

Why most Nobel Prize economists are quacks

by Lyndon H. LaRouche, Jr.

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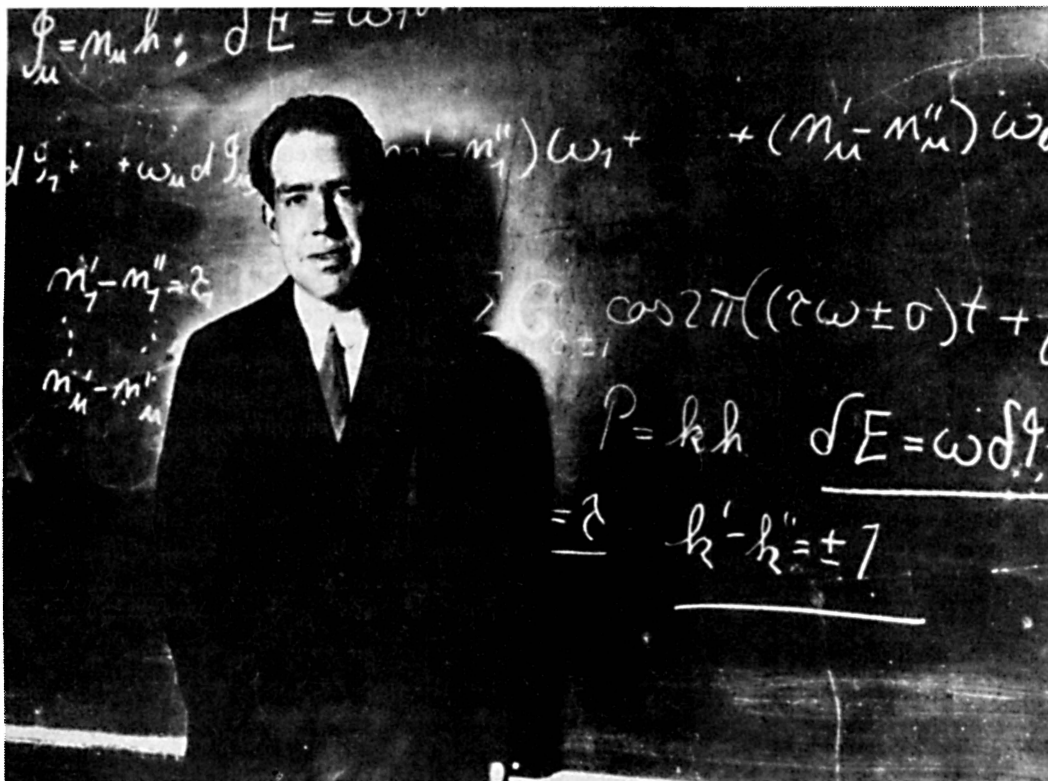
Today, every nation on this planet is under the domination of a single, worldwide, monetary and financial system: the so-called International Monetary Fund (IMF) system. That system is about to go out of existence. The worst financial collapse of the Twentieth Century could erupt within as soon as weeks, or, in the unlikely case, the disintegration of the system could be postponed until as late as early 1997.

Nothing can save the present monetary and financial system. It could be gobbled up in an orderly bankruptcy reorganization conducted by governments, or, if governments are, as Hamlet said, too “pigeon-livered” to do this, it will reach the point that the system simply disintegrates within as short a span as 24 to 72 hours. That is to say, it would vanish as if in a cloud of smoke: in an implosion of what is called “reversed financial leverage.”¹

That information should come as no surprise; any competently trained economist would agree immediately with what has just been written here. They, and all honest mass news-media, would have been warning governments of this danger over years, even decades. To illustrate that point: The present writer has forecast just this danger—repeatedly, consistently, and accurately—during the past 30 years; during the mid-1970s, he found concurrence with his own forecast, on the general nature of the danger, in his personal meetings with such notable figures as the former economic adviser to President Charles de Gaulle, the distinguished Jacques Rueff. During the recent several years, another of the rare species of competent economist, France’s Nobel Prize-winning economist, Maurice Allais,²

1. A collapse best described by the same sets of equations used to describe a chemical or nuclear explosion.

2. See Maurice Allais, *Le Figaro*: April 26, May 9, June 1, and Nov. 15-16, 1994. Allais also has the special distinction, of being the only sane person yet to receive the Nobel Prize for Economics.



The bankruptcy of "classroom mathematics": Radical positivist Niels Bohr, father of the Copenhagen School in physics, followed in the footsteps of the occultist Isaac Newton. This tradition has produced as many quacks in economic science as it has in physics and mathematics.

has been warning publicly, and repeatedly of this imminent danger.

Yet, until a few months ago, most generally recognized economists, worldwide, showed themselves not competently trained. Until the aftermath of both the Orange County, California and Mexico outbreaks, they consistently derided such warnings—although, at that time, the symptoms of an on-rushing, early general financial chain-reaction collapse, echoing the famous, Weimar Germany Reichsmark collapse of 1922-23, were already the dominant features of world markets.

Now, over the course of the period since the Orange County bankruptcy and the Mexico crisis, a significant and increasing number of prominent economists and bankers nod sadly, and agree: The system is coming down. One might respond to that: Better late than never; should we not respond, instead: that the economics profession and the bankers have failed miserably over the past 25 years, or longer? Must we not say, that they should have foreseen this coming decades ago, and warned governments and the public of the consequence of continuing the mistaken policies already under way back then?

To recognize why otherwise educated and intelligent people, when confronted with generally accepted economics dogma, so often behave like credulous spectators at a carnival side-show, we must make clear certain deep-rooted false, empiricist, assumptions about science. These are the prevalent, mistaken assumptions which have shaped popular opin-

ion on the subject of social theory in general and economics in particular. First, consider the subject-matter whose mention terrifies popular economic opinion today.

The facts just referenced pose three crucial questions of policymaking to the U.S.A.'s and other governments. 1) Why did virtually all of the most respected professional economists and bankers of the world fail so contemptibly, over a period of 30 years? 2) Why did we tolerate, over a period of 25 years, economic, monetary, and financial policies whose foreseeable inevitable consequence was a collapse of the physical economy of the planet, and also, inevitably, the worst monetary and financial collapse in European history since the mid-Fourteenth Century, when England set off the chain-reaction collapse of the Lombard debt-bubble of that time?³ 3) Why

3. See Barbara Tuchman, **A Distant Mirror: The Calamitous Fourteenth Century** (New York: Alfred A. Knopf, 1978); also, Miriam Beard, **A History of The Business Man** (New York: MacMillan, 1938). Over the hundred years preceding that collapse of the "Lombard" debt-bubble, since the A.D. 1250 death of the Holy Roman Emperor Frederick II, Europe had been gripped by the rise of a Venice-controlled "Black Guelph" faction, and the effects of the invasion of Venice's ally, Genghis Khan's Mongols, from the east. By the time of the death of the anti-"Black Guelph" political leader, Dante Alighieri, all western Europe lay prostrate under the heel of Venice's "Black Guelph" agents, notably the ultra-usurious Lombard bankers—the, so to speak, Paul A. Volckers of their time. Miss Beard properly highlights the case of two of these swindlers, known by their French cognomens, "Biche" and "Mouche." Among the more disgusting cases of belated resistance to Venetian usury was England, which had been virtually a "suburban development project" of Venice's bankers since the relevant capitulations of comprador-kings Edward II and Edward III. Then, mid-century, came

do most governments of the world, and also most “popular opinion,” support the policies of such transparently lunatic economic dogmas as those of former British Prime Minister Margaret Thatcher, Harvard’s Prof. Jeffrey Sachs, Sen. Phil Gramm, and U.S. House Speaker Newt(ton) Gingrich?

1. The present economic crisis

Before attempting to answer the series of questions we have just posed, consider the relevant most crucial facts about the presently skyrocketing, global, financial and economic crisis. The data upon which the following summary is premised are the standard statistics publicly available to every government and leading economist in the world.

To those statistics apply the following procedures, for the purpose of comparing U.S. per-capita income and output during the interval 1956-94. Reduce the publicly available data used, to the form of values expressed as quantities per capita,⁴ per family household, and per square kilometer of relevant land-use.

Define input as consumption by persons, by households, by agriculture, by mining, by basic economic infrastructure, by manufacturing, by construction, and by allowable ratios of employment for sales and administrative functions of both government and the private sector. Use U.S. data for 1956 as the standard of comparison for “allowable ratios of employment for sales and administration of both government and the private sector.” This yields “market baskets of consumption” for persons, households, infrastructure, production, and sales and administration: all, of course, per capita, per family household, and per square kilometer of relevant land-use. (See **Table 1** for 1967 figures.)

Define output as the production of the items contained in the market-baskets of consumption.

The content of these market-baskets is limited to useful physical goods, measured in physical (not monetary) units, plus three elements of infrastructure indispensable for maintaining and improving the demographic characteristics of the family household, and for maintaining and improving the productive powers of labor: education, health-care delivery, and science and technology as such.⁵

the time that the King of England, like the voters of Orange County, California more recently, repudiated England’s debts to the Lombard House of Bardi, Biche’s and Mouche’s employer, and the entire banking system of Europe went promptly belly-up, in a chain-reaction of Fourteenth-Century “reversed financial leverage.”

4. I.e., per capita of total available labor-force.

5. For example, to maintain the net rate of growth of physical productivity (per capita of total available labor-force, per family household, and per square kilometer of relevant land-area) at circa 1963 levels, approximately 5% of the total labor-force must be employed in functions of physical science and engineering. This references the comparison of three bench-mark, developed economies (the U.S.A., Germany, and Japan) for the interval 1967-70. If the level of employment for technological progress, and in related machine-tool sector categories, drops below that ration, the economy will suffer an entropic physical-economic net decline.

The assessment of these market-basket requirements is implicit. The relevant question is, what would be the actuarial impact upon demographic characteristics of family households and productivity (ratio of output to input of these market-basket contents), were the contents of some among the total spectrum of market-baskets to be increased, or decreased? Define “implicit economic equilibrium” as a secular trend corresponding to a rate of physical economic growth, measured in terms of demographics and output-to-input ratios, of about 5% (physical-economic) growth per annum.

Employ the suggestive imageries of the undergraduate science classroom; identify that “implicit equilibrium” level as representing the “energy of the system” of the physical-economic process at that interval of the continuing process. Thus, continuing to employ the same symbolism: The ratio of output to input, implicitly defines a ratio of “free energy” to “energy of the system.”⁶ This symbolism requires us to state that the healthy, non-degenerative (“sustainable”) phases of an economic process, are *characteristically* “not-entropic.”⁷

6. Do not overlook a crucial point implied here. What does society do with the “free energy” margin? A sane society reinvests most of it not only for expanding the economy in scale, but also in increasing the relative content of the energy-of-the-system, per capita, per household, and per square kilometer. Thus, the capital-intensity and power-density requirements of a “sustainable” economic process are continually increased. To maintain a “constant” minimum ratio of “free energy” to “energy of the system” over successive epochs of the process, requires a corresponding increase in the physical margin of output available for investment. This latter constraint is satisfiable by no other means than advances in productive and related technologies. The same challenge is presented by the apparent relative finiteness of what an existing level of technology regards as required natural resources; this constraint can be overcome solely through the same means: advances in productive and related technologies.

7. The system is actually “not-entropic,” not merely in the symbolic, but the strictly physical sense. “Not-entropy” is employed here in a sense distinct from Prof. Norbert Wiener’s silly derivation of his term “negentropy” from Ludwig Boltzmann’s H-theorem (Norbert Wiener, *Cybernetics* [New York: John Wiley & Sons, 1948]; see Morris Levitt, “Linearity and Entropy: Ludwig Boltzmann and the Second Law of Thermodynamics,” *Fusion Energy Newsletter*, September 1976, pp. 3-18). The measure of the not-entropy of a system is implicitly supplied by the mathematician Georg Cantor (n.b., *Beiträge zur Begründung der Mannigfaltigkeitslehre*, in **Georg Cantor: Gesammelte Abhandlungen mathematischen und philosophischen Inhalts** [Berlin-Heidelberg: Springer-Verlag, 1990], pp. 282-356). The mathematical representation of the relative not-entropy of a physical process is effected through a comparative study of a increase in the relative cardinalities of two crucially distinct successive states of a system: e.g., the implicit increase of the density of implicitly enumerable mathematical discontinuities per arbitrarily chosen interval of action of the process. The cause for a “sustainable” increase in the productive powers of labor, in a physical economy, is the realized increase in those forms of knowledge (i.e., cumulative discoveries of valid principle) which produce the *effect* of technological progress. This function for “not-entropy” was discovered by the present writer during the course of a project (1948-52), prompted by a determination to expose the fraud of Wiener’s fraudulent claim to represent human knowledge by the mechanical means of statistical “information theory.” The present writer employed Cantor’s work to illuminate certain deeper implications of Bernhard Riemann’s 1854 habilitation dissertation, “On The Hypotheses Which Underlie Geometry,” (*Über die Hypothesen, welche der Geometrie zu Grunde liegen*, in **Bernhard Riemann’s Gesammelte**

TABLE 1

The decline of the U.S. market basket

	1960	1963	1966	1970	1980	1990
Capital goods						
Fertilizer	2.00	1.75	1.39	1.29	1.36	1.26
Construction machinery	1.00	0.93	0.83	0.97	1.19	1.84
Mining machinery	1.46	1.72	1.48	1.53	2.18	3.00
Oilfield machinery	1.28	1.25	1.17	1.03	1.27	1.61
Industrial construction	1.38	1.38	0.86	1.31	1.41	2.65
Ocean-going shipping	0.30	0.24	0.99	0.07	0.06	1.05
Household goods						
Textiles	0.89	0.88	0.92	1.25	2.26	2.90
Shoes, leather	0.86	0.90	0.95	1.17	1.97	3.26
Passenger cars produced	1.14	1.05	0.97	1.30	1.51	1.74
Residential construction	1.16	0.90	1.16	0.96	1.03	1.14
School construction	1.12	1.17	0.98	1.28	2.69	2.00
Hospital construction	1.67	0.97	1.09	0.91	1.38	1.20
Intermediate goods						
Copper	26.03	28.54	22.85	19.81	29.06	22.17
Nickel	0.94	1.09	0.99	0.87	1.25	52.89
Bauxite	4.75	6.98	13.01	11.63	17.71	65.26
Hydraulic cement	3.87	3.97	3.77	3.89	4.29	3.68
Crude steel	1.76	1.93	1.62	1.71	2.24	1.74
Natural sulfur	3.57	4.05	3.52	3.63	4.54	8.44

This table shows the relationship to a 1967 standard, of a selection of capital goods, household goods, and intermediate goods which are part of the market basket of consumption of the U.S. economy. The numbers are calculated based upon the greater of consumption or production, then indexed to 1967. The number in the table, represents the number by which the consumption in that year should be multiplied, to meet the 1967 market basket standard. Figures over 1.00 show a shortfall, while figures under 1.00 show a surplus.

For example, for fertilizer consumption in 1990 to have met the 1967 standard, consumption would need to have been 1.26 times actual consumption.

Source: EIR market basket studies

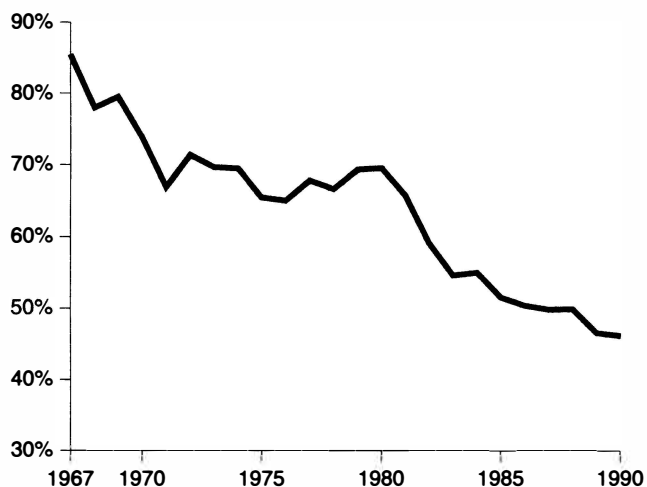
By that standard, using nothing other than the official statistics which are generally available to all professionals and relevant governmental and private institutions: The U.S. economy has been in a continuing state of physical-economic decline over the entire period, from 1967-70 to 1992-95.⁸ (See **Figures 1-3**.) Overall, the relevant available statistics are sufficient to show, that the same trend is characteristic of the world-economy taken as a whole. The same array of statistics shows, that although there were tendencies in this disastrous direction in the U.S.A. prior to 1963, it was a package of radical policy-changes set into motion during the 1964-72 interval, which has been responsible for the persisting net decline of the entire world's physical economy since 1972.

During the 1972-95 period to date, the percentile of the total labor-force employed in producing what we have identified, above, as "energy of the system," has been successively shrunken (see **Figure 4**), while the physical productivity of the labor still employed in these categories has also been suc-

Mathematische Werke, Heinrich Weber, editor [New York: Dover Publications, Inc., 1953], pp. 272-287). Hence, the application of Riemann's work to solve the problem of adequate representation of the function earlier defined by this writer, became known by the seemingly anomalous, but descriptively accurate "LaRouche-Riemann Method."

8. See Christopher White, "NAM's 'Renaissance' of U.S. Industry: It Never Happened," **EIR**, April 14, 1995.

FIGURE 1

Employment of operatives as percentage of actual requirement

cessively shrunken over this same interval (see **Figure 2**).⁹ This has been true in the U.S.A.; it is also, if even more em-

9. Ibid. See, also, Christopher White, "LaRouche's Ninth Economic Forecast—One Year Later," **EIR**, July 7, 1995.

FIGURE 2

Percent of actual workforce required to produce 1967-style market basket

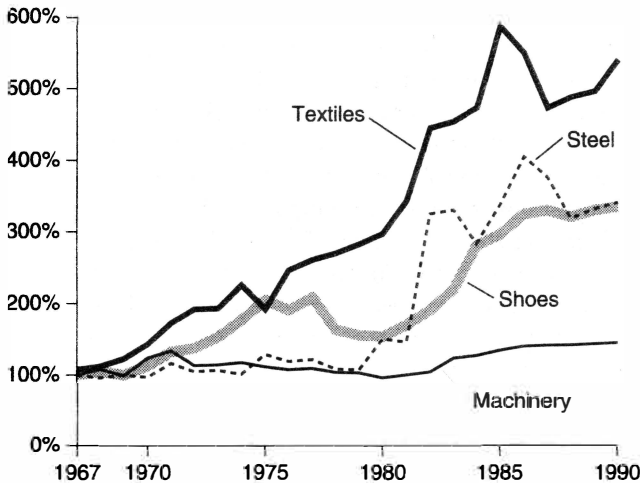
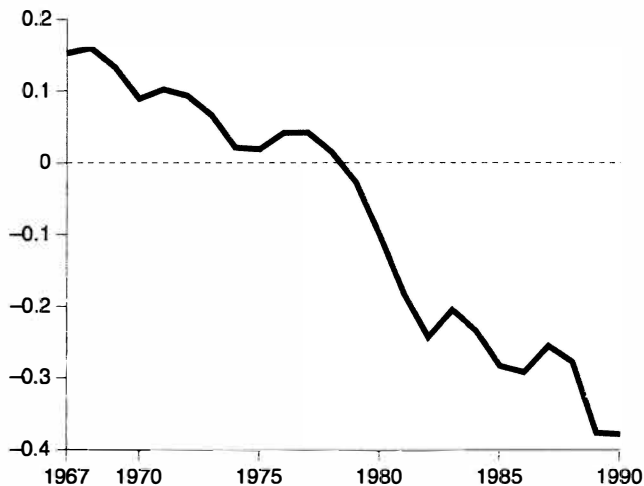


FIGURE 3

Financial profit ratio of the U.S. economy

(for unit value, see text)



phatically, the case for the planet taken as a whole.

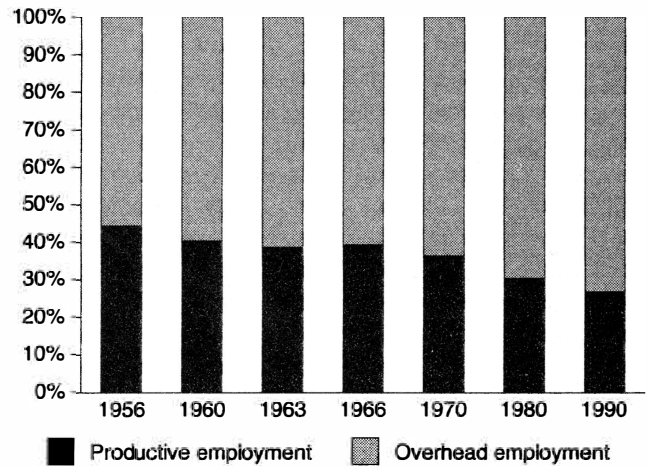
Next, compare the physical-economic developments and trends with the corresponding arrays of monetary and financial data. Begin with the simplest comparison: shifting patterns in the ratio of foreign trade to foreign-exchange turnover. After that, turn to the internal mechanisms of finance itself.

In 1976, the import-export trade of the U.S.A. accounted for a reported 23% of the total daily U.S. foreign-exchange turnover. Following the disastrous initial impact of the lunatic

FIGURE 4

U.S. workforce—ratio of workers in overhead vs. productive employment, 1956-90

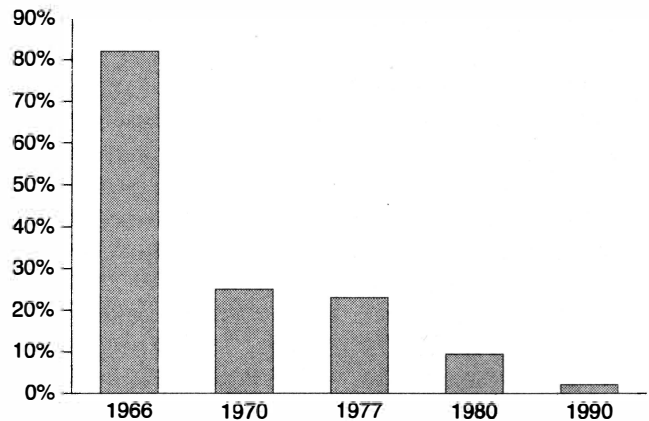
(percent of total labor force)



Sources: *Historical Statistics of the United States*, Bureau of the Census, 1975; Department of Labor, Occupational Employment Division, and Bureau of Labor Statistics, *Monthly Labor Review*; Department of Education, National Library of Education; Department of Health and Human Services, Bureau of Health Professions; American Nurses Association.

FIGURE 5

Falling value of U.S. merchandise trade as a percent of U.S. foreign exchange transactions, 1966-90



Sources: Bank for International Settlements surveys (1986, 1989, 1992); U.S. Federal Reserve surveys (1977, 1980, 1983); GATT.

October 1979 policy changes introduced by Federal Reserve Chairman Paul A. Volcker, by 1981, the trade factor in foreign exchange turnover had dropped to about 5% (see Figure 5). By 1992, under President George Bush, the figure had

dropped to less than 2%; for mad Margaret Thatcher's Britain, the figure had dropped to about half of 1%, and the world average had declined to about 2%. Today, taking into account "off-balance-sheet" derivatives transactions, it is safe to say, without fear of exaggerating the case, that total world trade accounts for less than 1% of daily world financial turnover.

In sum: The world's monetary and financial systems have been "de-coupled" from the real economy. Officially reported "economic growth" is a hoax, for two very obvious principal reasons. First, Gross National Product/Gross Domestic Product estimates, the figures used to report putative economic growth, are based on estimates of *monetary* Value Added; therefore, since the monetary-financial system has been de-coupled from the real economy, GNP and GDP estimates, even if they were honestly compiled, have a corresponding degree of irrelevance to any discussion of national economic health. Second, of course, governments and related agencies lie—with greater abandon, each passing year—in every statistical analysis of this sort.¹⁰

That de-coupling of money and finance from real economy is built into the changes in policy-shaping trends of the past 30 years: since the so-called "cultural paradigm-shift," which began as an orchestrated mass sociological phenomenon during 1964. The anti-science (anti-rationalist), "post-industrial," and "neo-Malthusian" trends introduced into the fevered, sex-crazed, and pot-soaked brains of (admittedly only) a majority among campus-based anti-war protesters during the 1964-72 interval, are exemplary of this part of the problem.¹¹ From about 1966, the London Tavistock Insti-

tute's influence succeeded in forcing initial major cutbacks in the U.S. science-driver (space) program, arguing that the success of space projects had inspired too many Americans with a deplorable liking for not only science, but also rationality in general.¹² The same year, the first neo-Malthusian proposal for making population control an issue of U.S. foreign policy was introduced into the U.S. State Department.¹³ During that period, Rep. George Bush (R-Tex.) earned the nickname of "Rubbers" for his zealous prosecution of the cause of birth control.¹⁴ By 1967, Zbigniew Brzezinski contributed his own "New Age" epiphany: his conversion from Christianity to the "Third Wave,"¹⁵ to Norbert Wiener's, Robert Theobald's, Alvin Toffler's, and looney Lord William Rees-Mogg's neo-paganist¹⁶ cult of "information theory."¹⁷

These and related mass-brainwashing efforts prepared the way for the crucial event of the 1964-72 transition to a "New Age": the Aug. 15-16 decisions of the U.S. Nixon administration, de-coupling the U.S. dollar from the Bretton Woods gold-reserve standard. That decision established, preemptively, a worldwide "floating exchange-rate" monetary order, to replace the pro-industrial monetary system con-

latter included prominent associates of MK-Ultra's Gregory Bateson, and his sometime-wife, Dame Margaret Mead. See **Dope, Inc.** (Washington, D.C.: Executive Intelligence Review, 1992) for the links among MK-Ultra, et al., and the circles which organized the mid-1960s mass-distribution of LSD-25 to university campuses around the U.S.A. Margaret Mead and MK-Ultra's Gregory Bateson, for example, were associates of Bertrand Russell and Robert M. Hutchins, in the 1938 launching, at the University of Pennsylvania, of the Unification of the Sciences project, one of the principal anti-science feeder conduits into the post-World War II launching of the "New Age" counterculture.

12. See the London Tavistock Institute's "Rappaport report" on the effects of the U.S. space program.

13. Anticipating U.S. Secretary of State Henry A. Kissinger's overtly genocidal policy-outline of 1974, **National Security Study Memorandum-200: Implications of Worldwide Population Growth for U.S. Security and Overseas Interests**, Dec. 10, 1974 (unpublished: available in the National Archives, Washington, D.C.).

14. See "Rubbers Goes to Congress," pp. 186-213 of Webster G. Tarpley and Anton Chaitkin, **George Bush: The Unauthorized Biography** (Washington, D.C.: Executive Intelligence Review, 1992).

15. Cf. Zbigniew Brzezinski, **Between Two Ages: America's Role in the Technetronic Era**, Prepared Under the Auspices of the Research Institute on Communist Affairs, Columbia University (New York: Viking Press, 1970).

16. See Lord William Rees-Mogg, "Dogmatic Without Dogma: Many of the New Forms of Religion Are Breaking Away from Hierarchies in the Search for Authenticity," *London Times*, July 13, 1995. Rees-Mogg is a devotee of Alvin Toffler's "Third Wave," and a leading backer of U.S. House of Representatives Speaker Newt(ton) Gingrich. He is also a vilely hateful enemy, together with Conrad Black's *London Telegraph*, and the **American Spectator**, of U.S. President Bill Clinton.

17. Lord Rees-Mogg has proposed that 95% of the population should receive no education at all. He has proposed that the educated 5%, creating Alvin Toffler's "information" in isolated places, such as perhaps the islands of the English Channel, will supply the future world all the needed wealth of a global "Third Wave" utopia.

10. On massive fraud in official economic-growth reports and quarterly forecasts by the Federal Reserve System and U.S. Department of Labor, see Lyndon H. LaRouche, Jr.'s Democratic presidential-nomination campaign TV address of Feb. 4, 1984: "Stopping the Worldwide Economic Collapse," published by The LaRouche Democratic Campaign in *A Program For America*, 1985.

11. The two most exemplary of influential events of 1964, are the publishing of Robert Theobald's **The Triple Revolution** and the staging of the imported "Beatles" on CBS's "Ed Sullivan Show." That book was, together with Rachel Carson's fraudulent **Silent Spring** (New York: Houghton Mifflin, 1962), the opening salvo in the effort to launch a mass-based anti-technology movement under the rubric of "post-industrial society." (As Environmental Protection Agency head William Ruckelshaus admitted, in ordering the virtual banning of DDT, his decision to capitulate to Rachel Carson's dupes on this issue, was a political decision, in defiant disregard of the scientific evidence supplied to his committee.) **The Triple Revolution** was a Ford Foundation-lubricated product of Bertrand Russell crony Robert M. Hutchins's Center for the Study of Democratic Institutions. What is recognized as the "rock" cult-fad spread since that 1964 appearance of the Beatles, was a joint creation of satan-cultist Aleister Crowley's followers and the "wise guy" financier interests of the recording and concert mafia. Even a decade and a half earlier than 1964, through his fight against the irrationalist cult-dogma of "information theory," this writer was already familiar with the establishment circles who played a key role in steering the anti-civilization cultural-paradigm shift of the 1960s and 1970s. In Boston, this featured Air Force- and RAND-funded projects at MIT's RLE; in the New York City Metropolitan area, this circle of plotters was typified by a series of seminars convened under the sponsorship of the Josiah Macy, Jr. Foundation. The

tracted at Bretton Woods.

The original Bretton Woods agreements were formally broken at the Azores monetary conference of 1972. The 1973-74 "oil-price shock," conducted by Britain's London petroleum-marketing cartel, with assistance from U.S. Secretary of State (and British agent of influence) (Sir) Henry A. Kissinger,¹⁸ either wrecked or severely damaged the industrial economies of the world, including that of the U.S.A. The effects of the London "oil-price shock" caper, led to the Rambouillet monetary conference of 1975, at which the looting of economies through "floating exchange-rate" speculation was apotheosized as an immortal god of IMF Olympus.

The next decisive development leading into the presently onrushing collapse, occurred in 1979. In spring of that year, while campaigning¹⁹ for nomination as the new U.S. Federal Reserve chairman, Paul A. Volcker announced that he considered "controlled disintegration of the [world] economy" an acceptable policy for an incoming Fed chairman. Those words, and Volcker's later practice as Fed chairman, echoed the proposals detailed by Fred Hirsch in the New York Council on Foreign Relations 1975-76 *Project 1980s* outline of policies being specified for the incoming administration of President Jimmy Carter; Carter appointees Cyrus Vance and Zbigniew Brzezinski had been key project coordinators for that CFR policy-planning. Beginning October 1979, Fed Chairman Volcker applied Hirsch's "controlled disintegration of the economy" with full and sudden force: zooming prime interest-rates into the stratosphere of usury, way above the rate of profit available in any known honest form of business enterprise. Since the ruinous effects of the 1979-83 implementation of Volcker's measures, there has been an increasing rate of net flow of financial and real (physical) capital, out of the productive sector, into the realm of pure financier speculation.

The Volcker measures, together with two disastrous, ad-

18. There is a continuing, hysterically lying effort from high-level mass news-media and other circles, to deny the conclusive evidence, that former U.S. Secretary of State Henry Kissinger has been, officially, an agent of influence of the British foreign-intelligence service during more than 50 years to date, since early days in Wilton Park training, at Harvard. See Henry A. Kissinger, "Reflections on a Partnership: British and American Attitudes to Postwar Foreign Policy," official transcript of his keynote address delivered on the occasion of the 200th anniversary of the founding of the British foreign service by Jeremy Bentham, delivered at Chatham House (Royal Institute for International Affairs), May 10, 1982 (Washington, D.C.: Center for Strategic and International Studies, 1982): "In my White House incarnation then [1969-77], I kept the British Foreign Office better informed and more closely engaged than I did the American State Department. . . ." The Harvard Wilton Park unit under British agent of influence William Yandell Elliot, Kissinger's trainer, is a subsidiary of British foreign intelligence's Chatham House. For an elaboration of the treasonous mindset which Kissinger acquired at Harvard's Wilton Park unit, see Henry A. Kissinger, *A World Restored: Metternich, Castlereagh and the Problems of Peace 1812-1822* (Boston: Houghton Mifflin, 1957).

19. In Britain, naturally.

ditional pieces of legislative lunacy, the St Germain-Garn and Gramm-Rudman bills, sent the U.S. economy on a reeling, "junk bond" orgy of financial looting and speculation, through 1982-87. The October 1987 stock-market collapse signalled the coming end of the "junk bond" phase, and inaugurated that "financial derivatives" bubble which has made the early doom of the existing monetary system inevitable.

To complete the sketch, showing why the early collapse of the system, during the coming months, is now inevitable, examine the ironies of the derivatives bubble itself.

At the core, what is called, euphemistically, "investment" in the financial-derivatives form of "futures," is somewhat less reputable than gambling at the tables of a Monte Carlo or Las Vegas casino. It has been fairly described, repeatedly, by Maurice Allais as a casino economy.²⁰ On at least two public occasions, prominent Japanese officials have described "derivatives" as "financial AIDS" in the world monetary and financial system.²¹ I have often referenced the fact that "derivatives" in the financial-economic realm is analogous to the model of cancer presented in one of my old textbooks, that of the mathematical biophysicist Nicholas Rashevsky.²²

Typical is the case of the gamble which tumbled the famous Lord Shelburne's Barings bank into bankruptcy earlier this year. It happened at Barings branch office in Singapore, currently one of the world's leading centers of financial prostitution. Their man there placed multibillion-dollar bets—not investments, but out-and-out crap-shoot-style side-bets—on the short-term outcome of shifts in both the Tokyo stock and bond markets. It was an enterprise steeped in the fiscal prudence of a New York City numbers-racket runner. Barings lost the bet on the numbers, and tumbled into bankruptcy as a result of that, plus other gambling losses. Derivatives speculation is gambling, on a thin margin, often risking large amounts of other people's financial assets. The Seventeenth Century's John-Law-style South Sea and Mississippi bubbles were paragons of fiscal conservatism, by contrast.

For purposes of practice, the most notable difference between today's wild-eyed Singapore, City of London, or Wall Street Yuppie, hedging derivatives bets, and the Seven-

20. Cf. Maurice Allais, loc. cit.

21. In 1990, former Japan Finance Minister Ryutaro Hashimoto (currently trade minister) described as "financial AIDS" the policies which President Bush and Mrs. Thatcher were urging, not only for Japan, but for all Asian countries. On June 19, 1995, a Japan source informed Executive Intelligence Review News Service, Inc., that "seeking a cure for 'financial AIDS' was on the agenda in June 18-19 talks between Japan Prime Minister Tomiichi Murayama and his cabinet, and President Jacques Chirac and European Union officials."

22. Nicholas Rashevsky, *Mathematical Biophysics* (Chicago: University of Chicago, 1938). The featuring of this usage of "financial cancer" by my friend Jacques Cheminade, in his 1995 campaign for election as President of France, caused an epoch-making outburst of lunacy from leading Paris media.



The Frankfurt money exchange. The main difference between today's Yuppie brokers and derivatives traders, and the Seventeenth-Century financial bubblers, is that the latter did not have personal computers and high-speed, round-the-world, round-the-clock communications links.

teenth Century financial bubblers, is that John Law's acquaintances did not have modern personal computers and high-speed, round-the-world, round-the-clock communications links. The application of a blend of John Von Neumann's Theory of Games²³ and Chaos Theory²⁴ to these modes of calculation and communication, permits a rate of speculative chain-reactions, subsuming impulses momentarily approaching near-light-speeds. This not only permits, but fosters rates of speculative inflation never before even imagined.

There are three most essential "mechanisms" of the resulting, worldwide financial bubble: 1) The numerically largest factor involved is the magnitude of the "notional" (fictitious) capital values, which are treated as the equivalent of money-capital for the purposes of the derivatives form of futures speculation; 2) the second largest factor is the flow of monetary stimulus into the maelstrom of financial speculation, in derivatives and related categories; 3) the speculative bubble's root-dependency upon an income-stream of real

wealth taken out of real consumption and the production cycle. To determine why and how a bubble will pop, and to estimate when it will probably pop, one must focus upon the function of these combined, interacting three mechanisms.

Since the typical layman has no notion of the meaning or functional significance of the term, "fictitious capital," two clarifying illustrations are supplied here: first, the treatment of a simplified representation of what occurs as speculative appreciations (nominal "capital gains") in secondary stock-transactions, and, second, a similar case in speculation in New York slum-rental real estate during the 1960s. To understand how "derivatives" speculation balloons, and then, inevitably, collapses in a sudden, "nuclear-like" implosion, it is sufficient to carry the ordinary image of purely parasitical speculation, as seen in secondary stock-markets and slum rental real-estate properties, into that domain of which is the "derivatives" form of numbers-racketeering.

The first example: A man has 100 shares of common stock in Widgets, Inc., which he has purchased from that company's representative for \$10 a share: \$1,000. At that time, the stock's expected annual dividend-income is \$5 per share. Meanwhile, a subsequent fluctuation in the prevailing interest increases the relative financial advantage in a financial speculator's holding of that \$5 yield per share. As a result, traders are willing to pay \$102 a share, instead of \$100, for a share of Widget common. The \$2 gain in price is purely fictitious, purely speculative, rather than the result of some action related to investment within the production cycle as such. The speculative gain of \$2 a share is, as such, a purely financial phenomenon, not an economic one.

Continuing the same example, go to the next step in the

23. John Von Neumann and Oskar Morgenstern, **The Theory of Games and Economic Behavior**, 3rd edition (Princeton, N.J.: Princeton University Press, 1953).

24. So-called "chaos theory" is a fanciful piece of pseudoscience-fiction derived from a misunderstanding of the flawed work on infinite series by Newton, Newton-devotees Leonhard Euler, Augustin Cauchy, et al. Starting from adoption of Newton's famous Latin motto, "*et Hypotheses non fingo*," the remarkable assumption is made, that the mathematical discontinuity axiomatically inhering in the inconsistency among mutually-exclusive mathematical-physical theorem-lattices can be bridged "at infinity." Thus, did Cauchy set out to circumscribe Leibniz's calculus, and, in his blundering enthusiasm, castrated it, instead.

hierarchy of speculation. Let a trading company be incorporated whose sole source of income is fictitious capital gains of the type represented by the indicated \$2 gain in Widget common stock. Let this company issue stock. Paid-in capital put to one side, the remaining assets which secure the value of that latter stock are already purely fictitious, rather than real-economic assets. Let the price of a share of that stock be \$100, and let the expected dividend be \$5 per year. Fluctuations in the value of that stock now represent fictitious values based upon appreciations, or depreciations of what are already purely fictitious values.

The second example, the case of the Manhattan slum-rental property, affords a more intimate view of the essential morbidity of fictitious gains in general. During the relevant period cited, the rule-of-thumb market valuation of a Manhattan rental property was calculated as a multiple of the expected annual rental income. Thus, a landlord, by using various devices to increase the rental rate per square foot, could increase the nominal market value of a savagely deteriorating property. This was characteristic of slum rental properties in New York City during that time.²⁵

The intrinsic value of the building used as an investment in slum rental property was almost an irrelevance, except as the physical structure provided a means for parking a relatively large number of rent-paying families on a city lot no larger than the standard plot allowed, during the 1920s or 1930s, for an urban single or two-family occupancy in a typical "working-class residential district" in a city such as Lynn, Massachusetts. Under the indicated slum-rental investment arrangements for Manhattan, the greater part of the paid-in rental income represented nothing other than "feudal" ground-rent, the latter a purely fictitious sort of economic value. Thus, the physical purchasing-power of the capitalized value of the slum could be zooming skyward, while the physical value of the building itself were falling rapidly toward zilch. The fluctuations in the financial value of the investment in the rental property had been "de-coupled" from the economic value of building and its use.

Thus, companies which speculated in fictitious gains from such investments could capitalize their fictitious earnings (capital gains) from the turnover in a number of such slum-investments, creating what we shall label Exhibit A. Let the profit of operations involving Exhibit A be labelled Exhibit B. This poses the question: What would a financial speculator pay to own the right to collect the expected annual dividend labelled Exhibit B? Suppose that prospective buyer expects a 10% financial return annually; in that case, the ownership of the right to collect Exhibit B annually would be approximately ten times the price of Exhibit B: creating Exhibit C.

These two examples introduce the principled features of the kind of process upon which all financial speculation in

general is based. Financial derivatives represent the shifting of this sort of speculation from investment to pure betting, sometimes called "hedging." The point of these two, admittedly much simplified illustrations, is to identify the role of unreal, i.e., fictitious values, in feeding a bubble: as Exhibit A feeds Exhibit B, which feeds Exhibit C. What gives the financial bubble its specific quality is that without the growth of successive tiers of pure speculation (fictitious appreciation), the growth of the bubble comes to a standstill.

At the point of standstill, investors are in a scramble to sell out from under the collapse of the bubble as a whole; the scramble becomes a panic. Consider a panic operating globally, at computer speeds, along pathways of contemporary cable and satellite communications: The panic zooms, hyperbolically, into a "reversed-leverage" analog of a thermonuclear explosion: an implosion which causes the disintegration of virtually every financial and central-banking monetary institution of the planet, within a lapsed time of hours, 48 to 72 hours at most.

The maintenance of the growth of financial speculation requires an inflow of primary monetary aggregates (e.g., Federal Reserve issues of U.S. dollars) into the network of financial speculation. The multiplier-effect embedded within the tiered structure of the speculative bubble demands such money in quantities which are only a fraction of the rate at which new fictitious aggregates are being generated within the bubble, but the inflow of that currency-issue is crucial for the continued existence of the bubble-process as a whole. That leverage is the second of the principal mechanisms to be considered.

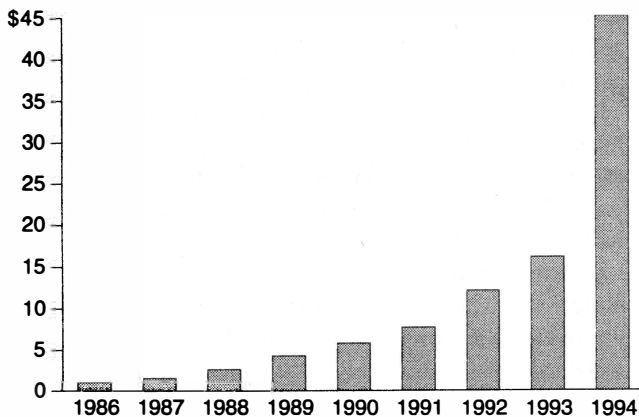
The inflow of currency into the bubble generates a tax upon the real economy. In part, this is literally a "tax," expressed in the form of government debt-service payments against the growing mass of debt used by the central banks to generate the flow of money into the bubble. Since the bubble is leveraged against outflows of real value from the productive cycle, among other sources, and since the mechanism of the bubble is leveraged borrowing, the growth of the bubble is reflected in accumulated financial charges embedded in every pore of the society's economic life. This is the third of the principal mechanisms to be considered.

In summary, the functional interrelationship among the three mechanisms, is this. The increase of the size of the bubble increases the rate of growth of fictitious accumulations required to prevent the bubble from shifting into a reversed-leverage phase. The increase of the rate of growth of fictitious accumulations required, obliges the central banking systems to feed increased money-flows into the bubble's speculative base, otherwise, the fictitious accumulations are slowed, and the bubble as a whole then shifts into a reversed-leverage phase. The increase of the accumulated debt-capitalization used to fund the inflows of currency into the bubble's speculative base, causes an increased tax (of various sorts) upon the economy which the central banking system is looting to support the speculative base of the bubble.

25. See Paul Gallagher, "How New York's Slumlords Created a Financial Bubble," *New Federalist*, Feb. 13, 1995.

FIGURE 6
Growth of financial derivatives worldwide, 1986-94

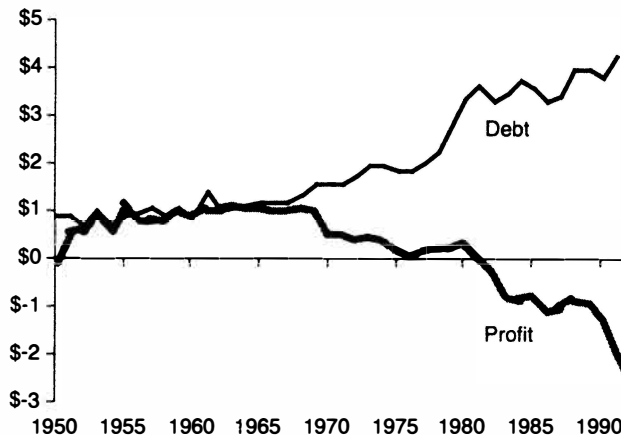
(notional principal amount outstanding at year end, trillions \$)



Source: Bank for International Settlements.

FIGURE 8
The better it grows . . . the more surely it's doomed

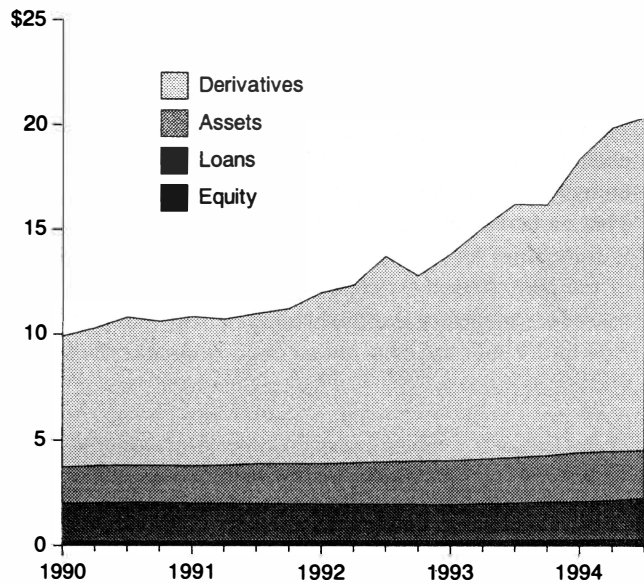
indexed to 1967 = \$1.00



Sources: Federal Reserve Flow of Funds, Commerce Dept. Survey of Current Business

FIGURE 7
U.S. banks are addicted to derivatives

(trillions \$)



Source: Federal Deposit Insurance Corp.

Consider the charts and graphs reflecting the statistical studies of Christopher White, John Hoefle, Anthony Wikrent, et al. in that light (**Figures 6-8**).

1) Over the interval from the base reference period of 1967-70, until 1990-95, the physical-economic consumption and output of the U.S. economy, per capita, have nearly

halved. At present, the decline is accelerating significantly.

2) Over the interval 1976-92, the percentile of U.S. foreign-exchange turnover represented by import-export trade had fallen from 23% to about 2%. Today, taking into account both reported and estimated rates of off-balance-sheet derivatives speculation, the figure is fairly estimated to have fallen to the vicinity of 1% or less.

3) Meanwhile, especially since 1987, the rate of daily financial turnover on markets has zoomed; since 1991, the ratio of the curve of rising volume of financial aggregates to rates of per-capita physical-economic output and input, has been indisputably hyperbolically upward.

Those three combined conditions define a rapid convergence upon an absolute functional discontinuity: not merely a financial collapse, but also a potential, literal disintegration of most of the world's monetary and financial institutions.

The only alternative to these calamities would be that governments, particularly the government of the U.S.A., act to put the entire bubbling system into government-supervised financial-bankruptcy reorganization: writing off the claims by fictitious capital, while assuring those continued flows of pensions, withdrawals from modest personal savings, and so on, needed for social, political, and physical-economic stability. Those emergency measures would not be sufficient by themselves, but they are no less indispensable; bankruptcy, "Chapter 11"-style, is the precondition for success of those governmental measures needed to organize an immediate economic recovery.

Under the U.S. Federal Constitution of 1787-89, the means for launching economic recovery are elementary. Within the same 48-hour interval, the President of the U.S.A. declares the Federal Reserve System as a whole to be bankrupt, and places it under the equivalent of "Chapter 11" fi-

financial reorganization. On the same day, the Fed is ordered to cease all new issues of Federal Reserve notes; the same day, an emergency bill is sent to Congress, under provisions of Article I, creating several trillions of dollars of U.S. Treasury currency-notes for lending. The loans are issued through a newly created (by act of Congress) National Bank, modelled upon the Washington-Hamilton Bank of the United States. Loans are issued, at between 1% and 2% per annum, in the mode of construction progress-payment tranches, to worthy infrastructure projects operating under authority of emergency legislation, to vendors to those projects, and to other designated high-priority purposes. Success is counted in the number of new productive work-places filled, and in the ratio of both the unemployed and the uselessly employed (such as financial-house employees) transferred into productive work-places.

During the same 48 hours the U.S. government is launching those recovery measures at home, the President of the U.S.A. invites the heads of responsible and willing nation-states to appear in Washington, D.C. for emergency sessions establishing both 1) a new international monetary order, replacing the IMF, and 2) guidelines for a new set of bilateral and multilateral tariff and trade agreements; a set of protectionist financial, monetary, and economic agreements reflecting the common vital interests of sovereign nation-states engaged in a general recovery-effort.

One concluding observation is to be added here, before turning to address directly the three questions posed at the outset.

The key to understanding the causes for the imminent disintegration of the present global monetary and financial system—the IMF system—is to recognize the crucial difference between a financial system and a real economy upon which a financial system is superimposed. For that reason, the solution to the problems of economic analysis, which we are next to consider here, depends upon recognizing several considerations which are axiomatic preconditions for competence in economic science. Several among those axiomatic matters are treated in their appropriate place, below; one must be considered at this juncture.

The systems of money, financial accounting, and John Von Neumann's "systems analysis"²⁶ are each and all *linear* systems. They can represent only those kinds of relations which are themselves approximately of a linear form. Using the language of the undergraduate thermodynamics classroom, they can represent only systems which are either actually entropic, or virtually so.

Contrast, the rise of the human population from the several millions maximum possible for a variety of higher ape: to several hundred millions by the mid-Fourteenth Century, and to more than 5 billions presently. This is the result of willful

forms of cultural changes, improvements in demographic characteristics of households and productivity per capita, changes brought about through the discovery of new scientific and related types of principles, a kind of creative-mental behavior which exists only in the member of the human species. This latter set of facts demonstrates, that human behavior is intrinsically not-entropic, neither linear, nor simply "non-linear."²⁷

Thus, the monetary-financial system of accounting is a linear system, which cannot map the characteristic events of the not-entropic process which a physical economy represents. The two systems are axiomatically mutually exclusive, with the qualification that a non-entropic system can always represent a linear one, but a linear one can never represent a not-entropic, or even a merely non-linear one. The irony of the matter is, that during the past 500 years of (globally-extended) modern European civilization, the system of agro-industrial economy which dominated the world from the early Eighteenth Century, through the time of President John F. Kennedy's assassination, has been a system based upon the mutual interaction of two axiomatically distinct processes, the financial system and the economic process.

For economic analysis, this difference signifies that all of the real profit (sometimes termed the "macroeconomic profit") of the real economy, the physical economy, is generated through creative (not-entropic) impulses such as technological progress from within the real economy. The financial system as such can generate no such profit; it can merely appropriate wealth from the real economy. This poses the special situation, in which the real economy generates no "macroeconomic profit," or is even operating at a physical-economic loss, in which the financial system appears to be enjoying a high degree of profitability, if but temporarily. This anomalous discrepancy between real and financial profit is sometimes termed "primitive accumulation": the looting of the real economy, and nature itself: a purely parasitical role of the monetary and financial system.

Until 1963, the two interacting, axiomatically-distinct

27. Too frequently, a streak of scientific illiteracy found even among ostensibly educated professionals, confuses "not-entropic" with "non-linear." As noted earlier here, those physical processes, including physical economies, which are not-entropic, can be represented mathematically only in the manner suggested by Cantor's theorem on the enumerability of the density of mathematical discontinuities within an arbitrarily selected interval of action. The advances in technology, as in culture generally, which render one culture superior to another, reflect cumulative, valid discoveries (e.g., mathematical discontinuities in previously established theorem-lattices)—in physical science and in Classical forms of culture—which constitute increases in the number of historically accumulated discontinuities transmitted to an interval of thought-directed practice of today's member of society. Those who blunder into using "non-linear" to signify "not-entropic," thus show themselves illiterate respecting the dominant, continuing issue of scientific method throughout the present century: the conflict between Leopold Kronecker, James Clerk Maxwell, and Rayleigh, on the one side, and Carl F. Gauss, Wilhelm Weber, Bernhard Riemann, Karl Weierstrass, and Georg Cantor, on the other.

26. Von Neumann, op. cit. More descriptive than "systems analysis," is the term which Von Neumann himself employed in introducing his economics, during the late 1930s: *systems of simultaneous linear inequalities*.

processes interacted in a kind of symbiosis: Within the industrialized nations, finance, usually, contented itself to taking no more than a share of the “macroeconomic” profit generated by the agro-industrial economic process as a whole. The introduction of the cult of “post-industrial society,” together with the degeneration of Bretton Woods into a parasitical form of “floating exchange-rate” monetary system, broke the symbiosis: Finance was transformed from a relatively benign, to a malignant form of financial “cancer.”

2. Adam Smith, sociology, and Newton

During the 1940s and 1950s, since the popularization of the pseudo-science cults of “operations research,” “information theory,” “econometrics,” and “systems analysis,” the economics profession has been dominated by charlatans whose abracadabra is expressed in densely-packed mathematical and quasi-mathematical symbols, such as Sigmas, Integral signs, and so on, at the classroom blackboard, or upon the printed page. Some of this twaddle has limited, practical engineering uses; it is like a police-detective’s snitch: The detective might use one, with approbation from his superiors; but he should be fired from the force, if he married it. Similarly, the limited, circumscribed usefulness of some of the engineering knick-knacks acknowledged, the prevailing fact of the matter is, that to pretend that that sort of mathematics proves anything of principled importance for economic science, is spewing buncombe.

Why have almost all the economics professionals failed, during the past 30 years, to recognize that current policy-trends were generating a general collapse of the existing monetary and financial systems? Why did all those supposed experts on economic haberdashery fail to recognize, that the Emperor’s new suit of clothes left him stark naked? A very large part of the answer to that question, is that, like today’s credulous layman, most professionals, too, are devotees of the delusion, that science equals statistics, the delusion that “generally accepted university-classroom” sorts of mathematics are the standard of proof for science.

There are other reasons for this prevailing ignorance of both the professionals and most ordinary citizens; but, as we shall now proceed to demonstrate, those other reasons reflect the same incompetent assumptions which permeate professional ignorance of the problems of generally accepted classroom mathematics. Let the case of Isaac Newton serve as the starting-point for this line of investigation.

The incompetence of Isaac Newton’s variety of mathematical physics was exposed as incompetent by the greatest scientific mind of the past three and a half centuries, Gottfried Leibniz.²⁸ It was seen as an object for contempt by the largest

28. The most widely known among Leibniz’s descriptions of the crucial incompetencies within the work of Isaac Newton are from the so-called Leibniz-Clarke correspondence. A convenient reference on this is found in

concentration of the world’s leaders in science and technology at the beginning of the Nineteenth Century, Gaspard Monge’s 1794-1814 Ecole Polytechnique.²⁹ Newton’s method was exposed as scientifically illiterate by the second most brilliant scientific mind of the Nineteenth Century (second to his patron, Carl F. Gauss), Bernhard Riemann.³⁰ Newton’s notions of cause-effect were implicitly destroyed by the greatest discovery of scientific principle which has occurred during the Twentieth Century, Max Planck’s development of

Leory E. Loemker, **Gottfried Wilhelm Leibniz: Philosophical Papers and Letters**, Vol. II (Chicago: University of Chicago Press, 1956), pp. 1095-1169.

29. In the aftermath of Leonardo da Vinci’s 1506 flight from Italy, to the patronage of France’s Charles d’Amboise on the Loire, France emerged quickly as the European nation-state which, by the early Seventeenth Century, was most advanced in science and technology. France continued to enjoy that superiority over other nations until the post-1814 Bourbon Restoration. The figures of Gaspard Desargues, Pierre Fermat, and Blaise Pascal, and the great *Académie des Sciences* founded and patronized by France’s Minister Jean-Baptiste Colbert, typified this during the lifetime of Leibniz. The 1794-1814 version of the Ecole Polytechnique, under the leadership of Gaspard Monge and Adrien M. Legendre, is a high point in this scientific heritage. From 1815 onward, under the pro-Newtonian leadership of the Marquis de LaPlace and Augustin Cauchy, the Ecole Polytechnique and French national academy of science degenerated, with a few exceptions, into what became, predominantly, a swamp of positivism. By approximately 1827, with the establishment of Crelle’s Journal (**Journal für reine und angewandte Mathematik**), the Germany of Carl F. Gauss, Alexander von Humboldt, Lejeune Dirichlet, and, later, Bernhard Riemann, assumed a position of world leadership in science, which Germany maintained until the aftermath of World War I. Ridicule of the silly René Descartes and of the sillier Isaac Newton, was standard fare among those world leaders in science occupying the foremost positions, as followers of Gottfried Leibniz, within the Ecole Polytechnique.

30. See the concluding section from Riemann’s **Fragmente philosophischen Inhalts**, in **Bernhard Riemann’s Gesammelte Mathematische Werke** (New York: Dover Publications, Inc., 1953), pp. 524-525. Note the following excerpts from page 525:

“Das Wort Hypothese hat jetzt eine etwas andere Bedeutung als bei Newton. Man pflegt jetzt unter Hypothese Alles zu den Erscheinungen Hinzugedachte zu verstehen.

“Newton war weit entfernt von dem ungereimten Gedanken, als könne die Erklärung der Erscheinungen durch Abstraction gewonnen werden.

“Newton: Et haec de deo; de quo utique ex phaenomenis disserere ad philosophiam experimentalem pertinet. Rationem vero harum Gravitatis proprietatum ex phaenomenis nondum potui deducere, et Hypothesen non fingo. Quicquid enim ex Phaenomenis non deducitur, Hypothesis vocanda est.

“Arago, Oeuvres complètes T.3. 505:

“Une fois, une seule fois Laplace s’élança dans la région des conjectures. Sa conception ne fut alors rien moins qu’une cosmogonie.

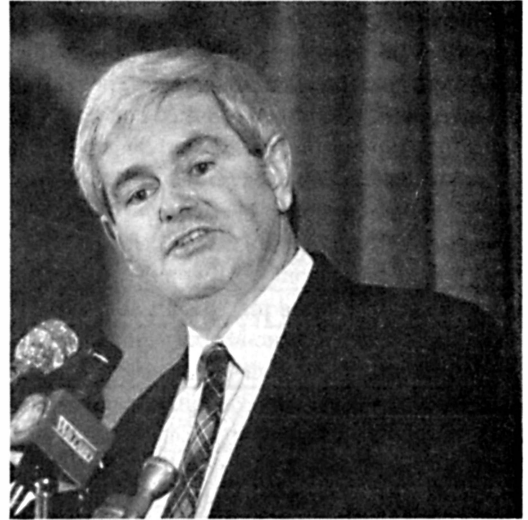
“Laplace auf Napoleon’s Frage, weshalb in seiner Méc[anique] cé[l]este der Name Gottes nicht vorkomme: Sire, je n’avais pas besoin de cette hypothèse.”

In the same location, Riemann launches his attack against the arbitrariness of the assumption that gravitation must be mathematically equivalent to inertia:

“Die Unterscheidung, welche Newton zwischen Bewegungsgesetzen oder Axiomen und Hypothesen macht, scheint mir nicht haltbar. Das Trägheitsgesetz ist die Hypothese: Wenn ein materieller Punkt allein in der Welt vorhanden wäre und sich im Raum mit einer bestimmten Geschwindigkeit bewegte, so würde er diese Geschwindigkeit beständig behalten.”



Newts of a feather: Isaac Newton (left) and Speaker of the U.S. House of Representatives Newt Gingrich. The fact that Gingrich's backers are utterly ignorant about Newton's views on mathematics, does not let them off the hook for supporting the ideological garbage of "free trade."



the quantum of action.³¹ Otherwise, a minority among notable professionals has staked its reputations upon exposing one or more among the additional incompetencies in the Newtonian scheme.³² Perhaps, the event which the Newtonians found the most embarrassing of all, occurred when the economist John Maynard Keynes was entrusted with examining the contents of the chest of Newton's private papers; Keynes showed that Newton's work had been chiefly kookery in the field of black magic, with virtually nothing of redeemably scientific interest among all of those papers.³³

Those fallacies in Newton's mathematics which were attacked by Leibniz, by the circles of the Ecole Polytechnique's Gaspard Monge, and by Riemann, are also the key to what makes today's generally accepted classroom "mathematical economics" worse than worthless as a way of representing the way in which economies actually do, or should function.

At this point, we imagine we can see someone in our readership audience raising a finger to interrupt this line of argument. Let us hear his objection. What he has to say might be expressed as the following quotable argument:

I think I see where you are going with this. Assume, for sake of argument, that your criticisms of Newton and the mathematical economists are correct. How do you answer the objection, that most people who sup-

port "free trade" today, have no formal education in mathematics, and would not recognize the differences between Leibniz and Newton? In other words, how does your argument about mathematics apply to the vast majority among those science-illiterates who voted for Newt Gingrich's "Contract with America" in the 1994 elections?

To go directly to the point of the question: The spread of ignorance and superstition is not confined to graduates of today's institutions of higher education. Consider a real-life anecdote, one which should suggest to virtually any reader some relevant evidence already at his or her disposal, addressing the referenced objection.

During 1992, the writer was acquainted with a number of persons who were engaged in studying how to make a living, using modest investable resources, for speculating in futures. That was at a time that "financial derivatives" had begun to capture relatively widespread popular attention, at about the time this speculative frenzy began to assume the sociological characteristics of the Seventeenth-Century tulip bubble. "You see: you can't lose," was the remark that first drew the writer's attention to the kind of impact the derivatives bubble was making within one stratum of the people in his immediate surroundings: very ordinary people, of the specific sort one would classify as "typical small businessmen."

"You can't lose"? The relevant reaction to that, is the time-worn U.S. popular proverb which runs: "Famous last words." The stratum referenced were not uneducated, but were, nonetheless, laymen in the sense implied by the conjectured query we are addressing here. Readers can recognize other expressions of the same social phenomenon in persons much more poorly educated than the subjects of the anecdote just referenced.

In the United States, as elsewhere, it is difficult to convince most members of Wall Street Yuppie generations, that

31. For an historical account of Planck's discovery and the attack upon Planck by the followers of Ernst Mach, Bertrand Russell, et al., see Caroline Hartman, "A Tragedy of Science: The Life of Max Planck," *21st Century Science & Technology*, Summer 1995.

32. Alfred O'Rahilly, *Electromagnetic Theory, A Critical Examination of Fundamentals* (New York: Dover Publications, Inc., 1938). Originally published as *Electromagnetics*, 1938.

33. See John M. Keynes, "Newton the Man," *Newton Tercentenary Celebration* (Cambridge, U.K.: Cambridge University Press, 1947), pp. 27-24. Keynes describes Isaac Newton as, "the last of the magicians, the last of the Baylonians and Sumerians . . . wholly devoid of scientific value."

the mere act of obtaining the combination to a neighbor's safe, does not earn one the right to possess the contents of that safe: "I did the work; it's mine!" The real-life persons of the referenced anecdote were not concerned with whether the betting-scheme they were studying contributed anything useful to the economy, or served any other morally significant purpose, excepting the wishful prospect of their own enrichment. Even the notion that their gain would be someone else's loss, was refused by most of those students of this scheme; most believed that "Don't you see: No one loses." "No one loses": the remembered voice of every dupe gulled into joining a "chain-letter" scheme.³⁴

Examine the "No one loses" delusion through the eyes of a modern Socrates, and the appropriate response to the objector's proposition emerges. What are the axiomatic qualities of assumption which underlie the controlling delusion of the participant in a "chain-letter" scheme such as the "financial derivatives" racket?³⁵

The most conspicuous of the axiomatic assumptions underlying the referenced type of social phenomenon are two: first, the nominalist's metaphysical delusion, that money, by virtue of having the apparent power to command wealth, is wealth; the second, a delusion which Mrs. Joan Robinson has identified as characteristic of all of the professional output of Prof. Milton Friedman, *post hoc ergo propter hoc*.³⁶ Although Friedman's doctrine is tailored for the opinions of people of whom it is often said, that "their I. Q. is lower than

their body-temperature," for just that reason, its advantage for our purposes here, is that it has, correspondingly, few surface features which might distract our attention from the bare axiomatic assumptions which underlie it.

At this point, our response to the objection being considered, assumes the form: Professionals and science illiterates alike accept the putative authority of generally accepted academic economics dogmas. They do so, not because they have learned the academic litanies involved; the dogmas are popular because they were designed to appeal to the kind of ignorant assumptions which are embedded in the present form of popular culture. The widespread acceptance of the two axiomatic assumptions identified immediately above, shows how deep-rooted features of generally accepted popular belief, generate the kinds of suggestibility upon which the economist snakes play, to hypnotize the populist chickens.

It will save time, if we let the completion of our answer to the considered objection flow from continuing the historical account on which we were embarked at the point of that interruption.

The crucial historical fact is, that the popular assumptions on economics matters are identical to the false axiomatic assumptions employed, from the beginning of the Seventeenth Century, to found what became today's generally accepted university-classroom mathematics. All those forms of relatively popular, contemporary university social doctrine which are termed variously empiricist, positivist, or behaviorist, are derived directly from the same axiomatically flawed ideas of mathematics met in the work of Isaac Newton and his followers. All of the trends in public and higher education popularized in the U.S. during the Twentieth Century, all Twentieth-Century innovations in trends in art and mass entertainment, all new trends in notions of mental health, all new trends in teaching and practice of religion, and all generally accepted practice of so-called "news reporting" in mass media, are products of currents in social theory shaped by what English-language tradition usually identifies as "Newtonian" approaches to mathematical physics.

Newton's degenerated parodies of earlier discoveries in mathematics,³⁷ and forms of social theory cohering with them, were designed in conformity with blind faith in illiterate assumptions respecting the nature of man, nature, and cause-effect. Those assumptions were already somewhat commonplace then, and are venerated in most universities of the world today.

Modern empiricist economics dogma is rooted in an apol-

34. Typical cases of this "No one loses" sort of mass-hysteria, in addition to the Seventeenth-Century tulip bubble in the Netherlands, include the Eighteenth-Century "South Sea Island" and "Mississippi" bubbles of John Law's time, and, during the recent half-century, the "Pyramid Club" mass-hysteria of 1949, and compulsive speculator Anthony DeAngelis's 1963-64 "salad-oil bubble." See Norman C. Miller, *The Great Salad Oil Swindle* (Baltimore, Md.: Penguin Books, Inc., 1966).

35. A subsidiary question might be added: Why are present generations of young adults, for example, more susceptible to such delusions than their parents' or grandparents' generations?

36. See Joan Robinson, *Economic Heresies* (New York: Basic Books, Inc., 1971), pp. 86-87; e.g., ". . . the modern Chicagoans, led by Milton Friedman. A great part of their work consists in historical investigations of the relationship between changes in the supply of money and national income in the United States. The correlations to be explained could be set out in quantity theory terms if the equation were read right-handed. . . . But the tradition of Chicago consists in reading the equation from left to right. Then the observed relations are interpreted without any hypothesis at all except *post hoc ergo propter hoc*. There is an unearthly, mystical element in Friedman's thought. The mere existence of a stock of money somehow promotes expenditure. . . ." See, also: Lyndon H. LaRouche, Jr. and David P. Goldman, *The Ugly Truth About Milton Friedman* (New York: New Benjamin Franklin House, 1980). The "dust jacket" of the latter text quotes economist Arthur Laffer: "You want to prove that Milton Friedman is a fascist? It's easy. Quote him." Following Laffer's advice, the publisher cites Friedman's *Studies in the Quantity Theory of Money* (Chicago: University of Chicago Press, 1956): "The object of such controls (on wages, prices, and credit) is the restriction of spending on the part of individuals. . . . Such a policy, if rigorously enforced, should restrain a rise in the price level. This policy appeared to have been successful in Nazi Germany."

37. Take, for example, the fraudulent teaching, that Isaac Newton discovered "universal gravitation." It is readily shown (see, Lyndon H. LaRouche, Jr., *The Science of Christian Economy* [Washington, D.C.: Schiller Institute, 1991]; see Chapter VII, Note 8, pp. 471-473), that Newton's formulation for gravitation is derived algebraically from the same famous Third Law of astrophysics discovered by Johannes Kepler, and employed by Kepler to define the measurement of that notion of universal gravitation which had been originally and famously discovered by Kepler.

ogy for rule of society by a feudal land-owning aristocracy: the so-called Physiocrat dogma of Dr. François Quesnay.³⁸ Quesnay's central dogma against state interference in feudal aristocrats' whims, *laissez-faire*, was translated into English by the British East India Company lackey, Adam Smith, as "free trade." The only significant difference was, that Smith's doctrine shifted the rule over society from a feudal aristocracy, to the Venetian species of feudal financier nobility, as typified by the owners of the British East India Company, Barings Bank, and the Bank of England.³⁹ Lord Palmerston's asset, Karl Marx,⁴⁰ defended Adam Smith and "free trade" against the United States of America, but otherwise shifted the future rulership over society from the London financier nobility to a future world-government, a "dictatorship of the proletariat." Once one knows the rudiments of Quesnay, Smith, Marx, and the Lausanne school's Leon Walras, every essential feature of today's generally accepted university classroom economics, can be attained with no more than a smidgeon of linear mathematics.⁴¹

On the other so-called "social sciences." What is known as "political science" in today's university curriculum, was invented, like sociology, by the Bourbon Restoration followers of Isaac Newton: notably, the positivists Saint-Simon and Auguste Comte. Emile Durkheim established "sociology" as a certified "discipline" of universities.⁴² Ethnology, known in

38. François Quesnay, *Tableau Economique* (1758). Court physician, agent of the Venice intelligence service's powerful Abbot Antonio Conti, and founder of the central doctrines common to all empiricist and positivist economic dogma, that of Karl Marx and John Von Neumann included.

39. Smith was a lackey of the most powerful figure of mid- to late-Eighteenth-Century London, perhaps the most powerful Englishman of the entire century, William Fitzmaurice Petty, otherwise commonly identified as Lord Shelburne, or the Marquess of Lansdowne. Shelburne, who served as prime minister himself during parts of 1782 and 1783, negotiated the 1783 Treaty of Paris with both the U.S.A. and French representatives. During that same period, Shelburne created the British Foreign Service (in 1782), putting his lackey, Jeremy Bentham, at the head. Later, he bought, on behalf of Barings Bank, the relevant number of members of the Parliament, to ensure the ascension and long tenure of Prime Minister William Pitt the Younger. He was the key oligarch associated with the British East India Company and Barings Bank. From no later than 1763, Shelburne employed Adam Smith, of later *Wealth of Nations* notoriety, as his lackey, assigning Smith to work on a project for destroying the economy of France, and the autonomy and technological progress of the English colonies in North America. Under Shelburne's patronage, lackey Adam Smith visited France and Switzerland, patching together a theory from appropriate scraps of the work of the Physiocrats.

40. See Webster G. Tarpley, et al., "Lord Palmerston's Multicultural Human Zoo," *EIR*, April 15, 1994.

41. Leon Walras (1834-1910), the putative founder of the so-called "Lausanne School" in positivist economics, was the notable predecessor of John Von Neumann in applying systems of simultaneous linear (Newtonian) expressions to the attempted modelling of economic processes. Those functions are assumed to determine the implicit prices and quantities to be assigned to the factors listed under assumed conditions of equilibrium.

42. Emile Durkheim, *Rules of the Sociological Method* (1895).

English as Anthropology, had the same Nineteenth-Century French-positivist patronage. Behaviorist psychology, in its several original varieties, was also a Nineteenth-Century concoction of British empiricists and continental positivists. The method of history practiced academically and professionally today, is a creation of the same array of empiricist and positivist ideologues. Even modern legal doctrine and practice, is derived chiefly from irrationalist currents of empiricist and positivist sociology.⁴³

And, so on, for the arts and other matters of broad relevance for "mass culture" today.

The 'begats' of empiricism⁴⁴

Modern empiricism, and its appended, generally accepted forms of university-classroom mathematics and social theory, originate with the mathematician, and powerful monk, Paolo Sarpi. This was the Sarpi whose faction seized control of Venice's power in 1582, and used that power to launch the process of the Venetian oligarchy's takeover of England and the Netherlands. Sarpi launched the efforts which led to the establishment of the British monarchy in 1714, and the later foundations of the British Empire, from 1763 onward.

The array of the creatures whom Sarpi employed for this takeover of England's influential institutions, featured such relevant figures as the mathematician Galileo Galilei, Francis Bacon, and the English monarchy of James I.⁴⁵ Galileo had a mathematics student, Thomas Hobbes, better known as an intimate of Francis Bacon. Out of these origins, came the relevant, celebrated figures of René Descartes, John Locke, Isaac Newton, David Hume, Charles Montesquieu, and such Eighteenth-Century devotees of Newton (and haters of Leibniz) as Voltaire, Pierre-Louis Maupertuis, Giammaria Ortes,

43. The two leading irrationalist currents within modern philosophy of law are those similar, but distinct varieties, stemming from British empiricist John Locke (1632-1704) and the German neo-Kantian positivist Friedrich Savigny (1779-1861). Contrary to rumor, the U.S. Federal Constitution was referenced to Gottfried Leibniz (life, liberty, and pursuit of happiness), in rejection of Locke's "life, liberty, and property." Locke did shape the Seventeenth-Century colonial law of the Carolinas, and his influence was resurrected by the preamble and body of the insurrectionary constitution of the American Confederacy. Savigny, popularly identified as the putative father of the Romantic school in law, and a key influence in establishing Kantian irrationalism (separation of *Geisteswissenschaft* from *Naturwissenschaft*) in the domain of fine arts, was infamous on two additional counts. During his lifetime, he was notorious as a confederate of the Metemich agent G.W.F. Hegel, in efforts to ruin the attempts of Alexander von Humboldt to establish modern mathematics and modern physical science at Berlin University. During the 1930s, his influence contributed a key part to establishing the foundations of the Nazi law otherwise associated with Carl Schmitt. A strictly Lockean practice of law would establish a form of fascist tyranny more radical than that Germany suffered under the Hitler regime.

44. The content of the following sections overlaps material covered earlier in several published locations, notably: Lyndon H. LaRouche, Jr., "Structures of Sin' Still Rule the Nations," *EIR*, April 28, 1995, pp. 46-56.

45. Cf. Webster G. Tarpley, "Venice's War Against Western Civilization," *Fidelio*, Summer 1995.

Francesco Algarotti, Leonhard Euler, Joseph Lagrange, the Marquis Laplace, and so on.

Modern science itself had been founded circa A.D. 1440, by Nicolaus of Cusa's *De Docta Ignorantia*, the book which shaped the work of such self-proclaimed followers of Cusa as Luca Pacioli and Leonardo da Vinci. At the beginning of the Seventeenth Century, the most famous acknowledged follower of Cusa, Pacioli, and Leonardo da Vinci, was Johannes Kepler, the founder of the first modern, comprehensive mathematical physics. Followers of Kepler included such famous French mathematicians as Gaspard Desargues, Pierre Fermat, and Blaise Pascal; other followers of the work of Cusa, Leonardo da Vinci, and Kepler included such associates of France's Colbertist *Académie des Sciences* as the Dutchman Christian Huyghens and the German Gottfried Leibniz. The followers of Cusa based the development of modern science upon the pre-established foundations of the Classical Greek work of Plato's Athens Academy and Archimedes.

Cusa's launching of modern science had been complemented by the use of the Classical Greek tradition for launching deep-going revolutions in the fine arts of poetry, music, tragedy, painting, and architecture, and in related advances in city-building and colonization. This combined scientific and artistic ascent of Fifteenth-Century Europe out of the Fourteenth-Century "New Dark Age," is the *Renaissance*.

The opponents of Cusa's, Leonardo's, Kepler's, and Leibniz's current of modern science, based themselves upon the deductive and metaphysical methods of Plato's adversary Aristotle. Venice's (and Padua's) Aristotelean efforts to eradicate modern science, were superseded by Paolo Sarpi's rise to the leading position of power in Venice's foreign policy. Sarpi's neo-Aristotelean method, which harked back in part to nominalists such as William of Ockham, became known variously as *empiricism*, or the *Enlightenment*.

It is useful and fair to say, that all of the past five centuries of the internal history of extended European civilization, has been a continuing war of the Venice-launched *Enlightenment* against the *Renaissance*. The two represent mutually exclusive conceptions of the nature of man, and of the universe; consequently, these axiomatic differences subsume mutually exclusive notions of the nature of cause-effect relations within society, and in man's practical (e.g., physical-economic) interaction with the universe. That conflict, between the ideas of the Renaissance and the contrary, empiricist ideas of the reactionary Enlightenment, has shaped the internal and global history of extended modern European civilization throughout the past five centuries.

This conflict in ideas has an easily recognized practical basis.

Prior to the Fifteenth-Century Renaissance in western Europe, in all cultures, throughout all prior existence, over 95% of humanity had lived in the depressed condition of virtual human cattle, as serfs, slaves, or worse. The typical structure of ancient and medieval society, throughout the

planet, had been the picture of society offered by the first part of Aeschylus' famous tragedy, *Prometheus*:⁴⁶ at the top of society, a collection of "quasi-immortal" oligarchical families, the real-life guise of the Greek gods of Olympus; immediately below them, their lackeys, who administered the affairs of mankind on orders from Olympus; below that, the 95% subject to the capricious whims of the oligarchs.

The influence of the A.D. 1439-40 sessions of the Council of Florence, and the echoing effects of Louis XI's accession to the throne of France in A.D. 1461, changed the human condition radically. With the transformation of a reconstructed France into the first modern nation-state, under Louis XI, the order of human affairs was revolutionized, with the effects of that revolution radiating throughout this planet to the present day. The policy of fostering a humanist form of secondary education for orphans and for boys from families of the poor, broke the barrier which had earlier confined more than 90% of humanity permanently to a cattle-like status under oligarchical domination. The building of the modern form of sovereign nation-state republic, sometimes called a "commonwealth," on this new social basis, was, and is the modern nation-state.

That new institution, the modern nation-state, has revolutionized the rate of growth of potential population-density, of productive powers of labor, and demographic characteristics of family households.⁴⁷ Taking into account all of the just complaints to be placed at the door of the nations of modern Europe and North America, any elimination of the institution of the sovereign nation-state would unleash a global genocide beyond any criminality earlier wreaked upon humanity in known history up to this point.

These new, Renaissance institutions, the policies of the Council of Florence and the modern nation-state, came immediately into mortal conflict with two oligarchical forces: the landed feudal aristocracy, and the financial oligarchy led by, and typified by, the Venice nobility. The powerful new forces sent into motion by the Renaissance came near to crushing Venice at the beginning of the Sixteenth Century; Venice's successful use of corruption to set its powerful enemies against one another's throats, breaking up the anti-Venice League of Cambrai, enabled Venice to survive, and recover much of its strength, through continuing such "balance of power" diplomacy.⁴⁸ Nonetheless, during the following three centuries, all feudal efforts to destroy the modern nation-state failed. The Holy Alliance, the last major expres-

46. *Prometheus Bound*, in Aeschylus, Herbert Weir Smyth, trans., Vol. II (Cambridge, Mass.: [Loeb Classical Library] Harvard University Press, 1922); pp. 211-315.

47. See Lyndon H. LaRouche, Jr., "What Is God, that Man Is in His Image?" *Fidelio*, Spring 1995: graphs and chart on population and demographics, pp. 25-26.

48. Tarpley, "Venice's War," op. cit., passim.

sion of feudal-aristocratic imperial power, disintegrated in 1848-49, and its relics were virtually obliterated⁴⁹ during the course of World War I. The financier oligarchy has been a more durable proposition; Sarpi is key to understanding why.

The root of the nation-states' inevitable defeat of the feudal aristocracy's imperial institutions, is found in effects of the nation-state's tendencies toward universal humanist education for the youth from families of the poor. The tendencies toward future universal education, combined with emphasis upon technological improvements in the productive powers of labor, revolutionized economy and warfare. Among similar effects, this educational tendency prompted a qualitative increase in the society's potential, per capita, for generating and assimilating the benefits of scientific and technological progress. The fostering of advances in technology and productive powers of labor, translate into increase in the firepower and mobility of military forces. Against determined modern nation-states, the imperial obsessions of the old feudal land-owning aristocracies were doomed to ultimate defeat.

Sarpi and his faction committed themselves to establishing a global maritime and financier power within the Protestant regions of northern Europe, selecting the Netherlands and England as the new centers of global maritime power, in which to build up such clones of the Venice oligarchical system. Instead of seeking to destroy the nation-state, they sought to dominate it from within, by a combination of control over the finances of the nation-state, and through balance-of-power games pitting one nation-state against the other. In this way, the modern nation-state became, predominantly, a form of "mixed economy" which combined the nation-state's original and organic impulse for agro-industrial investment in technological progress, with the superimposition of a financier oligarchy, controlling the financial and monetary institutions of the nation-state, on top.

Sarpi's "new Venetians" of Paris, London, and the Netherlands, put three conditions upon their willingness to tolerate the institutions of the modern sovereign nation-state. The first condition: The Venetian-style, London-centered financier oligarchy must dominate the world's financial markets and the central banking institutions of the nations. The second condition: The nation-state itself would be tolerated, but not the "Renaissance" quality of intellect and spirit which had brought the new form of European society into being at the Council of Florence and under France's Louis XI. The third condition: The relations among nation-states must be regulated by the same "divide and rule" ("balance of power") practices which Venice itself had employed to set its enemies within the League of Cambrai at one another's throats.

Our topic here, is the second of those three conditions: the methods which these Venetians and their neo-Venetian

British clones employed, to adopt the babies, the nation-states as such, after sterilizing both those babies and their parents, ridding the population of the intellectually and morally fertile influences of the Renaissance. The topic here is those methods of cultural warfare, psychological and philosophical warfare, which empiricism has used to enslave the minds of those over whom it rules. Once the Sarpi-Galileo-Hobbes-Descartes-Newton development of a perverted form of mathematics is understood, and the way in which today's generally accepted university-classroom social theory was derived from that empiricist mathematics, the mechanisms which control the minds of most U.S.A. citizens today, are immediately recognizable. That is the key to the persistence of the presently ongoing economic debacle.

That said, turn to consider the manner in which the Europe-wide salons created by Sarpi's most important successor, Abbot Antonio Conti,⁵⁰ controlled the destiny of every nation of Europe over the course of the Eighteenth Century. From approximately 1582 through the death of Conti in 1749, Venice's agents Sarpi and Conti are the two most significant figures of the European Enlightenment, the two cabalists who virtually created the mythical nation of Britain from mud. We touch only the most relevant highlights of the Conti salon's "begats" here.⁵¹

Members of Conti's Newton cult included such notables as Charles Montesquieu (**Spirit of the Law**, 1750) and Voltaire. Also an agent of Conti's salon, was the Dr. François Quesnay who produced the dogma of "free trade" (*laissez-*

50. Antonio Conti, pen-name "Schinella," the most important oligarchical figure of Eighteenth-Century Europe, but today among the least known to history students. Born as a member of the Venice nobility, in Padua, 1677, a descendant of the Nani clan, on his mother's side, and of Sperone Speroni, himself an influential student of the founder of the Padua school of Aristotle, Pietro Pompanazzi. In 1699, young Conti entered the Venice religious order *Oratorio pardi della Fava*, and was ordained as a priest, but abandoned those vows in 1708. He became a specialist in French culture, including the study of modern science of that time from the standpoint of René Descartes, remaining a secular priest with the title of "abbot." During this time-frame, Conti assumed a leading role in the formation of a network of Europe-wide Venice intelligence-service salons, *conversazione filosofica e felice*. (See Piero de Negro, **Giammaria Ortes: un "filosofico" veneziano del Settecento** Cini Foundation study of 1990 [Florence, Italy: L.S. Olschki, 1993], pp. 125-182.) The principal target of his work was organizing a continent-wide effort, creating the cult of Isaac Newton as a vehicle for seeking to eliminate the name and influence of Gottfried Leibniz. He was personally deployed to Hanover for this purpose, following up efforts by his agent Ludovico Antonio Muratori. His letters from London and notebooks of that same period identify his close association with Isaac Newton, Edmond Halley, Samuel Clarke (of the Leibniz-Clarke Correspondence), Willem-Jacob Gravesande, Abraham deMoivre, and James Stirling. (See Antonio Conti, **Scritti filosofici** [Naples: F. Rossi, 1972] and Mauro di Lisa, "*Chi mi sa dir s'io fingo, Newtonianismo e scetticismo in Giammaria Ortes*," **Giornale critico della filosofia italiana**, LXVII [1988], pp. 221-233.) In London, Conti established himself as a Kensington Whig, the political party of the followers of William of Orange, Marlborough, et al.

51. For more background, see Lyndon H. LaRouche, Jr., "How Bertrand Russell Became an Evil Man," **Fidelio**, Fall 1994, and Webster G. Tarpley, "Venice's War," op. cit.

49. Or, assimilated, with or without their aristocratic titles, into the ranks of the Anglo-Dutch international financier nobility, as the English and Scottish feudal aristocracy had been earlier.

reader that Watson (and the **Financial Times**) are quite serious about this promotion of cannibalism, and that we might prepare the reader for an insight into the minds of not only the perverse Mandeville, but Hobbes, Locke, and Ortes, too.

Watson begins: "Some of my best friends are cannibals. They live on the Casuarina Coast, the delta area of Irian in Indonesian New Guinea. . . . There are about 20,000 of them and they call themselves the Asmat, which means 'the human beings.' All outsiders are known very simply as Manowe—the edible ones." Near the close of the article, on the jump page, Watson waxes British-philosophical as he gets down to empiricist business: "The fact that humans are, on occasion, both aggressive and violent presents the Asmat with no problem and requires no heart-searching or remorse. They have stereotyped and ritualised such tendencies, allowing them full and satisfying play in headhunting, *while at the same time resolving a pressing environmental problem* [emphasis added]. . . . There is hope in this, but only if we follow the Asmat example and learn how to bend in favour of that which best allows equilibrium to be established."

That is exactly what Mandeville means by "private vices, public benefits," and what Adam Smith defines as individual morality in his 1759 **The Theory of the Moral Sentiments**. That is the same construction which François Quesnay employs in arguing that society must benefit from non-interference with the capricious whims of feudal aristocratic serf-owners—*laissez-faire*—and the argument which Adam Smith copies from Quesnay in presenting his case for "free trade" in the 1776 **Wealth of Nations**. That is way in which Thomas Hobbes argues in his **Leviathan**; that is the morality of John Locke, and Jean-Jacques Rousseau. That is, as the item from the **Financial Times** merely reflects this, the typical, present-day British-empiricist mind-set; that is the mind-set expressed by the attitude of British diplomats and U.N.O. officials in explaining why Bosnians must submit to Chetnik conquest by means of rape and genocide, for the greater good of a reunited Yugoslavia under control of London's and Milosevic's Chetnik assets.

To understand Hobbes's, Locke's, Mandeville's, Adam Smith's, and Lyall Watson's curious advocacy of individual evil, examine the empiricist axiom we have just described here from the standpoint of the relevant mathematical physics.

Think of the mechanistic model of a Cambridge University gas system, as fancied by Lords Kelvin or Rayleigh, for example: a Newtonian gas system. Construct the image. See the millions of tiny balls roving about in what is otherwise a confined vacuum. Remember that beach-side concession, where, for a brief, but idyllic moment, one might rent the use of an electric-powered "bump-'em" car, ramming other such "bump-'em" cars, and being rammed in turn? So, the tiny gas-particles interact percussively, and, in a more sophisticated version, by radiating upon one another.

Now imagine that each of these tiny balls is motivated by either an assortment of the Seven Deadly Sins, or, perhaps,

some motives of a nastier type. In addition to percussive interactions so generated, they also radiate sinful and even evil impulses upon one another. Now, imagine that a net social good comes out of all of this percussive and radiant wickedness. Imagine that this occurs in the fashion Rayleigh's gas would acquire the general attribute of pressure and temperature, through some mechanism analogous to the kind of kinematic equilibrium popular with Galileo, Hobbes, Newton, et al. There you have the intellectual model which forms the axiomatic basis in method for all of the principal theses on social theory in general, and economics in particular, by Hobbes, Locke, Mandeville, Giammaria Ortes, Adam Smith, Jeremy Bentham, John Stuart Mill, and John Von Neumann.

The hey-day for constructing such social-theory concoctions was the Enlightenment's Eighteenth Century. The central figure in this enterprise was the Conti salon's Ortes; this was understood by Ortes to be the effort to show that all social processes could be reduced to the terms of a mechanistic model, using Newton's algebraic designs as a model. After Ortes's recipe had been assimilated by the British and the continental Newtonians, the empiricists and continental positivists have been virtually mass-producing new departments of social theory, from the second half of the Eighteenth Century, to the present day. It is all essentially gobbledygook, but the suckers call it "science," or simply "professionalism," nonetheless.

3. How the control works

Mother opens the kitchen door, exclaiming, "Junior! You have your hand in the cookie-jar again!"

The boy recovers quickly, and retorts with what might pass for injured innocence: "What cookie-jar?"

Not all charlatans choose to be conscious of the fact that they are practicing fraud.

The poet, dramatist, and historian Friedrich Schiller named one of the important categories of such charlatans. In German, the term is *Brotgelehrten*. In English, it translates as the professional who passed his time in higher education studying to learn how to get a better-paying job after graduation. It is the end-product produced by the student who challenges the teacher: "Teacher, is this going to come up on the examination?" meaning that the student considers it immoral for the teacher to raise any topic for which the pupil is not going to be financially rewarded, sooner or later. In the present writer's long experience, most U.S. professionals—among others—are *Brotgelehrten*, whether or not they speak German.

Any honest scientist works much harder, and with greater rigor than any member of the tribes of the *Brotgelehrten*; he is motivated by the sheer joy of scientific discovery, just as any really good professional musician is similarly driven. He or she is motivated by the consideration, that when doing

genuinely creative, rigorous work, his or her mind is in a more ennobled state, a more joyful one, than would be possible were he or she not so engaged for a large portion of each day, each week. Put aside all the silly litany about “desire for gain, and fear of losses” in the cant of the empiricist economists and sociologists. The essential motive for doing good, is that it is fun: much more fun to be that kind of person, than any other.

The importance of having fun, in that way, is better cognized if one reflects on the brevity of that historical instant we know as the expected life-span of the mortal individual person. Once one grasps that one’s foremost self-interest lies in acquisition of those things which one may, assuredly, carry into the grave, the things which are not objects of sensory pleasure or pain, then fun is living in the way which cheats death, the things which leave the world a better place after one has left it, than one found it, a mere historical instant earlier.

Once one has learned the joy of having fun, there are certain questions which come frequently to one’s mind, questions which any of the dismal *Brotgelehrten* would probably never think to ask. The *Brotgelehrten* locate self-interest in that which they imagine themselves to get out of the mere historical instant of their mortal existence; people who have fun, worry about what they are putting into that instant. The *Brotgelehrten* are therefore much less intelligent, and also less happy, than the people who have fun.

The sobersided pragmatist, with his eye fixed on what he considers his main chance, will argue in defense of Newton, and so on, “Buddy, this is the way the world is, and if you wish to get ahead, learn to accept the way things work, the way the world is.” That miserable sobersides would never think to ask, what kind of mathematics exists outside Newtonianism? He would never think about those facts from the known span of human existence which show us that all empiricist sociology, and economic dogma is flatly absurd from the start.

Thus, the facts we are about to reference will probably appeal only to either those who simply enjoy having fun, or who prefer not to have the world plunged into the kind of New Dark Age in which the population of this planet collapses, very rapidly, through famine, epidemic disease, and perhaps cannibalistic qualities of homicide, from over 5 billions persons today, to less than half a billion 20 to 40 years from now.

That *Brotgelehrten* type, whether he or she has graduated from institutions of higher learning, or is an illiterate, is the bearer of that quality which the empiricist tradition values most highly in its victims. This is what the empiricist tradition has worked to ensure remains the standard of popular culture.

For the citizen who prefers fun, there are two questions which ought to be considered of the utmost importance.

The first involves the factual evidence showing the true nature of the human individual: that, as Moses’ first chapter of *Genesis* insists, the created universe is *good*, and the indi-

vidual person is born not only intrinsically good, but the noblest creature of creation. As this writer has spent most of his adult life insisting that, were man merely an animal, subject to the rules of animal ecology, the human species could never have exceeded a living population of several millions individuals at any time past, under the late Cenozoic conditions prevailing on this planet during the recent 2 millions years. Man, unlike any beast, has the creative-mental capacity to effect valid discoveries of scientific principle, through which to transform man’s relations with the universe, and thus to increase the potential population-density of the human species, while improving the demographic characteristics of the family household.

The second, is the question: Since human existence depends upon an unending succession of revolutionary discoveries of principle in natural science, and otherwise, what is the nature of human knowledge? Since mathematical formalism represents knowledge in terms of the kinds of deductive consistency we associate with deductive theorem-lattices, how can we represent the *progress (change)* of knowledge which overturns an existing such theorem-lattice? The fun-loving person who embarks on a rigorous and sustained study of that question, will end up as a follower of Plato, of Nicolaus of Cusa, Leonardo da Vinci, Kepler, Leibniz, Gauss, and Riemann.

There are two conceptions to be mastered. First, the notion of *ideas*, as defined by Plato, which this writer addressed in the Spring 1995 edition of *Fidelio*.⁵⁴ Second, the understanding that mathematics remains a useful tool only as long as we introduce the principles of physical science to mathematics from the outside, principles which occur to us in the form of scientific *ideas*, as Plato understood the notion of ideas, and as Aristotle, Pietro Pomponazzi, Paolo Sarpi, and Isaac Newton did not: as this writer has repeatedly addressed that issue.⁵⁵ Once those conceptions are grasped, and implications of those ideas are understood, that person is freed from victimization by that corruption recognized as “popular culture,” and will therefore be free from the confidence-game called empiricism.

The crucial thing to be understood, is that the prevailing popular culture is not a “natural” phenomenon, but a synthetic culture, created and shaped by those powerful, presently London-centered international oligarchical forces which have long sought to contain and control the institution of the modern nation-state, and are now committed to seeking to destroy it. Once it is also recognized, what is the significance of the demonstrable frauds permeating Newton’s work, and the related frauds permeating taught economics-teaching and social-theory dogma generally, the citizen is no longer gripped by the compulsion to believe that “the cookie jar to which mother refers does not exist.”

54. Loc. cit.

55. See Lyndon H. LaRouche, Jr., “The Fraud of Algebraic Causality,” *Fidelio*, Winter 1994.