universe, would have tended to foster a state of popular opinion consistent with the same "ivory tower" outlook, characteristic of presently accepted notions of financial accounting. The contrast between the principles of physical science presented by Johannes Kepler's founding of modern astrophysics, and the intentional fraud which Galileo circulated against Kepler's work, is the clearest example of the relevant political and scientific connections. This brings the central fallacy of contemporary financial accounting into clear focus. Stated in popular language, the

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Galileo was right, against those who accused and tried him, does not make Galileo an honest person, but merely a dishonest person who happened to suffer a disgusting injustice which did more damage to the Christian churches than it did to Galileo himself.



*Johannes Kepler (left) and Galileo Galilei. Galileo's empiricist hoaxes with respect to the physical organization of the universe, and his fraud against Kepler's work, express "exactly the same underlying mental disorder characteristic of both modern accounting practice, and of the doctrines of political-economy prevalent in today's universities."*

issue to be made clear in this way, is the matter of "How do we connect the dots among sense-impressions?"

The ground now to be covered here, is in part a restatement of a case presented in locations published earlier. The difference between those earlier treatments, and what is said here, is that our concern here is to show the causes for that self-destructive form of *mass political behavior* resulting from the state of mind induced by the popularization of the empiricist interpretation of the connection among sense-impressions. Insofar as I point out here certain physical principles which I have addressed adequately in earlier locations, I do that now for the purpose of exposing the issues of state of mind associated with those subject-matters, rather than those subject-matters as such.

The following points of review and summary are supplied in aid of that purpose.

## My Method

It is typical of my several original and other contributions to science, that my standpoint in physical science and art here, is the implications of the fact that the human species is unique among living species. This uniqueness is what I have defined as human nature. In other words, *the nature of the member of the human species*. This distinction rests upon the proof that

the human species is the only living type which is capable of willfully increasing, without limit, the potential relative population-density of its entire species, not only on Earth, but also within the Solar System and the universe at large. The effect of man's successful practice on this account, is measurable in terms of increase of man's power to exist as a species, in and over the physical universe, as measurable in physical terms, per capita, and per square kilometer of the cross-sectional area of the Earth's Vernadskyian biosphere.

Therefore, the only useful definition, the only scientific definition, of *the individual human will*, as distinct from the kinds of choices available to lower forms of life, is the choice of those forms of action, by means of which society increases its potential relative population-density. That potential is defined according to the measurable standard which I have just stated, once again, here. These forms of specifically human action occur uniquely in the following typical guises.

1. As a matter of universal principle, the specifically human will is expressed solely in two categorical forms: a) the validated discovery of *universal physical principles*, and b) the discovery of *universal principles governing those interactions among the sovereign cognitive processes of human individuals*,



*which bear upon choices of action which increase the potential relative population-density.*

Provably universal principles of Classical artistic composition, such as J.S. Bach's discovery and development of the universal principles of well-tempered polyphony, like the principles of artistic composition developed, typically, by Leonardo da Vinci, are typical of valid universal principles of artistic composition. There are also other aspects of statecraft, including the discovered principle of the sovereign nation-state republic, which have the exact same quality as universal Classical artistic principles, but which are not yet customarily recognized as being artistic principles. *No other forms of action than these two, universal physical principles and universal principles of Classical forms of artistic composition, can be right classed as expressing a specifically human will.*

2. The term "human will" is therefore rightly restricted in use, to signify a quality of mental activity which is specifically human, and not to be found among lower forms of life. This quality of will, is expressed by the forms of action which increase (e.g., change) mankind's potential relative population-density. Only the discovery or recognition of a valid universal principle, or of a technology derived from such a principle, alters the potential relative population-density in the indicated fashion. Classical artistic principles, as I defined that term, bears upon those aspects of the human will which enable mankind to cooperate in generating and applying valid discoveries of universal physical principle. Only those forms of action reflect the *specifically human* form of will.
3. Knowledge of universal principles can not be obtained by merely deductive modes of thinking; *they are generated solely by means of the perfectly sovereign cognitive powers of the developed individual human mind, and in no other way.* They are never generated by deductive methods, for example, and they are always experimentally validatable as universal principles.
4. Knowledge of universal principles is *communicated* solely in the same way such principles are originally discovered, by replication of the original act of discovery in the mind of another individual. They can not be communicated by deductive modes of argument.
5. The validity of universal principles, whether physical principles, or of the form of Classical artistic principles, is demonstrated by experimental tests of a uniquely specific type. Bernhard Riemann's argument on this point applies. Each qualifying such

principle, whether physical or artistic in quality, belongs to the form of multiply-connected manifold which Riemann described in his 1854 habilitation dissertation.

Certain qualifications must be added to Riemann's design, qualifications which I have stressed repeatedly in earlier published locations, and to which I shall give some relevant attention below.

6. The validity of a proposed universal physical principle involves special qualities of experimental considerations, from which we derive what should be recognized as the only valid systemic definition of *technology*.

As I have elaborated in numerous locations published earlier, the discovery of a valid universal physical principle features three primary elements. These are: A) The formulation of a paradox which has a definite physical basis, but which can not be resolved, deductively or otherwise, in terms of pre-existing opinion; B) The generation of an insight into a new principle, which, if proven, would solve the paradox; and C) The design of a successful experiment which shows conclusively the universalizable validity of the proposed new principle. Only the first and the last of these three steps coincide with the domain of sense-perception or with deductive modes of communication. The middle step, cognitive insight, can not be observed by means of the senses, nor defined by deductive procedures. The certainty of the existence and validity, or, *Socratic truthfulness*, of the act of insight, depends upon both the provoking paradox and the experimental validity of the proposed principle. The act of discovery itself, can be "seen" only by the cognitive powers of mind.

That is to emphasize, that by re-enacting all three steps in one's own mind, one can "see," with one's cognitive powers, the actual cognitive action taken by the mind of the original discoverer. By the repeated re-enacting of such acts of discovery of principle, as by a student in a Classical humanist program of education, one develops one's innate human potential for true knowledge of this uniquely cognitive quality. One can "see" such processes only in that way: the developed power of the cognitive potential of the individual mind for Socratic self-knowledge, self-consciousness. No other policy of education is competently human in quality.

For example, the ability of a performing musician to reproduce the intention of a Bach, Mozart, Beethoven, et al., depends upon precisely that kind of cognitive replication of the relationship among paradox and demonstrable resolution which can be known as having occurred in the mind of the original composer. Conductor Wilhelm Furtwängler sometimes referred to this as a principle of "playing between the notes." This conception of the composing and performance of Classical art, is essentially identical to the function of the

notion of the principle of *Mind*, respecting the definition of orbits, in Johannes Kepler's *The New Astronomy*. This quality of cognition-governed performance, is what sets Classical forms of artistic composition and their replication absolutely apart from all inferior, other forms of artistic composition. This is the only principled meaning of the properly used term "Classical."

7. Typically, conceptions which are usefully distinguished as *technologies*, arise in the process of experimental validation of universal principles. There will be, in the design of such an experiment, a novel feature which corresponds to the experimental proof of the principle at issue. The application of principles to new choices of materials, or combinations of assemblies or processes, will, similarly, define additional technologies associated with the principle. *Thus, the application of such technologies is included among the acts of the specifically human will.*
8. *These expressions of the specifically human will, identified and listed above, are principled features of a sane condition of the individual human mind.* Such acts of the sane mind, are reflected, in their effects, as an impulse for increase of the potential relative population-density of mankind, as measurable in relevant physical terms, per capita, and per square kilometer.
9. Thus, that composition of the sovereign nation-state's constitution and practice, when efficiently expressed as improvement of the general welfare, represents the healthy state of mind of the culture associated with both that form of state, and among the members of a community of principle among states which are united to the purpose of promoting the general welfare among them.
10. The issue tabled for this present report, is the matter of pathological states of mind of either entire societies, or of a controlling stratum of such a society. The popular opinion underlying the relevant acceptance of today's generally accepted modes of financial accounting, is typical of such pathological states of mind of the popular opinion of entire nations.

## Lunatics Squatting in Ivory Towers

The fundamental principle of geometry set forth in Riemann's 1854 habilitation dissertation, was unique. Yet, it was also an expression of a characteristic impulse reflected by a centuries-long tendency, a direction among the same scien-

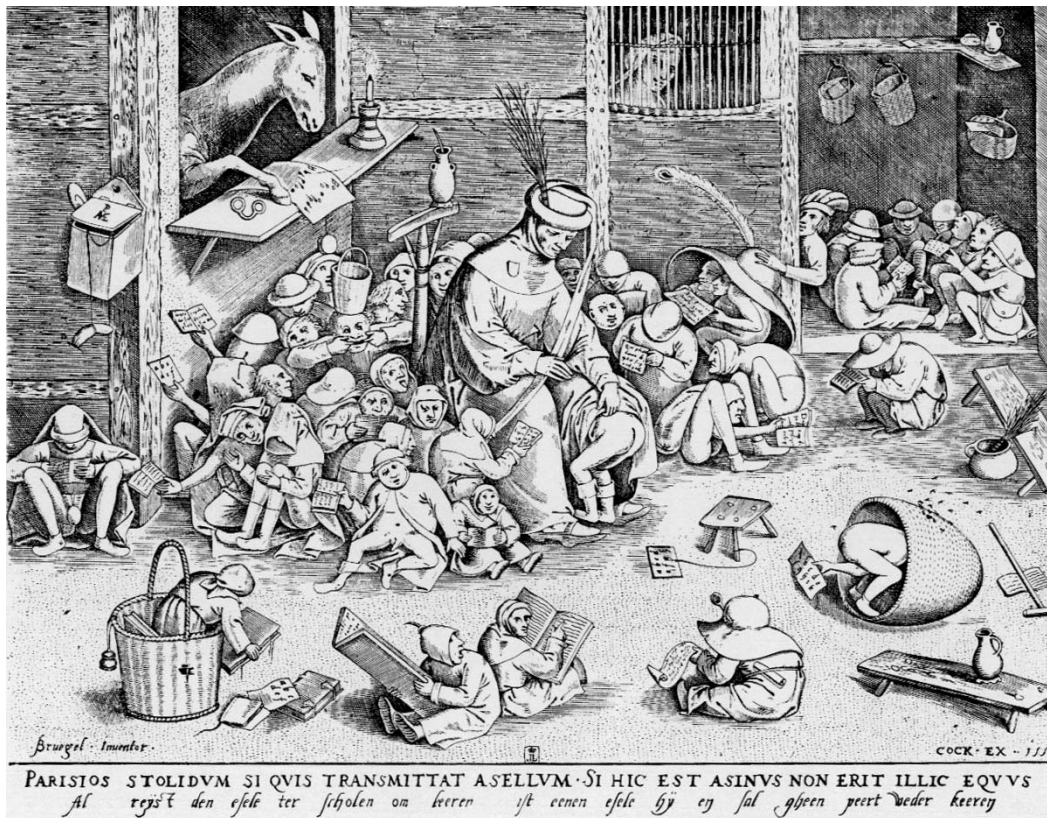
tists whose work populates the net progress of all European science. I mean the progress from Plato's Academy at Athens through such followers of Nicholas of Cusa's *De Docta Ignorantia* as Leonardo da Vinci, Johannes Kepler, Gottfried Leibniz, the circles of France's Lazare Carnot and Gaspard Monge, and Riemann's immediate predecessor in this field, Carl Gauss.

This principle, which can be recognized as implicit in such writings as Plato's *Timaeus*, was set forth frankly by Riemann, who showed that we must reject all arbitrary notions of matter, space, and time, such as those of Galileo, Descartes, Newton, Euler, et al. What is to be rejected, is such notions as adopting a so-called Euclidean geometry as the adopted "ivory tower" framework for conceptualizing real-life functions in the physical universe. Thus, Riemann, following the explicit argument against Euclidean geometry, by Gauss, Gauss's teacher Abraham Kaestner, and the Leibniz on whom Kaestner based himself, defined a universal quality of physical geometry. In this physical geometry, the so-called "ivory tower" axioms of the geometry and undergraduate physics classroom, must be discarded, and the notions of axiomatic principles of geometry limited to experimentally proven universal physical principles.

The notion of "action at a distance," as specified by Sarpi's lackey Galileo, and as copied by Isaac Newton and his followers, is among the most typical examples of modern society's attempts to explain the physical universe in "ivory tower" language. Galileo, who has, in effect, no conception of real physical processes, defines action at a distance, as occurring within an assumed "Euclidean space-time," and as among perceived objects of sense-perception.

That same pathological notion by Galileo, is typical of all modern empiricism and radical positivism. It is also the sole basis for the generally accepted academic teaching of the dogma of "free trade;" it is the implicit basis for the artificing of what are presently generally accepted forms of financial accounting. The specific root of both the Quality Adjustment Factor and the quackery of "bench-marking," is the "ivory tower" conception of space, time, and matter, as carried to a wildly lunatic extreme. It is the typical modern form of the delusion I have cited at the outset, the delusion that it is footprints which cause the existence of the people associated with those marks.

In the history of physics, the most celebrated, most direct and simple proof of the absurdity of the "ivory tower" notion of "action at a distance," has been provided by the successive development of modern astrophysics. That has been done, chiefly, by Kepler and Gauss. The succession, of Kepler's refutation of the incompetent methods used by Ptolemy, Copernicus, and Tycho Brahe, succeeded by Gauss's empirical proof, in connection with the discovery of the asteroid orbits, of Kepler's version of the Solar System, is the most convenient sort of conclusive demonstration of a comprehensive



*Lunatics squatting in ivory towers. Here: "The Ass at School," engraving by Peter Bruegel the Elder, 1557.*

case against the absurdity of the method of Galileo and Newton.

This version of the proof is doubly appropriate, since it was Newton and his associates who created today's widely repeated, but fraudulent argument for the toleration of empiricism in classrooms, in the form of their own outrightly lying denial of the fact that the discovery of the principle of universal gravitation was documented in detail in that *New Astronomy* of Kepler, which Newton and his associates had crudely plagiarized decades later.<sup>8</sup>

What Kepler presents, in his *The New Astronomy*, describes the Solar System as, in fact, a Riemannian form of what is called either a multiply-connected manifold, or a *physical* hyper-geometry. Kepler, there, shows Ptolemy, Copernicus, and Brahe as bunglers, because of their attempt to simply connect the dots between observed points in the schema of their observations: *the footprints*. Instead of the mere *a posteriori* curve-fitting on which those fellows had relied, Kepler's

concern, and accomplishment, was to determine what principle (*Mind, intention*) of the Solar System as a whole would require such orbits to come into existence. Of crucial significance, had been Kepler's denunciation of Ptolemy's fraudulent,<sup>9</sup> and Copernicus', and Tycho's clumsy errors, in their attempts to connect the dots among a series of observations, the attempt to define the orbital pathway with mathematical precision by conceptually crude, anti-scientific, "curve-fitting" methods. One among Kepler's scientifically crucial and devastating arguments on this account, was the experimental fact, that it would be impossible to predetermine a precise mathematical formula, for such simple reasons as the fact, that the number of sources acting upon the orbit of any body was not completely known. One must determine the orbital pathway by an approach entirely different than that of the cited three predecessors. It was through examining the implications of the elliptic character of the observed Mars orbit, that

8. Jonathan Tennenbaum and Bruce Director, "How Gauss Determined the Orbit of Ceres," *Fidelio*, Summer 1998. Contrast Kepler's discovery of universal gravitation, as elaborated in his *The New Astronomy*, to the attempted plagiarism of *The New Astronomy*, later, by Newton et al., resulting in the concoction of the "three laws," a concoction reflecting Newton's effort to explain Kepler's discovery entirely from the standpoint of Galileo's "action at a distance."

9. Claudius Ptolemy was, among his other faults, a hoaxster, who has been shown to have faked some of his observations, and reported falsely in ways intended to discredit the well-established solar hypothesis, well established centuries before Ptolemy's lifetime. When we take into account the vicious religious persecution, even in modern Europe, of those who questioned Ptolemy's hypothesis, we have a fair estimate not only of those who conducted that persecution, but also the apology offered for the method of argument which they employed to such effect.

Kepler was led to define a first approximation of a universal physical principle governing the determining of the orbits of which the Solar System is composed.

It was on the basis explicitly stated by Kepler, that Gottfried Leibniz became the first to define a calculus, unlike the simplistic and unworkable attempted imitation by Isaac Newton. In Leibniz's calculus, the smallest difference is never reducible to a linear form, that prohibition being exactly the warning which Kepler had specified in leaving the development of a calculus as a challenge to future mathematicians. The Kepler notion of actual Solar orbits was, following the earlier study of geometry, of quadrature of the circle by Cusa, the first application to physics of the notion of a truly non-linear function. Leibniz's original discovery of the calculus, was the first success in bringing the notion of non-linear functions, as expressed by the intrinsic non-linearity of an "infinitesimally" small interval, into the domain of non-linear mathematical-physical functions.

Amid this work, Kepler included one discovery which was to be proven crucial by new discoveries made at the beginning of the Nineteenth Century. By applying the universal physical principle which his treatment of the Mars orbit had provoked, Kepler defined the necessary existence of a missing planet, which must have lain in a specified quality of orbit, lying between those of Mars and Jupiter. Kepler insisted that such a planet must have been created, and must have been destroyed because of the adduced harmonic characteristics of that orbit. Two centuries later, Gauss, studying three short intervals of observed motion of what proved to be the asteroid Ceres, demonstrated the existence of the orbit which Kepler had prescribed for the missing planet, now referred to as the Asteroid belt.

Kepler's choice of method, and Gauss's, is paralleled by Mendeleyev's development of the periodic table of physical chemistry. How many modern students actually trace out the experimental method employed by Mendeleyev? How many know the systemic connection to the work of Louis Pasteur, for example? How many, like the duped admirers of the empiricist method of Galileo, Newton, et al., may have learned much, but actually know little or nothing, because, instead of knowing what they are talking about, they have merely learned to play the children's game of "connect the dots": to fill in between the dots, *the footprints*, without re-experiencing the actual rediscovery of the original discovery of principle?

From Galileo through Leonhard Euler and Immanuel Kant, and beyond, the empiricist enemies of the Cusa, Leonardo, Kepler, Leibniz tradition in science, have insisted upon an "ivory tower" universe, in which all principles could be derived, using only deductive methods, and "ivory tower" assumptions, as if at the blackboard. They have assumed, as did the influential Leibniz-haters Euler and Lagrange, that all knowledge of physics could be reduced to a universe in

which all action could be defined in terms of straight-line modes of action-at-a-distance: *connecting the footprints*. This was also the basis for the Seventeenth-Century origins of the doctrine of Galileo pupil Thomas Hobbes, and of what became known as the "free trade" dogma of John Locke, Bernard Mandeville, Adam Smith, and also the *laissez-faire* cult of the pro-feudal ideologue Dr. François Quesnay. Buried deep within such ideologies as theirs, an awful lunacy prevails, the same lunacy which underlies today's doctrines of financial accounting, the lunacy which is the principled intellectual cause for the presently onrushing collapse of the world's present financial system.

The specific lunacy to which we refer, is the core doctrine of "free trade" as specified by Mandeville, Adam Smith, and British Foreign Office official Jeremy Bentham. The core of the relevant argument runs as follows.

The argument of Mandeville, and the implicit argument of all empiricists on that and similar matters, is that it is the more or less random action, involving many thousands, or even billions, or more interactions, which lead to a determined kind of net result. Mandeville was most explicit, in insisting that, by this random principle, freedom to practice vices would be the most likely, and necessary way to produce good. The drug legalization, practiced against China, by the British monarchy, and proposals for drug legalization world-wide today, are premised upon that same argument used by Mandeville. Adam Smith's doctrine of "free trade" was based upon the same queer, pro-satanic logic, as was that of utilitarian and 1789-1794 British Foreign Office controller of French Jacobin terrorists, Jeremy Bentham.

Essentially, the argument of Physiocrat Quesnay was the same in form as that of the Adam Smith who plagiarized both Quesnay and Turgot; the only significant difference lay in Quesnay's choice of result. Implicit *Frondiste* Quesnay's argument was, that the universe is organized in such a way, that it is the aristocratic landlord's title to the ownership of his property, which is the cause for the landlord's profit, obtained from that agricultural domain. Smith, a lackey of the British East India Company, preferred the greedy pleasures of the Dutch and British merchant-banker class to the delights sought among Quesnay's beloved, parasitical, landed aristocrats.

Up to a point, the proponents of these kinds of lunatic argument in support of empiricism, present themselves, in the form of secretions of *idiot savants*, as being supremely logical, rabid advocates of pure deduction. However, when pressed into a corner, to explain how their random action in the small, might actually produce the beneficial outcome which they promise us, they become suddenly glassy-eyed. They show themselves, like Mandeville and Adam Smith, to be the wild-eyed lunatics they are at their core. The god of Mandeville and Smith, is a wild-eyed devil, akin to James Clerk Maxwell's and Norbert Wiener's mathematical

“demon,” the “invisible hand,” hidden behind the interstices of the statistically infinitesimal. It is that satanic demon, which is, for all among them and their followers, the Babylonian god they worship, a nasty *djinn* who manipulates the statistically accidental, thus to produce a universe under the imperial rule of greed and kindred pornographic lustings. In fact, the entirety of what historical records identify as the Eighteenth-Century British and French Enlightenment, was composed of raving madmen, like Bertrand Russell, Wiener, and von Neumann, of just this sort. Such are the free traders, and such is most of the practice of financial accounting today

The conventional academic sort of explanation of all this, is that so-called logic which the “free traders” and their like attribute to their social doctrines. That conventional view, is presented by them and their customary academic apologists, as nothing other than a product of solidly grounded materialism of the sort associated with the legacies of Galileo and Newton. The fact is, the social theory of these so-called economists, does not originate within the domain of physical science; rather, the origins of empiricist doctrines of physical science, are the kind of cockeyed social theory, also known as “philosophical liberalism,” and sometimes called “democracy,” which Hobbes, Locke, Mandeville, David Hume, Adam Smith, and Jeremy Bentham typify, echoing thus the ancient Athenian architects of the political assassination of Socrates.

Like the empiricists’ theories respecting nature in general, their ideas of physical science, are derived to be consistent with the way in which they think about the proper relationships of man to man. The origin of the order which Galileo’s and Newton’s doctrine attributes to the physical universe, is derived to conform to the social prejudices of such as lackey Galileo’s master Paolo Sarpi.

Take the case of the currently fashionable dogma rampant under the rubric of statistical thermodynamics, the dogma launched during the middle of the Nineteenth Century by Clausius, Kelvin, Grassmann, et al. That is to emphasize the doctrine of universal entropy associated with the so-called “three laws” of thermodynamics. It is essentially a form of superstition, essentially a continuation of the social doctrines of Hobbes, Locke, Mandeville, et al., from the Seventeenth and Eighteenth Centuries. Thus Clausius, Kelvin, and Grassmann begat Helmholtz, Rayleigh, et al., and also the statistical thermodynamics of Ludwig Boltzmann, from which the careers of Bertrand Russell’s acolytes Norbert Wiener (of “cybernetics”) and John von Neumann (of “systems analysis” and “artificial intelligence” notoriety), were manufactured. These are the footprints of the social theory of Hobbes, Locke, Mandeville, Adam Smith, François Quesnay, et al. embossed upon the body of physical-science doctrine.

To put the lunacy of empiricism into perspective, focus upon the issue of that notion of thermodynamics. Examine this from the standpoint of the science of physical economy.

Such a notion of a universal thermodynamic order (as distinct from describing a local phase-space condition) stands in contradiction to the most fundamental of the relevant experimental evidence. I must repeat myself in some part here, but it is necessary to do so, so that the argument on this point might be a properly organized one.

1. The primary fact of human existence, is that man is the only species which is capable of willfully increasing the potential relative population-density of its species as a whole.
2. In the history and known pre-historical record of the existence of the human species, this capability is expressed in terms of those forms of technologies which correspond to derivatives of discoveries of universal physical principles.
3. In the history and known prehistorical record of the Earth’s biosphere, there are three classes of what are fairly regarded as thermodynamical phenomena. A) Ostensibly non-living physical processes. B) Living processes in general. C) Human existence and activity. By the standards used by the errant Clausius et al., the first class is apparently predominantly entropic, and certainly at least relatively so, relative to living processes and to human activity. By the same standard, as defined by Vernadsky’s biogeochemistry, for example, living processes are categorically anti-entropic. By virtue of his cognitive processes, mankind represents a higher order of universal physical principle of an anti-entropic quality, than living processes otherwise.
4. Empiricism, like kindred “ivory tower” dogmas, not merely denies the existence of distinct physical principles of life and cognition, but insists, and usually with a great show of deductive fanaticism, that the existence of living processes has yet to be proven “scientifically” from the standpoint of empiricism and radical positivism.

Empiricists, especially of the most radical positivist types of “ivory tower” fanatics, insist that living processes are derived, that by a kind of evolution related to “free trade,” from mechanical interactions within the domain of non-living particles. Similarly, wild-eyed fanatics, such as Norbert Wiener, John von Neumann, and their devotees, have insisted upon an essentially mechanical origin of those processes which the physical evidence shows to be the action of a distinct universal physical principle of cognition.

The significance of those popularized empiricist objections, is shown to be, that living processes, even as modestly

defined on this account by Pasteur, Vernadsky, et al., are demonstrated to be independent of and superior to non-living processes. Similarly, the quality of cognition, unique to mankind, shows itself to be a distinct quality of universal physical principle of anti-entropy, which is independent of, and superior in power to the systemic characteristics of lower forms of life.

5. These immediately foregoing considerations lead us directly to the most crucial conception in all physical science. When mankind acts according to a discovered universal physical principle, that specific action is expressed as mankind's increasing power in and over the universe. This shows that the universe is obliged, as if by pre-design, to obey such human commands. That evidence is the sole basis in physical science for stating, echoing Plato's argument in his *Timaeus*, that the member of the human species is made in the image of the ruler, and creator of the universe.
6. In turn, since that creative act of cognition exists uniquely within the bounds of the sovereign individual human mind, the nature of man lies not in a characteristic of humanity considered primarily as a species, in the sense that lower forms of life may be so studied. The nature of mankind is located within the nature of the individual person, the sovereign cognitive nature of that person.
7. Thus, we have the conceptions of the composition of universal physical law as a Riemannian sort of multiply-connected manifold, a law which defines human nature, and also rigorously defines a principle of natural law, a notion superior in authority to any other concept of law.

## What Is Between Those Dots?

The typical questions at this point, would include: If the dots can not be connected by straight-line approximations, how are they to be connected? The answer, in brief, is that the connection between the dots must be conceived as congruent with the form of the action by means of which the connection is generated.

In physical science, this connection is represented by the discovery of validated universal principles. Respecting human action, including cooperation, in applying such physical principles, the validatable universal principles of artistic composition prevail. Both cases take us entirely out of the confines of a domain of deductive logic, and into a domain which Leibniz named *Analysis Situs*.

In Classical artistic composition, for example, the best typification of *Analysis Situs* is the role of metaphor in Classical modes of composition of poetry. The principles of well-

tempered polyphony developed by J.S. Bach, introduce notions of tuning and counterpoint which lie entirely beyond the rules of composition of vulgar doctrinaires such as Rameau, sterile pedant Fux of *Gradus ad Parnassum*, and the hoaxster Helmholtz.

The same point is reflected in the concluding portion of Riemann's 1854 habilitation dissertation, in his prohibition of any attempt to determine the characteristic physical-space-time curvature of a specific manifold by formal mathematical exercises, as if at the blackboard. Riemann insisted that such values can be determined solely by relevant types of experimental methods. The "gap" between the formal mathematical structures and the determination of that characteristic curvature, should be adopted as the Classic example of what really lies in the space between the dots.

Whenever we are led to an appropriate effort to find a direct connection between two matters which prior belief suggests ought to be deductively congruent, but which are not, we have defined an ironical "gap" in meaning between those two matters, sometimes a conflict in meaning of the same term or phrase. The true metaphor in Classical poetry, or the need for resolution of a lawfully generated dissonance, as according to the Bach-Mozart principles of the Lydian interval, in music, has such a form, the form of a true ontological paradox, as Plato's *Parmenides* typifies an ontological paradox. Such conjunctions, like the need for an experimentally defined characteristic curvature of a Riemannian manifold, typify propositions submitted to the mercies of what Leibniz defined as *Analysis Situs*.

In any idealized manifold which were properly susceptible of nothing more than deductive solutions, the feasibility of such solutions depends upon certain assumed preconditions. Chiefly, for such a case, we must assume that all of the axioms of physical space-time are given, and that they remain unchangeable during the interval of action being considered. If we also assume that the connections among the points of that manifold are simply continuous throughout, a linear portrait of events occurring within the bounds of that manifold were nominally feasible.

However, the moment we consider any change in the manifold, or encounter apparent discontinuities, linear connections are no longer feasible forms of real-world solutions to propositions stated. *Analysis Situs*, as defined by Leibniz, Riemann, and others, always corresponds to such a case. We are then compelled to enter the domain of a theory of gaps, discontinuities; that is the only competent definition of the term "non-linear" in mathematical physics. True Classical metaphor, as it forms the substance of Classical poetry, drama, and Classical composition after Bach, is typical of such well-ordered, non-linear domains. Kepler's condemnation of the linear methods of Ptolemy, Copernicus, and Tycho Brahe, expresses precisely such a recognition of what Leibniz later termed *Analysis Situs*.

For the purpose of this present report, the following sum-

mary is probably sufficient.

All among the significant transformations which occur within the domain of economy, are either of the non-linear form associated with *Analysis Situs*, or are actions to be judged from the standpoint of *Analysis Situs*. The non-linear characteristics include, generically, either physical principles, or principles associated with Classical artistic composition. These two, interacting types of characteristics define the domain within which all significant economic actions occur.

The standard of measurement of economic performance is that which I have stated at the outset: the increase of the potential relative population-density of the human species, as the effects are measurable per capita and per square kilometer. To understand the connections which prompt effects to be so judged, we must recognize the essentially non-linear connections associated with validated universal physical principles and social activity judged from the standpoint of methods of Classical artistic composition.

It was not merely ignoring those considerations, but ruthlessly violating the very idea of their existence, which has been the continuing cause for the recent thirty-five years process of corruption and impending disintegration of the world's presently hegemonic financial system.

## Who Are You, Little Man?

As I have elaborated the following point in previously published locations, the viewpoint I have just situated focuses attention on the heart of all political and moral issues, and therefore upon the axiomatic issues of political economy. This is not political economy as popular academic contentions define that subject, but, rather, emphasizes the axiomatic premises of political economy, the axioms of political-economy defined, primarily, as measuring the causes of changes in the increase of the potential relative population-density of mankind, as measured physically per capita and per square kilometer. As I have said, we are obliged, by this axiomatic standard, to recognize the crucial importance of distinguishing adult persons, and even entire societies, morally and intellectually, as variously infantile, childish, or relatively mature. This distinction is among the leading issues in statecraft.

In general, the degeneration of the U.S. economy over the course of the recent thirty-five years, is to be regarded as a descent of the strata of the population's presently political dominant generation of university graduates—the “Baby Boomer” generation, from the moral level of childishness rampant among the “Organization Man” types of the 1950s, toward infantilism. As I shall indicate, there is no exaggeration in that characterization; rather, facing the fact I have posed in this way, may prove key to the ability of the United States to outlive the presently onrushing collapse of the global financial system. In short, the road to survival means that they must suddenly grow up. One might hope, that the shocks of the onrushing financial collapse might prod them into doing so.

I mean, by infantile, childish, or mature, a view of per-

sonal moral and cultural development of the personality, as such distinctions are expressed in terms of where and how the individual locates his or her personal social identity with past, present, and future society. Reasonably moral adults locate their identities in respect to the outcome of their current personal decisions, or lack of decision, in the development and future of not only their own children and grandchildren, but in what is, in effect, the entirety of those future generations of their society. The individual who is truly and fully morally adult, like Plato's philosopher-king, locates his or her personal moral identity in the combined past, present, and future generations of all mankind. The morally matured Christian seeks to walk thus in imitation of Christ.

These moral distinctions should recall to mind what we have considered above, in contrasting a non-linear, even anti-entropic causal connection among observable events, to the simplistic, linear delusion of the empiricists and their like. Speaking in relative terms, in the extreme, the infant and child, insofar as they fall far short of the outlook of the matured personality, the philosopher-king, locate the mortal, biological individual's crude, bestial-like passions as the connection among sense-impressions. That contrasts the lower extreme, of those in such a larval state of development of their personality, to those in the desired, adult state of moral development. The lower, in that case, typifies the typical depravity of the adult who has not risen above the mental and moral condition of the empiricist or Physiocrat. Kepler's view of the organization of the Solar System, in contrast to the depraved hoaxster Claudius Ptolemy, and the honest but failed astronomers Copernicus and Tycho, represents a state of mind corresponding to the morally and intellectually matured personality.

All true scientific and artistic geniuses known to us from history, exhibit, as Cusa, Leonardo da Vinci, Leibniz, Bach, Mozart, and Beethoven do, both the model of the Classical Greek tradition, as in opposition to the Romantic, and the qualitatively superior moral outlook typified by Kepler's superior conception of the needed approach to understanding the lawful composition of our Solar System. They are able, early in their lives, somewhere in post-infantile, early childhood, to comprehend the entirety of their mortal life as it were but an instant in a simultaneity of eternity. Thus, for them, time and space dissolve in mere sequences of “before and after,” an instant expressed in the form “What shall I do with my life?” It is the habits first acquired in the development of that outlook, early in childhood, which drive the quality of personal self-development later to be recognized as the distinctive quality of our true geniuses.

Paradoxically, once we look at genius in that way, we must assess genius as the natural potential of every child. Unfortunately, in the non-genius, this specific commitment, sometimes described as “inner directedness,” does not emerge soon enough in the child's development. Where this does not occur, the habit of “other-directedness” stifles and stultifies the natural cognitive potential of the child; we have





*"Genius is the quality of insight which generates validatable revolutionary discoveries in science and Classical art-forms." Here: A Classical concert by the Niños Cantores and Schola Cantorum of Mexico.*

the relatively inferior quality of development of the individual's character, the quality which tends to make its victims prey to the influence of "popular opinion," rather than an inner-directed commitment to reason, and thus to truthfulness, that even in opposition to the forceful contrary expression of popular opinion by the relevant society.

This contrast is necessarily the case. Genius is the quality of insight which generates validatable revolutionary discoveries in science and Classical art-forms. Such discoveries are revolutionary, precisely because they overturn a relevant sort of prevailing opinion. As we witness in the instance of the destructive intellectual and moral defects of the human mind caused by habituation to the empiricist way of thinking, popular opinion, when it is opposed to truth, has the kind of corrosive effect on the victim's mental life, which is to be regarded as a mental disease. Notably, the seductive quality of mental diseases such as empiricism, lies in their appeal to the baser infantile impulses, as typified by "my personal pleasure," "my personal appetites," "my personal pain."

The child who remains morally at the level of infancy, the adolescent who remains morally childish, and the adult whose emotional and intellectual development is that of an adolescent, typify the generic forms of the most common types of mental diseases. Thus, we have the case of the adult who rejects concern for the policies of an imperilled nation, saying, with a swinishness typical of the type, "I can't be bothered with that; I have to worry about my interests, and those of my family and community!" Once we have reflected upon, and recognized those types of behavior as the mental

diseases they represent, we are able to recognize empiricism, and today's common practice of financial accounting, as typical of the kinds of mental disorders which can bring out the collapse, even the virtual self-extinction of the society so afflicted.

Thus, moral maturity exists only in that state of the individual mind which is implied, in English-language usage, by the poet Wordsworth's adoption of the phrase "intimations of immortality." It is only when the individual acts, as a mortal being upon the simultaneity of eternity, acts as if under God's eye, rather than as a hedonist, seeking to act thus to benefit universal human existence, that the person is being a truly adult human individual. It is when the members of society see one another in those terms of reference, see their society so, that a morally mature form of society will have come into existence.

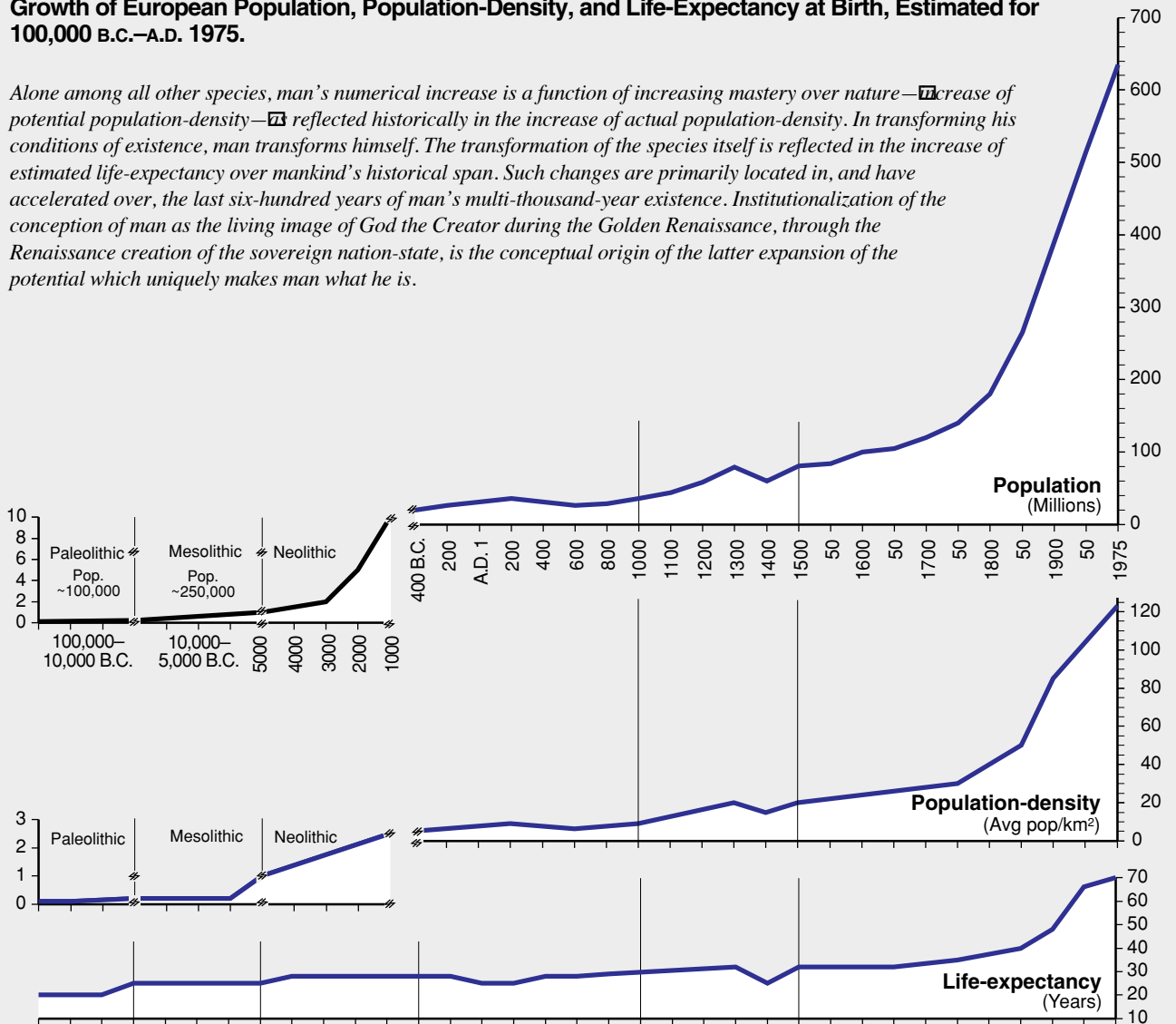
Man is intrinsically good by nature, endowed from birth with the equipment and impulses needed to produce a moral adult personality and a happy society. All of the principal, systemic disorders of society are derived from an abortion of the development of that inborn potential, from the lack of commitment to the development of that potential, from the moment of the infant's birth, by both the parents and the society as a whole. The object is to bring the infant and child to true adulthood, to the conception of one's self as functioning according to an intimation of immortality. Such is the obligation to promote the general welfare.

From this vantage-point, we may understand the role of cultures, and thus recognize that certain kinds of culture are

FIGURE 3

### Growth of European Population, Population-Density, and Life-Expectancy at Birth, Estimated for 100,000 B.C.–A.D. 1975.

*Alone among all other species, man's numerical increase is a function of increasing mastery over nature— $\square$  increase of potential population-density— $\square$  reflected historically in the increase of actual population-density. In transforming his conditions of existence, man transforms himself. The transformation of the species itself is reflected in the increase of estimated life-expectancy over mankind's historical span. Such changes are primarily located in, and have accelerated over, the last six-hundred years of man's multi-thousand-year existence. Institutionalization of the conception of man as the living image of God the Creator during the Golden Renaissance, through the Renaissance creation of the sovereign nation-state, is the conceptual origin of the latter expansion of the potential which uniquely makes man what he is.*



All charts are based on standard estimates compiled by existing schools of demography. None claim any more precision than the indicative; however, the scaling flattens out what might otherwise be locally, or even temporally, significant variation, reducing all thereby to the set of changes which is significant, independent of the quality of estimates and scaling of the graphs. Sources: For population and population-density, Colin McEvedy and Richard Jones, *Atlas of World Population History*; for life-expectancy, various studies in historical demography.

Note breaks and changes in scales.

viciously pathological, cultures from whose influence humanity is to be rescued. The study of cultures, and of their processes of evolution and devolution, thus appear to the literate person as the standpoint from which statecraft is to be defined for practice. The beginning of a sane practice of statecraft, is to recognize that certain cultures are relatively good, certain others absolutely, or relatively bad, and still others relatively better or worse than those with which they might be compared. Most importantly, we must never regard a cul-

ture as of a fixed type, but must assess it from the standpoint of the comparative level it represents, and, more important in the long run, how it is changing itself, for better or worse.

The essential problem of today's crisis, is, that, during the recent thirty-five years, the culture of globally extended European civilization, that of the U.S.A. most notably, has changed itself for the worse. There were defects earlier, even serious defects, but, at least, it was a culture which had, on balance, the moral fitness to survive. Unless we are now pre-