LaRouche's 9th Forecast

The Coming Disintegration of The Financial Markets

THE NEW FEDERALIST

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ON THE COVER: Democratic presidential candidate Lyndon LaRouche, on a nationwide television broadcast in April 1988, describes the "bouncing ball" ups and downs of the collapsing U.S. economy.

NFP 94-503

The Coming Disintegration of The Financial Markets

by Lyndon H. LaRouche, Jr.

It comes as no surprise that the name of the Bank of England's Eddie George is added to the list of which it must be said that "whom the gods would destroy, they first make mad." During the course of the current London meeting of the International Monetary Conference, Eddie joined the ranks of those greed-maddened public fools of finance who insist that the danger from the now metastatically cancerous financial bubble in derivatives speculation is being exaggerated by some critics.

It is a matter of some urgency that responsible governments subject all incumbent and prospective economics and central banking officials to the sanity test which Eddie George would have flunked gloriously. Among the probable benefits of this, the least would be creating suddenly many encouraging vacancies for the sane unemployed. The test consists of but one crucial question: *Prove conclusively that the near-term disintegration of the presently bloating global financial and monetary bubble is unstoppable by any means alternative to governments acting to place the relevant institutions into bankruptcy reorganization.*

Those officials about to be examined so could look up the answer in the back of the book, so to speak. We supply it here and now. Would that be cheating on their part? Not at all; it would be becoming sane.

LaRouche as a Forecaster

About my qualifications: I have introduced relatively few forecasts of critical events during my 40-odd years as an economist (not counting my repetitions of some of those warnings). To date, every forecast which I have made on the basis of my LaRouche-Riemann method has been confirmed by timely developments. I now present a summary listing of those forecasts, for the purpose of identifying my authority for designing the indicated test of economic sanity.

1) During late autumn 1956, in connection with a mar-keting study, I forecast the imminence of a major U.S. economic recession, triggered by the over-stretching of a post-1954 credit-bubble centered in financing of automobiles, housing, and analogous consumer goods. This recession broke out in February 1957 statistics, and was generally, if reluctantly acknowledged to have occurred several months later. The recession-spiral lasted into mid-1958, and was followed by a prolonged stagnation until an upturn appeared under the Kennedy administration.

2) During 1959-60, I made my first long-range forecast: that near or shortly after the middle of the 1960s, we would see the first of a series of major monetary disturbances, leading toward a collapse of the existing Bretton Woods agreements. I forecast that this collapse would see increased looting of what were then termed developing sector nations, and that the breakup of the Bretton Woods agreements would lead rapidly to austerity measures modelled upon those of fascist regimes, in international economic relations and in the U.S. domestic economy.

All of my economics forecasting and related activities of the 1960s, through spring 1971, were premised upon that same judgment. The first of the series of major monetary disturbances of the period occurred with the collapse of the British pound during November 1967, followed by the dollar crisis of January-March 1968. The break-up of the Bretton Woods agreements occurred beginning Aug. 15, 1971, and was consolidated by the Azores monetary conference of 1972. In immediate response to the August 1971 development, the U.S. government instituted the radical austerity measures known as Phase I and Phase II.

3) In November 1979, during my campaign for the Democratic Party's presidential nomination, I warned that the measures which the Carter administration and Federal Reserve had just taken, at the urging of newly appointed Federal Reserve Chairman Paul A. Volcker, would lead to the outbreak of a devastating recession, beginning early 1980. Every detailing of that forecast by *EIR* magazine's

LaRouche's Eight Economic Forecasts

1. Autumn 1956

Forecast: A major U.S. economic recession, triggered by the over-stretching of a post-1954 credit-bubble centered in financing of automobiles, housing, and analogous consumer goods.
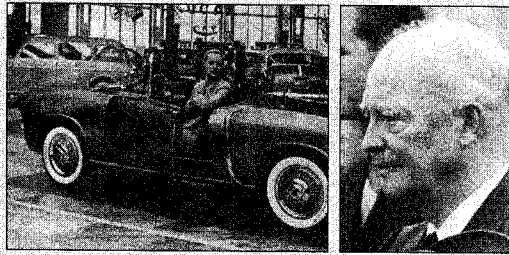
What happened: Recession spiral begins in February 1957, lasting until mid-1958. Hundreds of thousands of industrial workers lose their jobs, as unemployment climbs to highest levels since the Depression.
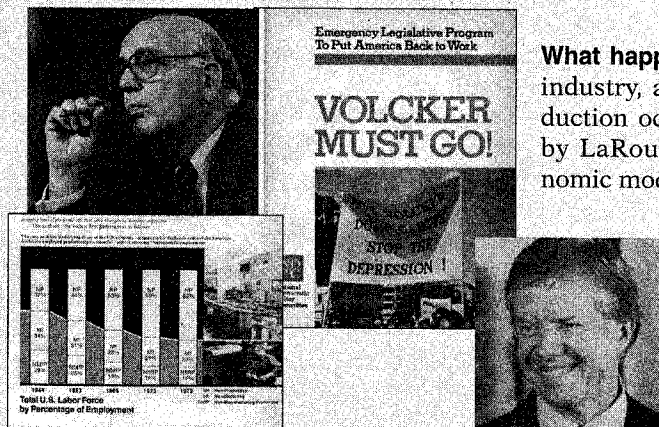
2. 1959-60

Forecast: A series of major monetary disturbances, leading toward a collapse of the Bretton Woods agreements, resulting in increased looting of developing sector nations, and austerity measures modelled upon those of fascist regimes.

SOLIDARITY 25¢
FBI/CIA Attack Backfires
IMF To Finance New Auschwitz

SOLIDARITY
NIXON PULLS THE PLUG
Why It Happened Now
Crisis Numbs Liberals
Socialists Follow Suit
Monetary Sickness Fatal?

What happened: On August 15, 1971, President Nixon decoupled the dollar from gold, collapsing the post-World War II Bretton Woods monetary system internationally; Nixon then initiates Phase I, II and III asuterity measures at home.

3. October 1979

Forecast: A devastating recession, beginning early 1980, as a result of Federal Reserve Chairman Paul Volcker's credit-strangulation policies. "Volcker will cause a 15% recession in the U.S. economy, probably putting the United States into a recession twice as severe as that of 1974," LaRouche wrote on Oct. 16.

Emergency Legislative Program To Put America Back to Work
VOLCKER MUST GO!

STOP THE DEPRESSION

Total U.S. Labor Force by Percentage of Employment

What happened: Collapse of U.S. housing industry, agricultural and industrial production occurs, and is charted accurately by LaRouche's LaRouche-Riemann economic model.

4. February 1983

Forecast: LaRouche informs the Soviet government, that if it were to reject a western offer of joint ABM development (which became known as the U.S. Strategic Defense Initiative, when it was adopted by President Reagan on March 23, 1983), the strains on the Comecon economy would lead to a collapse of that economic system in about five years.
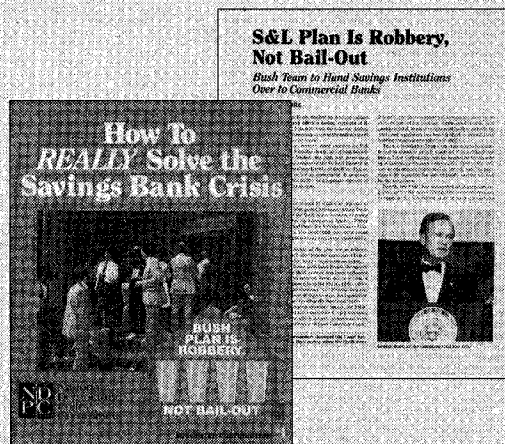
HOW BEAM WEAPON TECHNOLOGIES CAN REVERSE THE DEPRESSION

What happened: Gorbachov rejects the SDI offer in spring 1983. The Berlin Wall falls in November 1989. The Gorbachov regime falls in 1990.

New Solidarity WEEKEND EDITION 25¢
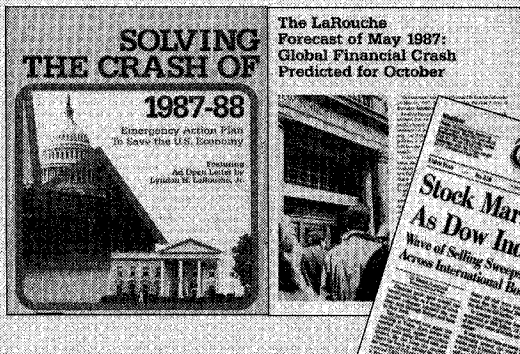**Reagan Announces Program For Defensive Beam Weapons**

5. Spring 1984

Forecast: A collapse in a large section of the U.S. banking system: the savings and loan and related sectors. "The banking system as a whole is at the brink of collapse," LaRouche told a June 1 television audience.

S&L Plan Is Robbery, Not Bail-Out
Bush Team to Hand Savings Institutions Over to Commercial Banks

How To REALLY Solve the Savings Bank Crisis

What Happened: Texas S&Ls begin to collapse in late 1987. Through the end of the decade, the savings and loan system coast to coast is in crisis, with many banks going under, or being purchased by larger institutions. The crisis requires a billion dollar bailout with federal tax dollars.

6. May 1987

Forecast: The outbreak of a major collapse in the stock market beginning approximately Oct. 10, 1987. This was LaRouche's first and only stock-market forecast.

SOLVING THE CRASH OF 1987-88
Emergency Action Plan To Save the U.S. Economy
An Open Letter by Lyndon H. LaRouche, Jr.

The LaRouche Forecast of May 1987: Global Financial Crash Predicted for October

The Washington Post
Stock Market Suffers Largest Loss in History As Dow Industrial Average Drops 508 Points
Wave of Selling Sweeps Across International Borders

What Happened: Black Monday, Oct. 19, 1987: the Dow Jones Industrial Average drops 508 points, or 22.6%, the largest loss in its history at twice the collapse of 1929.

7. Spring 1988

Forecast: During an April 12 nationwide half-hour TV address, LaRouche described the "bouncing ball" phenomenon as the key to following the continuing collapse of the U.S. economy through the course of apparent, short-term fluctuations relatively up or down.

The Washington Post
Clinton Asks Middle Class to Pay Higher Taxes

Richmond Times-Dispatch
Economy breaks shackles

The Washington Post
Asking Americans to 'Face Facts,' Clinton Presents Plan to Raise Taxes, Cut Deficit

What Happened: Federal government "indicators," and the Dow Jones Average, adjusted to include non-productive service industries and jobs and profits from activities such as derivatives trading, show modest recovery, while productive base of the economy continues to collapse.

8. November 1991

Forecast: An ongoing "mudslide" of economic collapse, rather than a dramatic blowout. "Many people have been looking for a definitive one-day, two-day, three-day financial crash, perhaps on the markets, with the Dow Jones, sometimes called Baby Jones, Index crashing 500 or 1,000 points or more. What they are seeing is . . . the great mudslide of 1991," LaRouche wrote on Nov. 23.

THE NEW FEDERALIST
Russian Film On Crime   **World Financial Crisis Unfolds**

EIR

The Great Mudslide Is On, Candidate LaRouche Says

What happened: 1993-94 bankruptcies of major financial institutions in Venezuela, Germany, Spain, and elsewhere signal a systemic crisis; the bond market collapses; major players, such as the Canada-based Olympia & York, the world's largest real estate company, go under.

quarterly projections through 1983 was the most accurate forecast issued publicly by any agency; in fact, most, including Chase, Wharton, Evans, and Data Resources, were absurd in their sensing of the direction of the trends.

4) In February 1983, in the course of an exploratory back-channel discussion I was conducting with Moscow in coordination with the Reagan administration, I informed the Soviet government, that if it were to reject what later became known as the Strategic Defense Initiative of March 23, 1983, the strains on the Comecon economy would lead to a collapse of that economic system in about five years. This forecast was repeated in an *EIR* Special Report, *Global Showdown*, issued July 1985. The collapse occurred during the second half of 1989.

5) In spring 1984, in my renewed campaign for the Democratic Party's presidential nomination, I warned, in a nationwide half-hour TV address, and elsewhere, of the outbreak of a collapse in a large section of the U.S. banking system: the savings and loan and related sectors.

6) In May 1987, I forecast, as published in *EIR* magazine and elsewhere, the outbreak of a major collapse in the stock market beginning approximately Oct. 10, 1987. This was my first and only stock-market forecast.

7) During my renewed Democratic candidacy of 1988, in a nationwide half-hour TV address, I described the "bouncing ball" phenomenon as the key to following the continuing collapse of the U.S. economy through the course of apparent, short-term fluctuations relatively up or down. That has continued to the present day.

8) During my renewed Democratic candidacy of 1992, I warned that we were already gripped by a global financial mudslide, "down, down, down."

This is a record of nearly 40 years, a record which cannot be even approached on the public record by any currently living economist, even by France's (and *Le Figaro's*) eminently sane Nobel Prize-winning Maurice Allais.

Out of that same unequalled competence, I say to you now, as I informed various relevant scientific institutions of Russia during the last week of this April past: *The presently existing global financial and monetary system will disintegrate during the near term. The collapse might occur this spring, or summer, or next autumn; it could come next year; it will almost certainly occur during President William Clinton's first term in office; it will occur soon. That collapse into disintegration is inevitable, because it could not be stopped now by anything but the politically improbable decision by leading governments to put the relevant financial and monetary institutions into bankruptcy reorganization.* That is LaRouche forecast No. 9—the addition to the list of eight, above.

The Rational Standard of Belief

What has been summarily reported on the first eight forecasts shows that something is missing in the intelligence or morals of anyone who refuses to take the ninth forecast very seriously. Yet, that being said, although the

When Speculators Go Mad

The Dutch Tulip Craze

Tulips arrived in the Netherlands from Turkey in 1593. They were brought into the country by Carolus Clusius, the head of the Dutch Royal Gardens, who had received them as a gift from Ogier Ghislain de Busbecq, the ambassador in Constantinople of Hapsburg Emperor Ferdinand I. Clusius planted several of the Turkish tulips in a small garden at the University of Leiden, where they caught the eye of Dr. Adriaen Pauw, who began to cultivate the Semper Augustus tulip variety on his estate in Heemstede. Soon, the exotic plants were all the rage among Dutch aristocrats, who began to purchase them, and to speculate on their value.

Historian Nicolaes à Wassenaer wrote in 1623: "Among the many precious examples of these flowers, one that for its beauty is named Semper Augustus, is the foremost of this year. . . ." When Wassenaer wrote, a single Semper Augustus bulb was selling for $525 (as compared to the average annual Dutch income of $79); in 1625, the price of one bulb of the variety sold for $1,575; by 1633 it had nearly doubled to $2,900. In 1637, a trio of Semper Augustus bulbs sold for $16,000, more than three times the value of the most expensive estate in Amsterdam.

These bulbs were never planted, in fact, were never even seen by their purchasers. Sales took place by contract, and gradually the number of middlemen between the grower and speculative investor rose to more than a dozen.

Prices reached staggering heights in late 1636 and early 1637. But by February of 1637, the collapse was on. Thousands of investors were bankrupted, many of them members of the middle class who lost their lives' savings.

John Law's Mississippi Bubble

One of the most notorious financial bubbles in modern history bankrupted the nation of France in the 1720s. Called the Mississippi Bubble, it was established by the Scottish gambler John Law, who eventually maneuvered himself into position as the Comptroller General of France.

Scottish gambler John Law

An early tulip of what is today known as the Rembrandt variety.
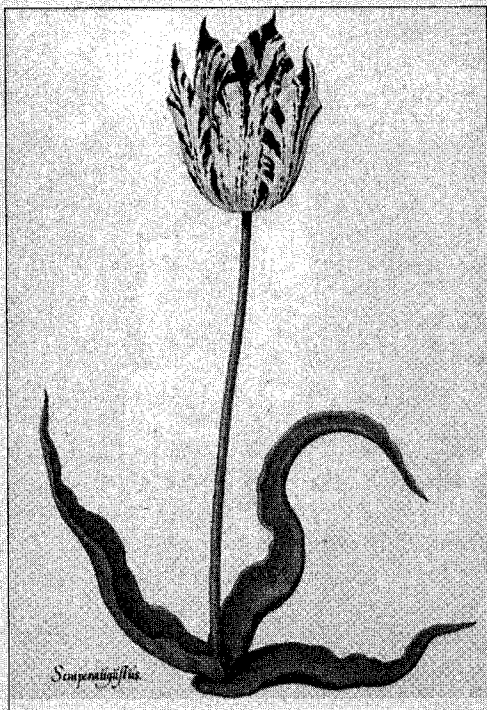
The Mississippi Company was established in 1717, a bit more than a year after Law had already gotten the ability to establish a French state bank. The company was based upon the fact that France owned the Louisiana territories, which allegedly were to bring great wealth to the nation. Shares were sold to the public, on the basis of the tremendous riches allegedly to be reaped. A massive publicity campaign painted a picture of Louisiana being filled with mountains of pure gold, silver, copper, or other riches. Further rumors idealized the native Indians, saying that they were willing to hand over their riches in exchange for the most common French goods.

All this publicity, however, was a lie. No income was coming from the Mississippi region, but only from the gains made by speculation and Law's expansion into other revenue sources. In order to pay the rates on shares which Law promised, however, he needed to keep expanding his capital, and access to income. Gradually, Law obtained from the government the rights to tax farming, and a virtual monopoly over the entire foreign trade of France. Despite the inability of the government to actually populate Louisiana, and the unfortunate news that Frenchmen sent to allegedly reap the wealth of the New World were slaughtered by the Indians, the price of shares in the company continued to zoom.

Indeed, all of Law's ventures combined generated a gambling fever in France—rather like the massive lotteries which now periodically sweep parts of the United States. By December of 1719, the original shares of 500 livres in the Mississippi Company had reached 40 times their original value. Foreigners also streamed into Paris to buy and trade shares—and the wealthy nobility, like Law's patrons, made millions. But the sources of wealth for paying off the gamblers were running out—as none of the money was going into *producing* anything.

As the winter of 1719 approached, however, the wealthiest speculators began to realize that the game was coming to a close. As they cashed in their shares, and then demanded gold for their paper notes, a massive contraction began. Eventually the contraction brought down not only the Mississippi Company—which had never brought back any wealth or developed anything—but also the national bank Law had started. Law himself, who had had legendary popularity for flooding France with money, had to flee for his life in the spring of 1720—after the bank had had to restrict payments of cash to no more than 10 livres per person per day.

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public record shows that I am probably the world's best forecaster living during the past 40 years, does that unmatched record in forecasting guarantee that my ninth forecast is right? Any responsible government says, "He may be the world's best economist, but, even in his case, I still need the proof that his ninth forecast is right."

Think of an economist advising a government as morally in a position like the physician advising a patient. Would it be consistent with medical ethics to prescribe a medicine on the basis of "I happen to find the labels on the pharmaceutical company's products attractive"? How should the physician judge? He is morally responsible for using scientific method, and for working in concert with those other members of the profession whom he knows to be governed in their utterances by obedience to scientific method (rather than some official of an insurance company controlled by investment trusts, for example). What is the comparable ethical requirement in connection with economic prescriptions?

Contrary to what most scientific illiterates among U.S. college graduates believe today, *science is not statistics. Science is the method by which a series of successful fundamental, and other crucial discoveries have been generated. Science is not mathematics; it is the delimiting conditions which the successively successful method of physical science, over nearly 2,500 years since Plato's Academy at Athens, imposes upon mathematics today.*

Any responsible government today is asking the following three questions about the ninth forecast in that series: 1) Is the method which I employed to develop the first eight of these forecasts consistent with the method upon which the ninth depends? 2) Is the method which opponents of this forecast employ identical to the failed method which their circles used in failing to meet the standard of each and all of the first eight forecasts in my series? 3) If the answer to the preceding questions is "Yes," then show the additional, crucial proof that my method conforms to the actual principles by which physical growth in economic processes is sustained.
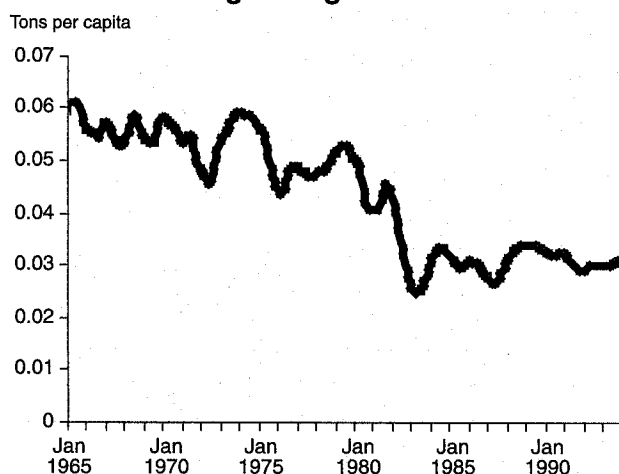
That is what any responsible government will demand of

A Look at the Post-Industrial U.S.A.

Decline in Per Capita U.S. Steel Production, 1965-94

This graph, which has been constructed using data for monthly raw steel production supplied by the American Iron and Steel Institute (the trade association representing U.S. steelmaking firms) and monthly estimates of the U.S. resident population from the U.S. Bureau of the Census, shows the 12-month moving average of per capita raw steel production every month from January 1965 to earlier this year (1994). A *moving average* is calculated by taking the data immediately preceding each data point, summing them, and finding the average. In this graph, for example, the data plot for January 1994 is calculated by adding all the production figures for the 12 months from February 1993 to January 1994, then dividing by 12. The next data plot, for February 1994, is calculated by adding the figures for the 12 months from March 1993 to February 1994, then dividing by 12. And so on. A moving average makes it easier to identify trends over periods of time, especially when there is much variation in data over time. In this case, a 12-month moving average is particularly well suited for bringing out an annual trend month by month.

It is readily apparent from the graph that U.S. per capita steel production is now around one-half what it was two decades ago. This reflects both the collapse of demand for steel, as the U.S. economy has been "deindustrialized," and the shutting down of one-third of the United States's steel production capacity in response. The American Iron and Steel Institute reports that total U.S. steel-making *capacity* in 1993 was 109.9 million tons. That compares to 160.0 million tons of capacity in 1977.

Per capita U.S. steel production, 12 month moving average

Tons per capita

Sources: American Iron & Steel Institute, U.S. Bureau of the Census

Decline in U.S. Productive Workers

After President John F. Kennedy was assassinated, U.S. economic policy was steered into a post-industrial shift. The physical base of the U.S. economy which produced goods was neglected—and, in fact, was looted. Financial resources were devoted to building up a massive bubble of speculation and usury, while industry was starved for credit. Thousands of factories and mines were closed.
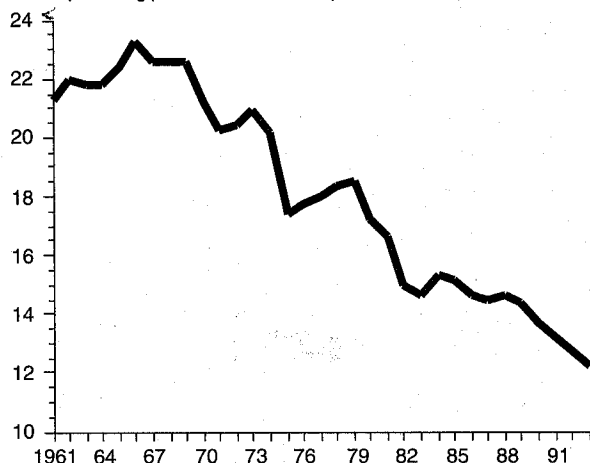
me, once it recognizes that it would be terribly, morally reckless to continue its disastrous former blind faith in my failed "Brand X" competitors of the post-World War II period, such as John Von Neumann, Abba Lerner, Milton Friedman, Friedrich von Hayek, Karl Popper, Arthur Burns, Paul Samuelson, George Shultz, Paul Volcker, Margaret Thatcher, Wharton, Evans, Chase, Data Resources, and, at the bottom of the barrel, that notoriously poisonous academic imp from Harvard, Jeffrey Sachs.

The future will judge the governments and the electorates of the present by the way in which they respond, or fail to respond to their obligation to pose those policy questions respecting that ninth forecast. The future will demand: 1) If you had asked those questions, you might have foreseen the mass-murderous disaster which was about to hit your nation and the rest of the world besides. Did you ask those questions? 2) If you did ask those questions, did you receive an answer? 3) What would have been the result had you accepted that answer? *This moral accountability applies to government; it may determine whether or not certain economists deserve to sit in Hell; it is also a measure of the morality of the voting-age population in general.*

The reader will find all the crucial features of the method employed in all nine of the list of past and present forecasts identified adequately in many published locations, including two most recent editions of the quarterly journal *Fidelio*. "On LaRouche's Discovery," (Spring 1994) is an account of the original work, over the years 1948-52, which produced my original fundamental discovery in the science of physical economy. This, including footnotes (pp. 37-55), is a concise report of the discovery. The second, longer treatment of the significance of economic policy in history, is found in "The Truth About Temporal Eternity," in the Summer 1994 issue.

If the reader has advanced competence in mathematical physics, including the issues associated with such matters as Bertrand Russell's fraudulent attacks upon Bernhard Riemann and Georg Cantor, or the related matter of Kurt Gödel's shattering proof of a crucial blunder by John Von Neumann, those two articles report enough to constitute rigorous scientific proof. If the reader lacks that advanced training, the contents of the two articles will be nonetheless highly informative and relevant.

It is my intent, that any literate person, whether one with adequate scientific training or merely good moral sense in such matters, will be suitably informed by the following description of the proof for my ninth forecast.

What is a Financial Bubble?

As the first step in understanding the derivatives bubble about to pop, ask yourself the question which I posed to members of my class in economics back in 1966, a class which included Virginia's present-day Democratic celebrity Nancy Spannaus and a number of other university graduate students. Why do slumlords find investment in New York City slum-housing so profitable? Nancy Spannaus, together with others among those graduate students, set up a field investigation, a project which involved many long hours at the New York Hall of Records, tracing the history of New York slum properties and their sites back as far as several generations. Nancy and other members of the task force found and proved the answer to my question.

Take any income-producing investment, whether a factory, a farm, a retail sales outlet, or a slum rental-housing property-title. From the total revenue which the owner of that investment obtains annually, a certain portion is taken out of the total. By "taken out" is signified "not poured back into reproducing or improving the physical operations of the investment itself." Four elements of this withdrawn portion of the total sales revenue are of primary concern to us at this moment: Withdrawn *rent, interest, profit,* and a certain portion of the *taxes* paid.

Focus for a moment upon the withdrawn-rental portion—the portion of the rent not put back into either paying taxes on the real estate or maintaining and improving the structure. Let us suppose that the current holder of the title

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High-paying jobs for industrial operatives disappeared by the millions, while a few thousand new jobs were created for the accountants, lawyers, and brokers that directly served the financial bubble. The lost industrial jobs were replaced by millions of low-paying service jobs catering to the nouveau rich. The result, as seen here, is that the percentage of goods-producing production workers—that is, the non-supervisory people who actually operate the machines in mining, construction, and manufacturing—declined as a percentage of the total labor force, from a high of 23.2% in 1965, to a low of 12.7% in 1992 and 1993.

U.S. production workforce collapsed after mid-1960s

Goods-producing production workers as percent of labor force

Source: U.S. Department of Labor, Bureau of Labor Statistics, Supplements to Employment and Earnings

to that slum rental property decides to sell this property as a rental property; how do we determine the expected valuation used for determining the selling price? *That valuation will not be based on the cost of constructing a replacement building, or the depreciated original cost of the building; it will be based upon a multiple of the withdrawn portion of the rental income, or some analogous consideration.*

Thus, for this classroom example, we have two values for that slum property. One is the depreciated value of the original construction, including depreciated value of improvements added. The other value is a multiple of the portion of the rental income withdrawn from the physical cycle of maintenance and replacement by the holder of the title. Let us give a name to the difference between the depreciated value of the original construction and the market value assigned to the rental income from that building. In 1967-69 New York City, the latter valuation was vastly greater than the first. The increase of the latter valuation over the former is termed *fictitious capital.*

The task force of which Nancy Spannaus was a member found that the slumlord system was extracting greater actual rates of return on slum properties used by very poor families, than more legitimate landlords were taking in from decent housing renting to middle and higher income households. By squeezing the rental income to the maximum, through non-maintenance and use of related tricks, a slum property realized a higher yield than a non-slum property. One could have seen in those facts a warning of the coming age of utter economic degeneracy, the age of junk bonds, hostile takeovers, and derivatives: one might say, the age of the keenest admirers of George Bush and Maggie Thatcher. The landlord with the scummiest morality, and the least degree of redeemable value to society, was being rewarded more richly than a landlord with decent morals.

That economic category, *fictitious capital,* is key for understanding why the present-day derivatives bubble is precisely analogous to a cancer of the world financial and monetary system in its terminal phase. Let us describe the present global bubble in these terms of reference, before turning to analysis of some of the crucial points of our proof.

Instead of a 1960s slum rental property, take today's near-approximation of that: Milton Friedman, Margaret Thatcher, George Bush, and Wendy and Sen. Phil Gramm's (R-Tex.) U.S. economy. That is the "post-industrial" United States which has replaced its steel industry-centered economy with a free-to-steal marketplace economy, the present-day *Wall Street Journal, American Spectator,* and *Washington Times's* economy of Michael Milken and kindred neo-conservative bandits.

It is visible that the net physical investment in maintenance and improvements of productive capacities of basic economic infrastructure, farms, and factories has long since dropped way below the level of zilch. The collapsing of farms (for the greater glory of George Bush's cronies in the grain cartel), and the collapsing of numbers of industrial and other skilled operative's work-places shows conclusively

Derivatives: The Hot

What are derivatives? The textbook definition of a financial derivative is a financial instrument, the value of which is based on the value or values of one or more underlying assets or indexes of assets. Derivatives can be based on equities (stocks), debt (bonds, bills, and notes), currencies, and even indexes of these various things, such as the Dow Jones Industrial Average. Derivatives can be sold and traded either on a regulated exchange, such as the Chicago Board of Trade, or off the exchanges, directly between the different counterparties, which is known as "over-the-counter">(OTC). The textbook explanation of the purpose of derivatives is that they serve to reduce the risk inherent in fluctuations of foreign exchange rates, interest rates, and market prices.

A generation or so ago, the matter of what derivatives are might have been adequately summarized by contrasting the difference between investment, on the one hand, and gambling or speculation, on the other.

The instruments which "underlie" derivatives—stocks, bonds, commodities, money—represent a claim, usually through ownership, on wealth produced in the economy. Such claims can be purchased. Thus, shares in a company can be bought, as can bonds issued by governments or corporations, or hard commodities produced by agriculture, forests, industries, or minerals extractors and refiners.

The instrument so purchased provides a means by which the wealth produced may be turned into money. In the case of stock, this may take the form of the company's dividend payment, the part of after-tax profits distributed to shareholders, or it might take the form of capital gains realized through the appreciation of the stock's value. Formerly, such monetization, or potential for monetization, would have been more or less directly related to the economic performance of the company, in contributing to an increasing overall rate of wealth generation through productivity-enhancing increases in the powers of labor. So too are bonds directly related to economic activity, though where stocks represent equity ownership, bonds represent indebtedness. The interest paid corresponds, more or less, to the dividend yield of a stock. And like stocks, bonds can provide capital appreciation.

Purchases of stocks and bonds would once have been seen as investment for the long haul. Trade in commodities would have been seen not as investment, but as purchases and sales.
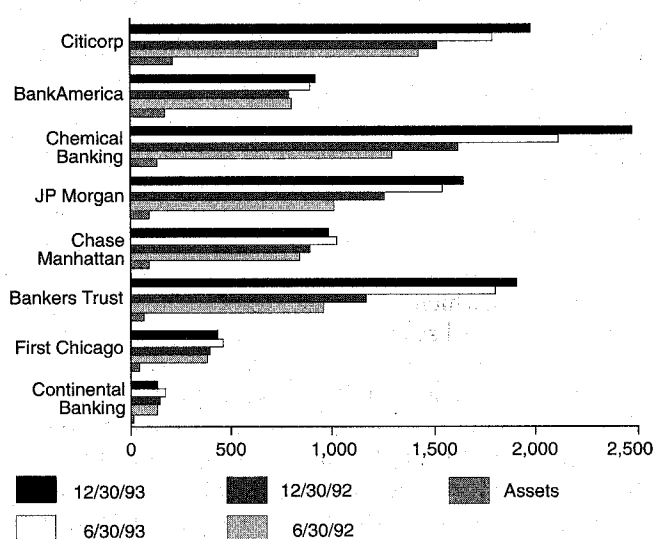
Air Inside the Financial Bubble

Growth of worldwide derivatives markets notional principal value at years' end
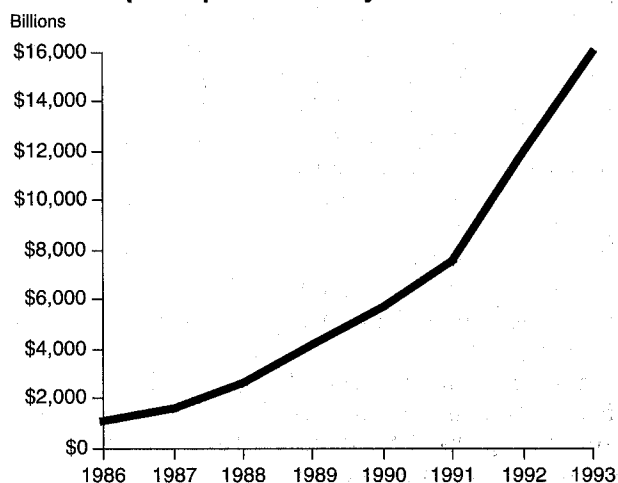
Billions

Sources: Bank for International Settlements, *Fortune* magazine

Big banks addicted to derivatives

Billions of Dollars

| 12/30/93 | 12/30/92 | Assets |
| 6/30/93 | 6/30/92 | |

Sources: Comptroller of the Currency, Annual reports

With what are now called derivatives, we move from investment, and purchases and sales of hard commodities, to speculating on the future price or yield performance of what were once investments, and relatively simple, economically necessary transactions.

All derivatives are actually variations on futures trading, and, much as some insist to the contrary, all futures trading is inherently speculation or gambling. Thus until late in 1989, all futures trading, of any sort, was outlawed in Germany, under the country's gambling laws. Such activities were not treated as a legitimate part of business activity.

There are two types of futures trading; each can be applied to each of the instruments, like stocks and bonds, which, bought directly for cash, monetize what used to be after-tax profits. The first type is, as it were, a second step removed from economic activity as such. This is futures trading per se: contracting to buy or sell at a future date, at a previously negotiated price. Here the presumption used to hold, that commodities, for example, would actually change hands for money, as the agreed-on contracts fell due.

The other kind of futures contract, called an option, moves another step further away from economic activity as such. Now what is bought or sold is the right, but not the obligation, to buy or sell a commodity, stock, bond, or money, at a future price on an agreed-on date. Where the futures contract speculates on what the price that would have to be paid against delivery will be, the option simply speculates on the price.

At yet another remove from economic activity per se is an index. An index is not the right to buy a commodity or stock in the future which is traded, but the future movement of an index based on a basket of stocks, commodities, bonds, or whatever.

Other types of derivatives, such as interest rate and currency swaps, caps, floors, collars, and currency forwards, are even further removed from the production of real wealth in the economy, as the chart shows.

U.S. Banks Addicted to Derivatives

The graphs show the situation of the eight huge U.S. banks which account for some 90% of the derivatives activities of the U.S. banks as a whole; they have clearly "bet the bank" on the derivatives markets, and will be bankrupted many times over when the derivatives market collapses. The reason the banks have taken such a suicidal gamble, however, is that they were already bankrupt to begin with and, like a gambler playing double or nothing, continued to gamble in the vain hope that they will somehow cheat their fate.

The Fed, Citicorp and George Soros— A Case Study in Corruption

The role of the Federal Reserve System in organizing and protecting the biggest speculative bubble in world history, looting entire nations to support a bankrupt financial system, was amply demonstrated during the September 1992 currency warfare which caused the blowout of the European Community's currency exchange rate system.

The attack on the EC's Exchange Rate Mechanism, which led to the withdrawal of the British pound and Italian lira from the ERM system, was widely touted at the time to be the work of master speculator George Soros, head of the Quantum hedge funds. For his attack on the British currency, Soros became known as "the man who broke the pound," the speculator so mighty he could singlehandedly defeat entire nations and their central banks.

Like most such stories about so-called investment geniuses—Michael Milken and Warren Buffett, for example—the myth of George Soros is pure fabrication, designed to hide the manipulations of institutions far more powerful: the central banks, banking families such as the Rothschilds, Warburgs and Barings, and the financial empires of the ancient oligarchic families for whom these banking families work.

Soros's September 1992 attack on the ERM was an "inside job," done in collaboration with the Federal Reserve and the Rothschilds, and a handful of big U.S. commercial banks. One reason for this currency warfare was geopolitical: to counter the growing German influence in Europe. Another reason for the attack was pure greed, to help the U.S. banks grab huge profits to help them hide their insolvency.

Behind the facade of Soros's public statements that the pound was overvalued, the Fed, the Bank of England and the big U.S. and British banks, launched a coordinated move to drive down the value of the pound. Knowing in advance that the pound was going to drop in value, these thieves were able to reap obscene profits by betting on that drop through currency futures, essentially stealing money out of the pockets of other speculators who lacked such inside information. During September, Soros and Citicorp reportedly reaped more than $1 billion each, and the other big New York banks garnered lesser but substantial profits.

The Fed, Citicorp, and Soros have an incestuous relationship. Citicorp, through its main subsidiary Citibank, is one or two custodians for Soros's Quantum Fund, and as such provides a variety of administrative services for the fund. Citibank also provides substantial lines of credit to Soros and his funds, which like all major speculators, operate on borrowed money.

Drawing the noose even tighter, Citicorp was at the time *under the direct control of the Fed.* In mid-November, 1990, Citicorp chairman John Reed was summoned to the office of E. Gerald Corrigan, then the president of the Federal Reserve Bank of New York, where he was informed that the Fed was taking control of his bankrupt bank. Thus the Fed was well aware of Citicorp's speculative activities, and could have ordered them stopped at any point.

To complete the circle, according to our reports, the New York Fed was providing Soros with inside information on the strategies and financial conditions of the major central banks, allowing him to more precisely tailor his attacks. Corrigan, it should be noted, has since resigned his position.

Hence we have Soros, directed by the Fed, and funded by the Fed-run Citicorp among others, launching currency warfare operations against our nation's allies. This represents insider trading on a massive scale, far beyond the activities of Michael Milken, Ivan Boesky and their cronies.

What this case shows is that the system itself is corrupt, functioning as a looting mechanism to prop up a bankrupt financial system through outright theft.

This is the Federal Reserve in action.

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that the U.S. economy is being contracted rapidly by a process of asset-stripping. This is a global process. It took off first in the developing sector, especially after the installation of the post-August 1971 "floating exchange-rate monetary system," in place of the former gold-reserve standard set earlier by the Bretton Woods agreements. After the introduction of the New York Council on Foreign Relation's 1975-76 "controlled disintegration of the economy" doctrine as Federal Reserve Chairman Volcker's October 1979 "Volcker measures," this disease of looting spread throughout the U.S. economy, into all sectors.

By the beginning of the 1980s, through the asset-stripping already in place during the "post-industrial" binge of the 1970s, the United States economy had lost the technological capabilities on which the successful 1960s manned landing on the Moon had depended. Under the guidance of Senate president and later President George Bush—as the late Robert Benchley wrote back in 1943—matters went "from bed to worse." From the end of 1982, the asset-stripping process ran amok under the influence of the Gramm-Bush push for radical deregulation of finance. The measures of deregulation pushed by Bush and Gramm could be

Banks stopped making business loans

Billions of dollars
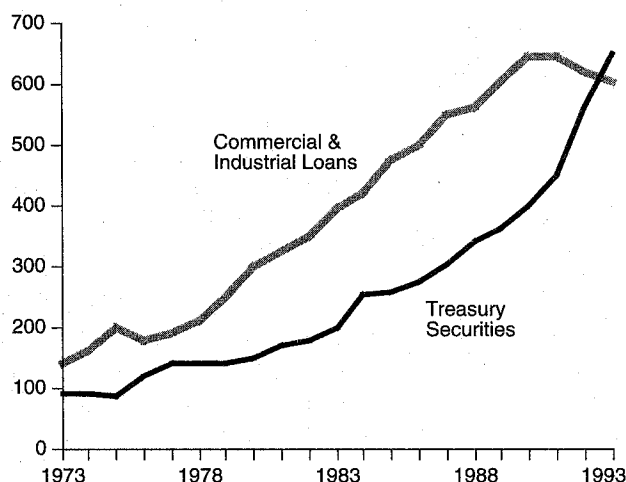
Source: Federal Reserve

How the Fed Subsidizes the Bankrupt Banks

The famous credit crunch of the early 1990s was in large part due to the decision by banks to abandon traditional banking and instead play the securities and derivatives markets. In this case, the banks dramatically cut back their level of business loans, while rapidly increasing their holdings of Treasury securities, a trend shown on the graph.

There were several reasons for this. One, the banks had to set aside reserves for possible loan losses when making business loans, but did not have to set aside reserves for their purchases of Treasury securities, which are guaranteed by the U.S. government and therefore allegedly safe investments. Since money placed into loan-loss reserves must be deducted from profits, the banks were able to improve their financial statements by cutting back on lending. Another reason for this rush into Treasuries is that the banks could borrow funds from the Federal Reserve at 3%-4% interest, and use the money to buy Treasury securities paying 6%-7% interest, locking in a 3%-4% profit, effectively a subsidy from the federal government, courtesy of the Federal Reserve.

fairly termed the "Kravis and Milken Junk-Bond Feeding Legislation." The "planned train-wreck" called the Gramm-Rudman bill, putatively intended to balance the budget, balanced nothing, but rather unbalanced much of what was left of the economy, and also the minds of its credulous supporters.

Look at this degeneration of our economy through the eyes of a 1960s New York City slumlord—his admiration would be orgasmic.

Look at the real income-stream taken away from the "reproductive cycle" of the process of production and distri-

bution of goods and of such specifically indispensable services as education, health care, and science. Trace the profit, interest, rent, and taxes from these sources. Now carry that extraction away from reinvestment in the physical improvement of those cyclic processes of production and distribution of product, and sell those extracted sums of income-flow on the financial market. Sell them as slumlords sell property titles to slum-rental holdings—not the physical property, but rather the legal title to the rental income.

Generate thus large masses of fictitious capital. Now, in addition to the real-income stream from primary sources of rent, profit, interest, and taxation, a second kind of income-stream has been generated, *fictitious capital gains*.

In any market economy, even in the rural barter of livestock, the occurrence of *fictitious capital* and of *fictitious capital gains* is endemic. Under certain kinds of conditions, the pyramiding of fictitious capital gains as an income-stream upon which a second order of fictitious capital is generated, sets into motion a process made famous in modern economic history by such disastrous lunatic binges as the seventeenth-century tulip bubble in the Netherlands, the early eighteenth-century South Sea Island and Mississippi bubbles, and today's Bush-league practices behind the junk bond and derivatives bubble.

As long as money and assets discountable for money treat such property-titles and contracts as negotiable assets, money treats real-income streams and fictitious capital gains more or less equally. In this circumstance, a legion of worse-than-useless Wall Street, City of London, and kindred parasites around the world become immensely rich, while families of farmers, industrial operatives, ordinary honest businessmen, and the nation at large become increasingly poor, even as destitute as Russia under the policy-influences of Margaret Thatcher, George Bush, and Jeffrey Sachs.

As long as the prospective purchaser is prone to act upon the belief that a nominal capital gain in a contracted fictitious capital represents an expected and discountable income-stream, this imagined new income-stream can be assigned a fictitious capitalization in the same way a slum-property title is assigned a fictitious valuation based upon the purchaser's willingness to pay a market-price for acquiring title to the stream of rental income. Once this next phase in the spiral of financial speculation becomes the basis for a new market in such instruments, a process of "geometric" growth of nominal fictitious capital is unleashed. A ballooning of fictitious aggregates occurs. That is the distinction of a true speculative bubble, as contrasted with endemic forms of speculative activity within markets.

What Is a 'Cancerous Bubble'?

The present global financial and monetary bubble goes one fatal step beyond a mere ballooning of fictitious capital gains. It has a dimension which marks it as fatally cancerous for the financial and monetary systems which it infests.

13

Why the Speculative Economy Must Collapse

The Better It Grows the More Surely It's Doomed

The growth of per capita indebtedness reflects the spreading cancer of usury and speculation. Indexed using 1967 as the base year, total per capita indebtedness has increased tenfold since the 1960s. Using data series from the U.S. Department of Commerce's Bureau of Economic Analysis and Bureau of the Census, we can roughly estimate the total profit of the U.S. economy. Then, we can find ratios for the amount of profit, as compared to the amount of debt service. We find that the U.S. economy entered a death spiral of debt during the supposed "Economic Recovery" of the Reagan-Bush administrations: From one dollar of debt service for each dollar of such profit in 1967, that ratio has widened to more than $3 of debt service for each dollar of profit in 1991. Moreover, the cost of servicing the debt has grown roughly three times faster than the ratio of debt service to profit has, over the same time period.

For an approximation of profit we take *manufacturers' shipments* and subtract the costs of producing the goods shipped. We approximate the costs of producing the goods shipped by adding together *cost of materials; wages* of manufacturing workers; *investment/depreciation* of the machinery and equipment used up in the production process (machinery wears out, just like the family car, and must be replaced); and the *cost of money* (i.e., an effective, not nominal interest rate, which we approximate as *total interest payments* divided by *total debt*).

Rate of Profit

Next, let us look at the *rate of profit*. We have already approximated the "profit" of the economy by taking manufacturers' shipments, and subtracting the cost of producing those shipments. From this figure of "profit," we now subtract *debt service*. The resulting figure is then divided by the costs of producing the goods shipped. In a healthy economy, production costs are reduced by the results of technology-driven increases in the productivity of labor. Also, interest charges would be restricted to a 2-3% administrative levy—not the usury in excess of 10% that has prevailed since Paul Volcker's interest rate shock of 1979. Under such conditions, the rate of profit would increase.

What we find is exactly the opposite. The rate of profit peaked during the Kennedy administration, and has fallen since. If a ratio of 1.00 represents economic breakeven, then Paul Volcker's interest rate increases drove the economy below breakeven, into depression. Calculated using 1967 as the base year, $2.50 is now lost for every dollar that is invested in the U.S. economy. Yet, three dollars in debt service are demanded for each dollar of profit! There has not been any ostensible "profit" in the U.S. economy since 1979 (See Figure 1).
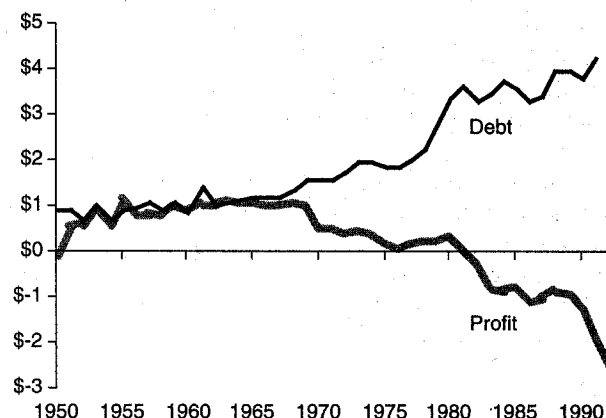
Debt Service Per Dollar of Profit

The total volume of all credit market debt outstanding, owed by the three principal sectors of the economy—*business,* including farms; *household;* and *government,* including federal, state, and local—is exploding. In the past few years, it has grown at the rate of half a trillion dollars or more each year. By 1993, in the United States, the total debt outstanding stood above $15 trillion.

Most of this debt is not paid down, but is simply added to. It is well known that U.S. government debt is refinanced or rolled over when it comes due. Remarkably, this is true with regard to the bonded debt of business. According to a Federal Reserve Board economist, most businesses either include 1) refinancing convenants in their contracts when they issue new bonds—which means, that if the company exercises the convenant it will refinance or roll-over all or a portion of its bonded debt; or 2), the company will issue new bonds, called "bullets." As an example of a "bullet", assume a company issues a 20-year bond, in which all or most of the principal amount is not due until the last year of the bond. When that point arrives, the company simply issues a new 20-year bond, and with the proceeds, pays down the principal owed on the earlier bond.

As this debt mountain builds up, the interest charges also escalate. The debt level considered here actually understates the size of the debt, because figures for certain categories of debt were not available. The debt used in our calculations is: a) credit market debt; and b) debt of one year or more in maturity. But there is additional debt that the business, household, and government sectors of the economy owe, which is not traded in a market—i.e., it is not "credit market debt" (for example,

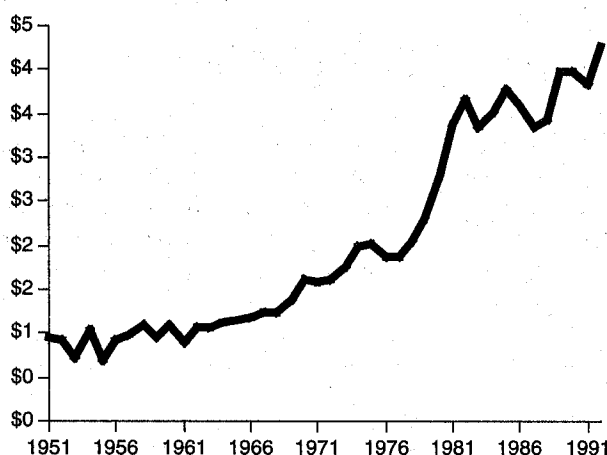## The better it grows ...
the more surely it's doomed

Indexed to 1967 = $1.00

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

Debt service per dollar of profit

Indexed to 1967 = $1.00

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

roughly one-third of the federal government's debt is held by federal trust funds such as the Social Security fund, and is not tabulated in the Federal Reserve's survey of credit market debt); and there is much debt, such as corporations' commercial paper (90- to 270-day IOUs) which is less than one year in maturity. Therefore, none of that is counted in the debt or the interest owed figures, reported here.

EIR magazine's economic research staff determined the interest payment level on the mountain of debt. This interest payment, no matter how earned, must come out of the wealth of the physical economy. That is, anyone who earns interest has a dollar claim—and that claim can be satisfied ultimately as a claim against physical goods. These claims have multiplied far beyond the physical capacity of the U.S. economy to meet them.

EIR compared the interest payments, to the economy's annual profit. What *EIR* reports here as profit, is not the profit of all companies collectively. It is much, much broader than that. What *EIR* reports as profit (calculated as described above) is the "value-added" figure of the manufacturing section of the economy, and is roughly comparable to the "Value Added" date series reported by the Bureau of Census of the Commerce Department (*EIR*'s figures were generally 10 to 25% lower than the Commerce Department numbers, probably reflecting *EIR*'s inclusion of depreciation of equipment). "Value-Added" represents all the new wealth created by and originating in the manufacturing sector for the year. While the manufacturing sector does not represent the entirety of goods-producing sector of the economy— there is also the value-added by the construction, mining,

and farming sectors—manufacturing accounts for 70% of it.

In 1951, the interest on the debt was $17 billion, the "value-added" by the manufacturing sector was $102 billion, and the ratio of interest on the debt to value-added of manufacturing was $0.16. So, for every $1 of manufacturing value added in 1951, interest on the debt made a claim of 16 cents. (See Figure 2).

In 1967, the interest on the debt was $91 billion, the value-added by manufacturing was $262 billion. For every $1 of manufacturing value added, interest on the debt made a claim of 34 cents.

By 1991, the interest on the debt was $1.725 trillion, the value-added was $1.331 trillion, and the ratio of interest debt service to value-added level was $1.29. For every $1 of manufacturing value-added in 1991, interest on the debt made a claim of $1.29.

Two notable points necessarily follow. First, there is a stupendous growth in the *rate of change* of interest debt service sucking out wealth from the physical economy. To measure this relative to 1967, *EIR* took the ratio of interest debt service to value-added in 1967— which was $0.34—and set it equal to an index number of 1. By 1991, the index is 5 times higher than its 1967 level.

Notice in particular, the period after 1981-82. Recall that in late 1979, then Federal Reserve Board chairman Paul Volcker sent interest rates skyrocketing. In 1982, the U.S. commercial banking system was deregulated. The combined disastrous effect of these two actions sent the index up from a level of 2 to a level of 4 within a matter of years.

They See
A Coming Crash

Even the so-called economic experts are coming to realize that the speculative bubble attached to the world economy can not be far from bursting:

Regulators are going to have to judge the magnitude of the market losses that bank capital should be expected to absorb. . . . In making this adjustment, regulators must recognize that there are some highly unlikely events—say, those that tend to occur only once in a half-century—that may call for government actions to backstop bank capital so as to avoid systemic problems."
> —**Federal Reserve Chairman Alan Greenspan** to May 25, 1994 hearings on derivatives of the House Telecommunications and Finance Committee

The primary function of banks in the end is to organize capital for industry. . . . Unfortunately, the tendency is growing that banks more and more turn to speculative activities. . . .. This is speculation, and can have dangerous consequences for the entire banking system. Dangerous above all because too often top management in companies have no understanding of how to value risk in such transactions. . . . I cannot recall there having existed in any recession such vast speculative positions as we see now."
> —**Henry Grunfeld,** co-founder and honorary president of the largest merchant bank in the City of London, S.G. Warburg & Co., May 31, 1994

[French prime minister Edouard] Balladur estimates that the enormity of the uncontrollable sums of money being exchanged daily could lead to a major international financial crisis.
> —*Le Point,* June 18, 1994

The countdown to the crash has begun. . . . We are today paying the price for the creation, during the last two years, notably in the United States, of the most significant financial bubble in human history.
> —**Roland Leuschel** of the Banque Bruxelles-Lambert, in the June 22 *Le Monde*

The speculative bubble is threatening to explode. . . .
> —**Professor Ibrahim Warde,** University of California, writing in the July issue of *Le Monde Diplomatique*

Asset-stripping is the key to this point.

Let us use the term "leverage" to identify the implied multiplier which converts an imputable annual rate of income-stream into a corresponding magnitude of nominal fictitious capital. In the case of the slumlord, looting the tenants to increase the income-stream from rental income is a way of increasing the imputable income-stream, and thus the fictitious capitalization of the property-title. The valuation of the secondary and tertiary fictitious capitalizations spun off from the imputable marginal gains in fictitious capitals are themselves so based upon leverage against the primary, real income-stream.

The valuation of the interconnected whole market in fictitious capital gains depends thus upon both the relative and corresponding absolute magnitudes of the primary income-streams taken as a whole. This fact is illustrated dramatically by the case of the asset-stripping needed to sustain the massive creation of fictitious capital in the RJR Nabisco operations. Without massive asset-stripping against the economy as a whole, the speculative bubble as a whole would have collapsed approximately a decade ago.

This is complicated by the fact that without an increase in the flow of fictitious capital gains at the top of the bubble, the bubble as a whole would collapse. For, without a continuing growth of the magnitude of fictitious capital gains, the bubble as a whole would collapse under pressures of reversed leverage.

"Collapse" would be a most misleading sort of euphemism in that case. "Reversed leverage" in such a bubble is best approximated mathematically by the same Kolmogorov equations used to describe a chemical, fission, or thermonuclear explosion, or a firestorm like that which the British war-time Royal Air Force created at Hamburg and Dresden: in mathematical-physical terms, a "shock front," and a very hard one at that. In effect, one evening the financial markets appear normal, stable; by the end of the next day, or something approximating that, everything is rubble; the financial and monetary system built up since August 1971 has disintegrated as it were in a single day's trading.

As in the case of a heroin or methadone addict, the habit of looting the real-economic basis must be fed to prevent a collapse. Feeding the habit prevents the immediate collapse by hastening the date of total collapse. The addicted state is destroying the basis upon which it feeds to sustain itself. As is illustrated by the tragic fate of the enterprises gobbled up in the RJR Nabisco caper, this is the fate of the world's economy under the rule of the cancerous financial bubble marked by derivatives speculation.

So, to sustain the bubble, the bubble must grow. To cause the bubble to grow, the real basis must be looted more savagely: asset-stripping. We see the result in the collapse of the constant-dollar value of the market-basket of per-capita and per-square-kilometer real consumption by households, farms, and manufacturing. We see the collapse of the similarly adjusted value of tax-revenue base per capita and per square kilometer.

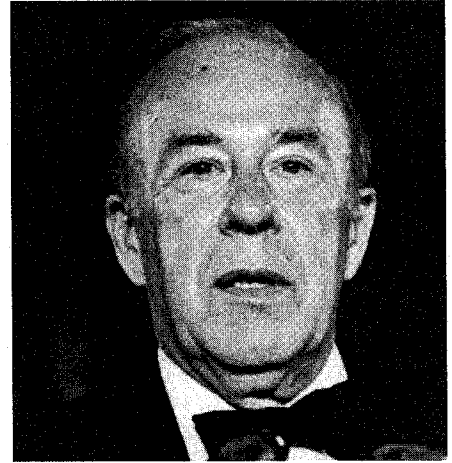Go back to 1913, to Paul Warburg's notorious Federal
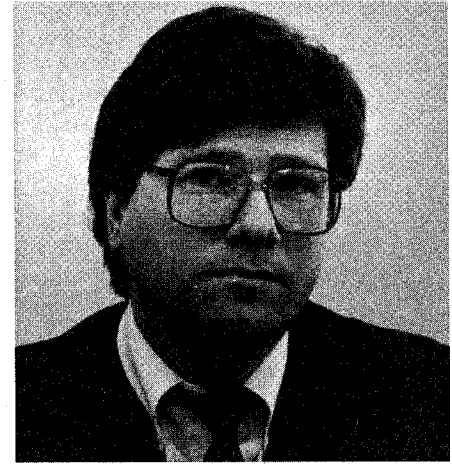
The Quack Economists

Milton Friedman

Arthur Burns

George Shultz

Margaret Thatcher

Paul Samuelson

Jeffrey Sachs

Reserve System scheme. See Confederate agent Alan Bulloch's nephew, Teddy Roosevelt, running a Bull Moose campaign to bring about the election of Ku Klux Klan booster Woodrow Wilson. Both are supporters of Warburg's Federal Reserve and federal income-tax proposals. Roosevelt's actions, and the later Wilson White House backing for the re-founding of the Ku Klux Klan, ensure three things: that the two acts will be declared legally enacted, and that the United States will be pre-committed to go to the side of Britain's planned war against Germany (otherwise Britain would not have gone to war, and then there would have been no World War I, or its sequel World War II). Look at the present situation from the standpoint of the state of Paul Warburg's original Fed and tax system proposals back about 1913, and look briefly at the relevant preceding development, the U.S. Specie Resumption Act of 1875-79. Look at the relationship between Federal Reserve-engineered U.S. debt-service charges and the U.S. income-tax revenue today, and then the significance of the derivatives bubble is clearly symptomized: Doom is on the way.

Through its relevant U.S. agent, the House of Morgan,

London bankrupted the United States government during the last quarter of the nineteenth century by a congressional law called the U.S. Specie Resumption Act. This act, enabled through massive corruption of members of the Congress, unlawfully repealed relevant sections of Article I of the U.S. federal Constitution, by requiring the U.S. government not only to cease engaging in its sovereign constitutional right to issue currency, but to call in existing, Lincoln-series U.S. currency-notes to a degree conforming to the demands of the London gold-exchange market. This collapsed the United States into a protracted social crisis, manipulated from London, under which conditions London was able to buy up the choicest morsels of the still-growing U.S. economy. By the turn of the present century, London, which had been constantly the principal mortal adversary of the United States since 1763, was suddenly promoted in Jim-Crow Anglophile America into our closest ally! The natural follow-on to the protracted crisis caused by the Specie Resumption Act was the plainly unconstitutional Federal Reserve System.

The Federal Reserve System is key to the derivatives bub-

Post-Industrial Lunacy: Path to Budget Deficit

America's decision, over the period 1978 to 1993, to abandon industrial and agricultural production and become a post-industrial rubble heap, cost our nation $1.7 trillion in lost individual income tax receipts. There is no denying that this post-industrial lunacy resulted in the budget deficit.

The U.S. federal budget deficit has been above $200 billion for the last four years, and for seven out of the past 11 years. The collapse of the United States as a manufacturing-agricultural economy has shut down factories, mines, and farms, resulting in the collapse of workers' living standards and income. As a result, individual and corporate tax revenues have plunged. This development, along with the usury-triggered swelling of the interest paid on the federal debt, is the reason why the United States is running a $200 to $300 billion annual budget deficit.

Unless the underlying cause of the deficit is addressed, it will persist and grow. Monetarist solutions, such as the 1985 Gramm-Rudman Act, which mandated cuts in infrastructure, social programs, and now defense—to balance the budget by force—only make matters worse.

The Internal Revenue Service of the U.S. Treasury reports the total annual individual income taxes (not counting Social Security taxes) collected by the U.S. government. In the first graph, we see this sum for each year converted into 1978 constant dollars, and reports it on a per capita basis, by dividing by the population size for each year. Over the last decade and a half, the per capita constant dollar tax revenue base of the U.S.A. rose to a high in 1986 of nearly $950 and then plunged. In 1993, it

was only $881 per person. That is, even if the expenditure side—minus interest on the debt—had remained the same, the revenue side of the U.S. budget, at least based on individual income tax receipts, would not have matched it.

The economics staff of *Executive Intelligence Review* *(EIR)* magazine has calculated what the level of tax revenues to the federal government would have been if the U.S. economy had not collapsed between 1978 and 1993. The rise in income tax revenues is shown in the second graph. *EIR* found that if there had been even small economic growth rates, then in fiscal year 1993 alone, individual tax revenues (not counting Social Security taxes, nor other taxes, such as corporate taxes, etc.) would have been $261.7 billion higher than were actually collected. These tax increases alone would have wiped out the deficit: The budget deficit in fiscal year 1993 was $254.7 billion. Over the 1978-1993 period, without having raised the tax rate one cent, the United States would have realized a cumulative $1.7 trillion in additional tax revenues.

To arrive at this calculation, *EIR* worked from two very conservative assumptions. First, growth in earnings was assumed to be minimal. In 1978, there were 86.7 million non-supervisory workers working at non-agriculture establishments, as reported by the Bureau of Labor Statistics. Each worker earned $10,185 per year (the average weekly wage times 50). By 1993, each such worker earned an average of $8,627 per year in constant 1978 dollars. This is a 15.3% fall, or a compounded rate of fall of 0.95%—nearly 1%—per year.
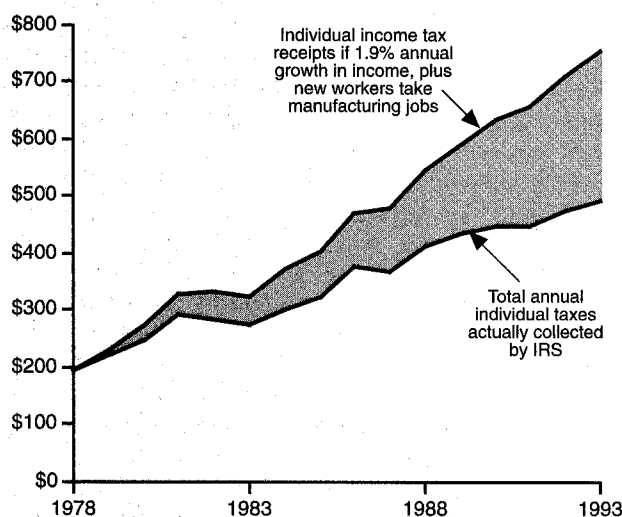
Constant dollar value of the per capita tax-revenue base is contracting

Constant 1978 dollars per capita
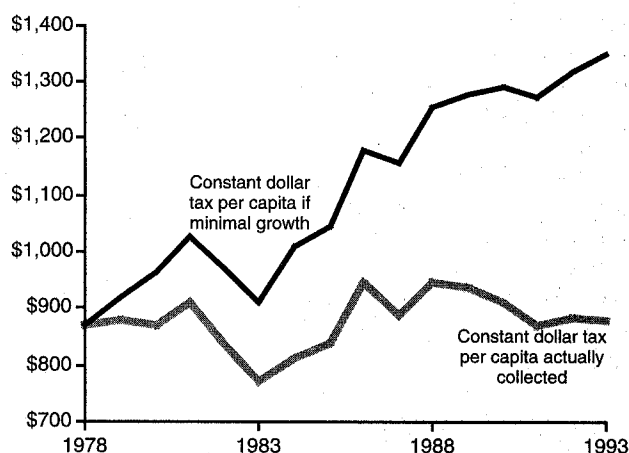
$1.7 trillion cumulatively lost in individual income taxes, 1978-93: minimal growth vs collapse

$, Billions

But in contrast, stands the period of 1947-72, not a period of great growth, but of minimal growth. Nonetheless, the average annual wage of non-supervisory workers at non-agriclutral establishments rose at a compounded rate of 1.9% per year. Thus, *EIR* chose the historical growth rate of earnings of the period 1947-72, 1.9%, for calculating income tax revenues for 1978-93.

The second assumption that was applied concerned the 23.48 million new workers who entered the labor force and secured jobs between 1978 and 1993, as counted by the BLS's non-agricultural establishment survey. A whopping 81% of these newcomers were forced to work in the lowest-paying job classifications of retail trade or non-government service workers, which jobs are non-productive. Instead, *EIR* assumed these new job entrants became manufacturing workers. For all categories of workers, the appropriate tax rate was determined and applied.

The third graph shows that, over the period 1973-93, the growth of gross interest on the public debt plus the yearly federal budget deficit far outstripped the growth of individual income taxes collected by the U.S. government. It shows federal individual income taxes divided by the sum of gross interest on the public debt plus the yearly federal budget deficit. Notice that in 1974, there were $3.36 in individual income taxes to pay for each dollar of combined gross interest on the public debt plus the yearly budget deficit. But this dramatically changed, especially in the period since 1978, and that figure today is $0.86. That ratio continues to fall.

Annual individual income taxes collected, divided by the sum of gross interest on the debt plus current budget deficit

Dollars
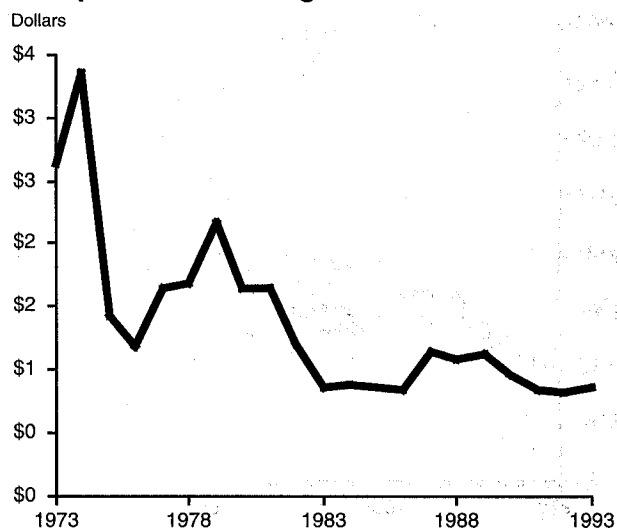
ble of today. Without corrupt, virtually treasonous complicit officials at the Fed, the speculative mania which has ruined our nation and much of the world besides would not have been possible. The Fed is a privately owned central bank, chartered by the federal government, which has gained increasing, unlawful, extortionist power over our government itself. It is principally an agent of those major commercial banks and private banking and other financial houses based in New York City. During the recent 15 years, the principal functions of the Fed have been to manipulate the U.S. government in Washington, and to use the monetary authority usurped by the Fed to subsidize bankrupt and other banks and other wild speculators in New York City and associated localities.

The Fed operates in collusion with complicit Treasury officials to increase the private indebtedness of the U.S. government to the clients of the New York City-based market in U.S. bills and other securities. This debt-creating mechanism is used principally to feed the Fed's process of generating its own unconstitutional, private U.S. Federal Reserve currency-notes; this generation of currency-notes is managed to generate a subsidy for the Fed's true private owners, and, during the recent dozen years, to feed the Bush-leaguers' wildly speculative financial bubble-building.

When the Fed was originally conceived, the adoption of a national income-tax was designated as the lawful source of budgeted funds to meet the debt-service obligations upon the Federal Reserve-created U.S. government debt! Now, we see that the U.S. revenue from the income-tax is being gobbled up more and more by the debt-service requirements on the federal debt! As the sign carried by the fellow wearing the white robe and beard says, "The end is nigh!"

The constant-dollar value of the per-capita tax-revenue base is contracting, largely as a result of the asset-stripping impact of Bush-league speculation practices. To increase the tax rates on anything but the speculative financial markets themselves would be to increase the income-stream out of the real economy, accelerating the economic contraction, hastening the collapse. To cut entitlements, another persisting proposal made on behalf of the Wall Street speculative pirates, would have similar effects.

That relationship between federal debt-service and income-tax base is but one of numerous signs to the same critical effect. As the driver explained, bringing the bus to a halt before the washed-out bridge, "Brother, it looks like we are about to run out of road."

The cancer of speculative derivatives burgeons—an ugly growth. Worse, to exist, the cancer must loot the healthy tissue in at least equal degree. Thus the monster grows, while the human being is sucked to death so. Excise the tumors, kill the cancer without killing the healthy tissue. The task is destroy the parasite, to save its victim.

The Issues of Method

The problem has been described. We are thus situated to consider the likely varieties of significant objections to that description.

Decline in production levels for goods in producers and consumers' market-baskets on a per-household basis, 1967-1990

(1967=1.000)

	1967	1973	1979	1982	1990
Consumers' market basket					
Men's trousers	1.000	0.965	0.594	0.504	0.335
Men's shirts	1.000	0.644	0.486	0.343	0.165
Women's blouses	1.000	1.023	1.511	1.405	0.684
Women's dresses	1.000	0.597	0.503	0.339	0.279
Woven woollens	1.000	0.264	0.254	0.139	0.166
Refrigerators	1.000	1.247	0.935	0.703	0.932
Passenger cars	1.000	1.150	0.869	0.484	0.512
Tires	1.000	1.020	0.833	0.666	0.877
Radios	1.000	0.706	0.467	0.316	0.098
Producers' market basket					
Metal-cutting machine tools	1.000	0.643	0.530	0.289	0.212
Metal-forming machine tools	1.000	0.854	0.730	0.404	0.406
Bulldozers	1.000	1.200	0.713	0.334	0.306
Graders and levellers	1.000	0.786	0.748	0.383	0.349
Pumps	1.000	1.140	0.541	0.424	0.506
Steel	1.000	1.029	0.821	0.416	0.487
Intermediate goods for either market basket					
Gravel and crushed stone	1.000	1.023	0.914	0.624	0.575
Clay	1.000	1.022	0.759	0.459	0.544
Bricks	1.000	0.999	0.850	0.451	0.598
Cement	1.000	1.045	0.911	0.632	0.689

A production level for each item for 1967 was determined, and then divided by the number of households in 1967. This yielded a production level on a per household basis. For example, in 1967, the United States had 59,236,000 households and produced 86,014 metal-cutting machine tools. Thus, there were 0.001452 metal-cutting machine tools produced per household. The 1967 level was set equal to 1, and all subsequent years' production levels were compared to it. By 1990, the United States produced but 0.000308 metal-cutting machine tools per household, a level that was only 21.2% of what it was in 1967. During 1967-90, production levels, on a per household basis for major goods contained in both the producers and consumers' market baskets fell between 7 and 90%, with most goods registering a collapse of 40% or more. This represents a fall in both the producers and consumers' market baskets as a whole, and shows the inability of the United States to reproduce itself.

Known objections to the foregoing description fall into three broad classes, of which two can be summarily discarded as cases of a speaker who offers no rational argument for his no less vehement objections. The three are:

1) What we may describe fairly as the Eddie-George-the-pantry-bandit syndrome: "Mommy, you are exaggerating again; there are no cookies in this jar."

2) The opinionated-common-gossip syndrome: "People whose opinion I respect say that you are wrong."

3) The academic standpoint: any one or a combination of several fads commonly taught in contemporary classrooms, textbooks, and economics and financial trade periodicals.

Only the last has any further interest for us here.

Within that third class of objections, the principal academic premises are, variously or in combination: a) the marginal intellects, the utilitarians who deeply resent personally any attempt to distinguish between productive and non-productive occupations; b) the idiot-savant mathematicians of the "Chaos Theory" cults; c) the ever-faithful gnostics chanting, with an obligatory uprolling of the eyeballs, "the magic of the marketplace." Conveniently, all three, and related other varieties of professionalist objections, including the lately fashionable "Chaos Theory," share the fundamental flaw of the late John Von Neumann's efforts to derive a mathematical dogma of radical marginal utilitarianism from a set of linear inequalities.

It greatly simplifies the discussion to begin with a thumbnail historical account of the controversy over the appropriate method for study of economic processes.

Let us situate the internal modern history of political-economy in a nutshell. Modern political-economy began to be developed in Cosimo de' Medici's mid-fifteenth-century Florence, Italy through the initiatives of the Byzantine scholar George Gemisthos, also known as "Plethon." It began to assume modern form during the sixteenth century, in such expressions as the writings of France's Jean Bodin and the establishment of political-economy within a body of statecraft known formally as *cameralism*. The first work establishing a scientific basis for the study of political economy was Gottfried Wilhelm Leibniz's development of a branch of physical science known as *physical economy* over the interval 1672-1716.

At the end of the seventeenth century, Venice's far-flung intelligence services launched a vigorous campaign throughout Europe, mobilizing for the destruction of France and the discrediting of Leibniz. The key figure leading this eighteenth-century operation in the field—in France, Britain, and Germany—was a most senior Venetian nobleman, Abbot Antonio Conti (1677-1749), whose network included such notorious Venetian operatives against France as Giovanni Casanova (1725-98), Count Alessandro Cagliostro (1743-95), and the founder of late-eighteenth and nineteenth centuries' British radical empiricism, Giammaria Ortes (1713-90).

The point to be stressed here is that all of the doctrines for which Adam Smith, Jeremy Bentham, and Thomas Malthus are best known today were copied from the writ-

ings of Giammaria Ortes. It was through the work of Ortes that Smith obtained his dogma of "the invisible hand," and Jeremy Bentham his "hedonistic calculus." Malthus's 1798 *On Population* is a direct plagiarism, in more popularized language, of Ortes's 1790 *Reflessioni sulla Populazione delle Nazioni*.

To situate the discussion, consider the widespread lie which asserts that the United States was founded upon Adam Smith's doctrine of "free trade." The fact is, the economic and social issue of the U.S. War of Independence against Britain was the American colonists' rejection of Britain's eighteenth-century version of "International Monetary Fund conditionalities," in favor of what was called later a "protectionist" economic policy.

"Free trade" was first brought to the United States in 1783, as a peace condition dictated to France and the United States by Britain's Lord Shelburne, in the 1783 Treaty of Paris. As a consequence of this concession to British "free trade," the economies of the United States and France were bankrupted by 1789. The United States used its head, wrote a federal Constitution which arranged the outlawing of "free trade," and recovered to prosperous growth under President George Washington and Secretary of the Treasury Alexander Hamilton. The king of France acted differently; failing to use his head, he lost it.

The strongly Leibniz-influenced economic policies of the U.S. federal Constitution and the first George Washington administration were known officially from that time onward as the anti-British "American System of political-economy."

"Free trade" was revived in the United States several times during the nineteenth century. Under the influence of British agent Albert Gallatin from within the second Jefferson administration and the Madison administration. Under the influence of British asset and New York banker Martin van Buren over the second Jackson administration, causing the Panic of 1837. "Free trade" was the doctrine of the New England opium-traders and the southern pro-slavery faction during the early nineteenth century. Under the treasonous Pierce and Buchanan administrations, the effects were ruinous. Every period of economic recovery into 1875 was the direct result of rejecting "free trade" in favor of reviving the "American System" policies of Franklin, Hamilton, Henry Clay, Mathew and Henry Carey, and Friedrich List.

Despite Cobden and Bright and their "Corn Laws" reform, throughout the late eighteenth and the nineteenth centuries, Britain never made a general application of a "free trade" dogma to itself, but only to those competitors and colonies which it looted for the enrichment of the London financial houses. To defend what Britain saw as its special economic or related interest, she was a jealous protectionist, to the point of war. Her policy on that point could be fairly described: "Free trade was meant for the suckers." The "invisible hand" turns out to be her hand in your purse.

All of the grounds for putatively professionalist objections to my description of the speculative process, including the work of the utilitarians, of Walras, of John Maynard Keynes, of Von Neumann, of the modern "Chaos" theorists, and so on, are merely different disguises for the same underlying set of mid-eighteenth-century axiomatic assumptions introduced to Britain through the work of Giammaria Ortes. All of the issues posed by the third of the three named classes of critics can be addressed comprehensively, and most efficiently, by examining the crucial differences in axiomatic assumptions separating the method of Leibniz's influential science of physical economy from the derivatives of Ortes's hedonistic calculus.

The essential difference between Leibniz's physical economy, on the one side, and the liberal, Marxist, and neo-conservative dogmas, on the opposing side, is between those, like Leibniz, who base the measure of economic performance on the starting-point of *human demography*, and those, like British economist Karl Marx, who are obsessed from the start with someone's primeval hoard of "my money." First, look at political-economy from the standpoint of Leibniz's and my own science of physical economy, and then contrast that with the teachings of a mathematical pseudo-science such as John Von Neumann's and Oskar Morgenstern's famous *Theory of Games and Economic Behavior*.

Demographic Science

The science of physical economy is premised upon the conclusive proof that the human species is unique in the known universe, set absolutely apart from and superior to all other known forms of existence. The crucial evidence for this conclusion is found in studies of *the changes of the human species' potential relative population-density:* Only mankind is manifestly capable of willfully increasing this potential population-density by decimal orders of magnitude.

The study of this phenomenon begins with scrutiny of two more readily measurable sets of phenomena: *changes in demography,* and *changes in the per-capita productive powers of labor.* First, we examine changes in relative population-density, and then their correlatives in, second, demographic characteristics, and, third, productive powers of labor.

As a matter of elementary scientific rigor, implicitly this study encompasses many different cultural series over thousands of years, and even longer, preceding our time. Of course, it also includes the past 600-odd years since the fourteenth-century European Black Death pandemic. *The scope of the investigation indicates that the question of money is introduced only as a tertiary feature of the studies. We are concerned primarily with the physical relationship between society and nature as a whole; the principles involved must be adduced without introducing any consideration of money. Money matters are studied later, against the background of the monetary system's interaction with the physical-economic processes upon which money-systems are superimposed.*

In demography, we begin with the obvious considerations of fertility of households, and life-expectancy and con-

ditions of health of households' members by age-interval stratifications. We consider not only the typical individual household, and also the immediate society with which the household is associated, but also the reciprocal functional interaction of the individual person and the society with one and another, and of both with the entirety of the human species. We examine the productive powers of labor in terms of a demographic model of social reproduction of the household, the society and mankind as a whole. We measure these productive powers in terms of the market-baskets of both households' goods and of means of production required to maintain improvements in demographics per capita, per household, and per square kilometer above a conjecturable "0," or so-called "equilibrium level."

We examine the effect of the development of basic economic "hard" infrastructure (e.g., water, general land-transport, power, sanitation, and communications) upon demographic and productive factors. We include three qualities of services—education, health care, and scientific and equivalent development—as "soft" infrastructure, and also include as "hard" infrastructure the logistical means required for maintaining these three essential categories of services to households and productive facilities.

To shorten the account, sum up a number of steps in the following terms:

We define consumption in terms of a roster of goods included in market-baskets of consumption, whether by households, or by production of goods. *Excepting the three indicated special classes of services (education, health-care, and scientific progress), the designation of goods is limited to physical goods.* These goods are listed as elements of *market-baskets*, each associated with corresponding categories of the general social division of labor in employment. We have as broad categories of market-baskets: *households' goods, hard-infrastructure goods, soft-infrastructure goods, agricultural producers' goods, industrial producers' goods,* plus a general social-overhead allowance for consumption by other categories of employment as a whole.

We also define economic activity by categories of land-use. We have waste land, reserve land, land used for urbanized and rural residence, respectively, land used for urban administrative and general social functions, and land assigned to the categories of each of the principal elements of the social division of labor.

In practice, in a well-designed university curriculum, economic science starts with the study of the changes in these categories and their ratios during the recent 550 years in western Europe and the Americas. Once the student is familiar with the conceptions which are prompted by studying five centuries of changes in those locations, the student is prepared to contrast the modern European case with the qualitatively different cases during the preceding 2,000 years of European civilization, and with the older civilizations of Asia and Mediterranean Africa to about 6000 B.C. Those studies prepare the student to study pre-Columbian America, Oceania, and sub-Saharan Africa. This gives the student a global overview within the bounds of the intraglacial warming period in which we presently dwell. And, so on.

The ascertained cause for the somewhat correlated changes in potential population-density, demographic profiles, division of labor, land-use, content of market-baskets, and so on, is changes in human behavior of a quality typified by valid fundamental scientific progress. Such scientific progress merely typifies the quality of thinking common to the spectrum of changes in statecraft and in Classical forms of fine arts which, together with scientific-technological progress, cause the improvement in demographic performance. In other words, *what is reflected here is an increase in mankind's per-capita power over the universe, as measured in respect to per-capita power per square kilometer of the Earth's habitable surface.*

The subjective cause for the increase of this power admits of no description other than "creative powers of the individual mind." The case for a valid fundamental discovery within the scope we assign to the name "mathematical physics" typifies this argument. For our purposes here it will be sufficient merely to summarize the argument supplied in the indicated relevant sources.

Technology as Creativity

In any branch of science, there is no way to avoid certain deep-going conceptual problems without foundering forever in the incurable incompetencies of one's own foolish babbling. In economics, the key such conception is that of *creativity.*

The investigation of this conception begins, pedagogically, with the subject of those forms of creative discovery which are most easily represented, the mathematical form of what are justly called "revolutionary," or "axiomatic-revolutionary" qualities of fundamental scientific discoveries. The yardstick we apply to the study of such discoveries and their impact is the standard of *technological progress,* by which we signify increase in the qualitative powers of physical productivity of labor per capita, per household, and per square kilometer of usable land-area.

Once the idea of "creativity" is removed from the domain of emotionally colored, vague imageries, and is rendered an intelligible scientific conception of willful practice, the entirety of economic science begins to open up for the student. Until that step is made, professors of economics will never move much beyond the pre-Stone Age level of competence, bungling and babbling over all of the crucial conceptions upon which this branch of science is absolutely dependent. Once creativity is rendered an intelligible, practically applicable conception, all of economic science begins to open up rapidly for the student. From that standpoint, the incompetence of all critics of the foregoing description becomes transparent.

To the degree any mathematical physics can be represented in a mathematically consistent way, it may be represented, if only for purposes of description, by what is termed a "theorem-lattice." That signifies, that any formal mathematics can

LaRouche's Model of the Physical Economy

The following excerpt from a May 8, 1994 memorandum by Lyndon LaRouche, succinctly and elegantly develops the powerful core concepts of basic economics. (A fuller discussion of these ideas can be found in LaRouche's essay, "The Truth About Temporal Eternity," Fidelio magazine, Vol. III, No. 2, summer, 1994, pp. 15-23.)

Let us describe a successful economy, one in which the per-capita physical productive powers of agricultural and industrial labor are increasing, and in which the per-capita physical standard of living is increasing. Let us consider only those inputs which affect the production of those elements representing that per-capita standard of physical consumption, and physical consumption which is necessary for that level of per-capita productivity of physical output.

Express this relationship as a *changing* one, in which that per-capita consumption and that per-capita physical productivity are both increasing.

This must be expressed in terms of relative rates of change. Thus, in the first approximation, the functional description is set up in the following terms. This makes clear the general nature of the required distinction between "productive" and "non-productive" activities. All measurements are made in terms of both the changes in the whole, and per-capita values of changes in the whole. It is relations among these changes, rather than relations among objects, which are to be studied.

Changing Rate of Output, in respect to Changing Rate of Input. Call the first $F(y)$ and the second $F(x)$. Hence, $F(y)/F(x)$. All three functions are measured in terms of rates of change of whole magnitudes and rates of change in per-capita values of these whole magnitudes.

$F(x)$ treats all of those physical elements of consumption necessary to sustain per-capita physical productivity at a given technological and related level. This includes households' (physical) goods, producers' goods, and basic (physical) economic infrastructure. To this must be added three essential components of maintenance and increase of the potential per-capita productive powers of labor: science & technology, education, and health care.

$F(y)$ treats all of those classifications of physical and service products which are listed in $F(x)$.

We next define growth as contingent upon some function of $F(F[y] > F[x])$. This includes two principal terms:

1) $F(y1)/F(x1) < F(y2)/F(x2)$.

2) Let r signify per-capita value of population-density. Then $F(x2)/r > F(x1)/r$.

Let us name $F(x)$ the "energy of the system," and $F(yi) - F(xi)$ the "free energy" of the process. Thus, we have the ratio of "free energy" to "energy of the system" as the first term, and per-capita-per-kilometer energy of the system as the second. We have a function in which $F(yi)/F(xi)$ is now a function of $(F[x]/r)i$.

According to the generally accepted principles of current classroom mathematics, these constraints are impossible; yet, they occur in every successful economic process. This signifies to the competent mathematician that the formal representation of such processes has a higher cardinality than is provided by any presently generally accepted variety of classroom mathematics instruction. This was the core of the first phase of my original discovery, back during 1948-1949.

Technology and Discontinuities

This result, which is apparently anomalous from the viewpoint of today's generally accepted classroom mathematics, is the inevitable result of the nature, the characteristic feature, of the process considered: that the changes described by the sets of constraints come about as a result of fundamental scientific and related forms of discoveries, discoveries which appear in the functions as absolute discontinuities. This occurs to such an effect, that the functions so defined bound externally, as higher cardinalities, all possible transcendental functions. My later work, during 1952, showed me that these are functions located within the higher domain of alephs.

We restrict the term "productive" to that general definition. We may add terms to the functional listing of products or services only insofar as they satisfy those same restrictions. This means that subtracting from an existing category of listing to add a new term, requires that the replacement itself increase the physical productivity of labor per capita for that society as a whole.

The other restrictions required are subsidiary to those given here. These definitions are supplied for a physical-economic process described without any consideration of the existence of money. The study of money and monetary systems should be conducted to show how different rules of the money game produce different modes of human economic behavior, either relatively sane ones, or, in the extreme, the kind of ever-worsening lunacy shown by governments and financial institutions generally during the recent decades.

be regarded as a network of theorems which are each mutually consistent with all other theorems of that some collection. This mutual consistency is representable by a set of interconnected theorems and postulates, such as the theorems and postulates of a formal Euclidean geometry.

Therefore, we may think in terms of some collection of interconnected theorems, each and all of which are not inconsistent with any among that set of interconnected axioms and postulates. In looking at this business in that way, we are able to conceptualize both the presently known and yet-to-be-discovered theorems which would satisfy those restrictions. We may describe this as all the theorems of that formal mathematical-physical *type*.

Against this background, consider the case, that one is able to define experimentally a theorem which is true in nature but which is not consistent with any previously known mathematical-physical type. Close analysis shows that this new theorem requires a specific kind of change in one or more of the axioms of the presently accepted form of

mathematical physics. Enter Socrates: The fun begins.

The question is thus posed implicitly. Suppose we adopt a new set of interconnected axioms and postulates, one which conforms fully to the new experimental theorem, which introduces only the absolutely necessary modifications in the previously established collection of axioms and postulates. Can we secure an experimentally valid, revised version of the theorems of the old system which fit the new set of axioms and postulates?

In effect, that is what a revolutionary discovery in science forces us to do. In that case, a crucial experimental theorem of those troublesome specifications has introduced an axiomatic-revolutionary change into formal mathematical physics. That kind of successive axiomatic-revolutionary change has been the characteristic of both formal mathematics itself and of modern physical science since Nicolaus of Cusa's *De Docta Ignorantia* of A.D. 1440. The discovery of Dmitri Mendeleyev's Periodic Law, Georg Cantor's transfinite, Max Planck's quantum of action, radioactivity, and

Population Potential Varies By Mode of Agriculture—Three Systems Compared

Agriculture Mode	Population Potential (Persons per sq. km.)
I: 3-field rotation system, northern Europe, 1000-1500s	**30-60**
Crops: One field wheat, one fallow, one another crop. Fallow used for grazing cattle. **Sowings:** Winter sowings on two fields (e.g. barley, or oats), followed by a spring planting. Ox-plough **Diet:** more than 50% cereals	
II: 2-field rotation system, southern Europe, 1300s	**Fewer than 20-30**
Crops: Various grains, plus olive groves and wine grapes; sheep-raising **Sowings:** Field cultivation plus pasturage for livestock—principally sheep and goats **Diet:** more than 50% cereals	
III: Double-cropped paddy rice system, China, 1600s	**150**
Crops: Two crops of rice a year, plus occasionally a different, intermediate crop **Diet:** 80-90% cereals	
IV: Slash-and-burn, primitive forest cultivation	**10-20**
Crops: Maize, in South America **Sowing:** Sow the seed broadcast in a forest area cleared by slash-and-burn **Diet:** 50-90% cereals, plus wild vegetation and meat	
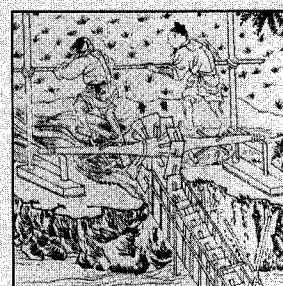
nuclear fission typify the revolutionary changes which erupted at the close of the last century and the first three decades-odd of this. Each of those required an axiomatic-revolutionary change in our notions of physics as a whole.

Over the millennia preceding A.D. 1400, the revolutions came more slowly, and there were even long periods of sterility, or even falling backwards in too many cultural strains. Yet, the same principle is reflected in the shards of very old prehistoric cultures. This type of willful increase in mankind's power over nature per capita and per square kilometer, is what most clearly sets the human species absolutely apart from, and above all other known forms of existence within physical space-time.

That brings the inquiry to a crucial point: "Why must one equate 'axiomatic revolutionary' with 'creative'?" The mastery of the science of physical economy depends upon the student's comprehending this connection. Once this point is grasped, the essential incompetence of today's politically correct university economists and their textbooks is shown readily. The immediate relevance of this is that it involves proof of the fraudulent character of the assertions of Norbert Wiener and John Von Neumann, and their followers the idiot-savant chaos-theorists, on the subject of the human intelligence and mathematics generally.

Logic versus Creativity

Given two theorem-lattices, separated from one another by only a single change in axiom. There is no consistency between any theorem in one of these lattices with any theorem in the other. The difference between the two is therefore, mathematically, a formal discontinuity. In real life, this signifies, that in the case of every valid axiomatic-revolutionary discovery in mathematics, or mathematical physics, once we have discovered the axiomatic change which defines the successor theorem-lattice, we shall always be able, on principle, to treat every theorem of the preceding lattice as a special case of the latter; however, no theorem of the second lattice can be reached by consistency with the axioms of the first.

This principle was well known to Plato and his associates. Plato's *Parmenides* dialogue is a demonstration of the way in which a creative discovery must appear from the standpoint of the mere formalist Eleatic (or the Aristotelian Immanuel Kant's *Critiques*). To the formalist, such a discovery appears as an inexplicable leap of the intellect.

The classical modern illustration of Plato's point is the solution to the paradox in Archimedes' quadrature of the circle by Nicolaus of Cusa.

Until Cusa, mathematicians were fooled by the fact that a series derived from Archimedes' construction may estimate the value of the ratio of the circular radius, π, to any required decimal position. Cusa showed (A.D. 1440, 1453) that this apparent arithmetic convergence had an embedded falsehood insofar as one assumed falsely from the apparent convergence in numeric values that a circular perimeter was constructable in this way. The values were, in fact, nearly equal, but never congruent. Cusa defined circu-

lar action as of a different, higher mathematical species than the Greeks had assumed all incommensurables to have been. Later (1697), the physical significance of Cusa's discovery was proven for radiation of light by Jean Bernoulli and Gottfried Leibniz, and established as the basis for what they termed "non-algebraic" or "transcendental" functions.

Since 1697, this discovery, known under the rubric of the *continuum paradox*,[1] has continued to be the center of the principal methodological controversy, and a source of the most significant classroom and textbook frauds within mathematical physics.[2] A crucial treatment of this from the standpoint of Karl Weierstrass's work was given by Georg Cantor's presentation of the series of *Aleph* transfinites (1897); the exposure of the axiomatic fallacies of the entire life's mathematical work of Bertrand Russell, and also the related work of John Von Neumann, was given by Kurt Gödel in 1931.[3] Despite the conclusive proof, from these and other sources, the denial of the existence of what Riemann describes as the "continuum paradox" persists stubbornly as a leading, fraudulent feature of the standard mathematical physics curriculum today. As in the exemplary cases of Norbert Wiener's popular *Cybernetics* and the work on economy and the human mind by John Von Neumann, this popularized classroom fraud plays a dominant role in the mistakenly generally accepted versions of professionally taught and practiced economics doctrine today.

Back during the 1940s, this writer sometimes amused himself by asking some of the pompous varieties of academics whether human life were statistically possible. The central premise upon which this writer's 1948-52 discoveries refuting Wiener and Von Neumann were based, was the position that a theory which cannot be shown to be consistent with the existence of the theoretician is bad physics. In later years, a few notable thinkers have expressed either the same or a very similar position.

Plato's Academy at Athens demonstrated their proof, that there existed geometric magnitudes which are not congruent with rational numbers, geometric magnitudes called "incommensurables." Later, Nicolaus of Cusa was the first to show us that we must divide those incommensurables into two distinct species, species which Leibniz later identified as the "algebraic" (the lower species) and the "non-algebraic" (the higher species), the latter commonly referenced today under the rubric of "transcendental functions." The continuum paradox, the central topic of Leibniz's *Monadology*, and the center of the work of Riemann later, must be recognized as showing us that there exists yet a higher species of mathematics. This is a higher domain in which the principle of cardinality is preserved, but not ordinality as we know it from the three lower species of mathematical domains. It is this last, the fourth and highest domain (from Cantor's Aleph 1 and up) which enables us to represent scientific creativity and its effects, a representation which is impossible from the standpoint of lower orders of mathematical physics.

So, although we cannot represent scientific creativity by any of the mathematical methods taught in engineering schools, a proper comprehension of the work of Cantor

from the standpoint of Leibniz's *Monadology* and the Riemann Surface shows us how to deal with this formal problem once we have identified the physics of representing a demographic process of development under the impetus of technological progress.

Economic Measurements

This problem was forced upon me during the 1948-51 interval of my efforts to define a rigorous refutation of the obvious frauds by Wiener respecting a Boltzmann H-theorem-based definition of "negative entropy," and Wiener and Von Neumann's mechanistic misconceptions of human thinking processes. My approach to that problem may be summed up as part of what ought to become standard pedagogy in any respectable university classroom in economics today.

The lesson of the internal history of mathematics, especially during the recent 550 years of the rise of European science, is that we must always seek to measure, but must not trust blindly the tape-measures which were issued to us as students in the classrooms or textbooks. Sometimes, we need to invent a new yardstick, just as we have today four distinct species of mathematics. Until the end of 1951, I knew of but three species of mathematics; I was about to learn a fourth, beginning January 1952.

Apply what was then, circa 1950-51, standard industrial engineering knowledge of the structure of a successfully developing agro-industrial economy. Define as the relevant input and output of a function an array of households' and producers' market-baskets containing nothing *functionally significant* excepting a combination of physical products plus three categories of services: education, health care, and scientific progress. Draw a cut through the continuing cycle of production-consumption at any point. Measuring all inputs and outputs in terms of per capita, per household, and per square kilometer, compare the input (consumption by either households or producers) and output (products of infrastructure, agriculture, mining, and industry, plus services of classical forms of education, health care, and scientific progress).

Since any economic process trapped in a zero-technological-growth mode must collapse "entropically," our first concern is to maintain growth of productive powers of labor. Therefore, subtract input from output, and divide the remainder by input: The result must be larger than "0." The margin by which the ratio must be greater than "0" will be an amount greater than the rate of technological attrition.

Thus far, not problematic. Term the input "the energy of the system," and the remainder the "free energy" margin. See the ratio as a "free-energy ratio."

Then comes the problem: Not only must there be a rate of technological progress, to offset required growth plus effects of attrition of natural and man-improved resources; to sustain the needed, relatively rising free-energy ratio, the value of the energy of the system must increase per capita, per household, and per square kilometer. No matter how we adjust the list of items in the bill of materials and process

sheets, that difficulty remains. That locates the crucial issue.

The next step, is to refine the picture by writing down and verifying a series of linear inequalities corresponding to the direction of changes in the social division of labor, and demography, which accompany the indicated, twofold transformation in the apparent functional form of rising free-energy ratio. The principal such inequalities describing successful economic growth of economies during the recent 500 years are described in my 1984 textbook *So, You Wish to Learn All About Economics?* It is easily shown that, during the same centuries, all economies which violated those constraints suffered decline, that violation of these constraints is the characteristic of declining economies.

There should be nothing surprising about the fact of my lines of inquiry into these matters during 1948-52.

During the late 1940s, after the 1930s depression, and following the war, experiencing the recession of 1947-48, and the 1949 economic recovery sparked by the Cold War revival of the Korea conflict, all we veterans who were reasonably sentient were aware of the anomalous fact that, during the twentieth century to date, the only prosperous periods had been those associated with relatively larger expenditures for the costs of war. During those days, the U.S. and other governments were frequently charged with seeking warfare as a way of organizing an economic recovery! Thinking about the story behind that apparent economic anomaly did not make warfare less wasteful of life and material; tracing out a few economic facts made clear the reasons for the anomalous appearances.

The characteristic of modern regular warfare is exceptionally high rates of technological attrition. Technologies are developed during a few years of forced-draft, which would have required decades otherwise. As some of the Manhattan Project's veterans described this to me in some detail, the intensity of scientific collaboration in that undertaking packed decades into about five years of research and development. If the history of "crash program" technological development is traced from its origin in the 1793-1814 technological leadership of France by Lazare Carnot and Gaspard Monge, through the military and aerospace crash-programs of the subsequent 150 years, what stands foremost for one's attention is what may be fairly described as a four-step process for injecting high rates of prosperous growth into any modern economy.

The top of the mountain is fundamental (axiomatic-revolutionary) progress in science. Slightly down the slope, there is the elaboration of these most crucial discoveries at the summit of the mountain into subsidiary discoveries. At both levels, the new discovery prompts the design of demonstration-of-principle experiments. As these experiments are refined, the lessons of the successful experimental designs are taken to a place a short distance down the slope from the two levels of scientific work: Here we encounter the transformation of the successful experimental designs into machine-tool or equivalent principles. Downstream from the advanced machine-tool-design sector, we have the new machine-tools revolutionizing product

Leibniz on Physical Economy

Gottfried Wilhelm Leibniz, the economist and philosopher Lyndon LaRouche has identified as the founder of the modern science of political economy, wrote the following in his 1671 essay "On the Establishment of a Society in Germany for the Promotion of the Arts and Sciences." The first English translation of this essay appeared in the quarterly journal Fidelio, *Vol. 1, No. 2, Spring, 1991.*

Perhaps through finding means, which though apparently of no great importance and involving no great costs, yet are for the common good, for the stimulus of the nation, for the support and maintenance of many men, for the glory of God and the discovery of His wonders, great results could be accomplished.

. . . Among such means, one of the easiest and most important will be the establishment of a society or academy, well grounded although small at the start. Through that, the natural genius of the Germans will be inspired, according to the examples of all their neighbors, which it is hoped they will excel; an increased agreement and closer correspondence of skilled people will be aroused, creating opportunity and arrangements for many excellent and useful thoughts, inventions, and experiments, which are often lost, because now those having them will have the confidence to communicate and then to receive them back again; to supply and make useful resources and funds, and other things lacking, on a large scale; joining theory and experiment in a happy marriage, the one supplying the deficiencies of the other; establish a school of inventors and, as it were, an official laboratory, in which each could readily work out his tests and concepts; discover the kinds and advantages of experiences which increase of themselves not in the least by chance (even if in the beginning there is only a small number); indeed, means will be supplied to maintain the nourishment of the people, to establish manufacturing and consequently draw in commerce, and in time to establish workhouses and houses of discipline for the idle and criminal in which to work; erect warehouses filled with necessities for emergencies, and even in the future form a safe bank for rentiers who wish to invest their money; to enter into companies, enter into negotiations with those formed; to encourage the Germans to commerce on the sea, joining up with the Hanseatic cities; to improve the schools, furnishing the youth with exercises, languages, and the reality of the sciences before they unfortunately travel, and establish Gentlemen's Schools as well; to facilitate the crafts through improvements and tools, through always inexpensive fire and motion; to test and be able to work out everything in chemistry and mechanics, to work with glass, to create telescopes, machines, water devices, clocks, lathes, painting studios, presses, paint companies, weaving factories, steel and iron works, and even some quite useful things which, when done in a small way without organization are unfruitful; to support private laws in land before all else except for new inventions; to get support from high places, to support foundations and organizations for curiosities, to form a theater of nature and the arts or chamber of arts, rarities and anatomy for easy learning of all things not in the now established herbal and other gardens and libraries; to summarize books and manuscripts and posthumous works, to bring together scattered reports, experiments, and letters of correspondence, to have everything in order and indexed; to support poor students and at the same time create institutions for their work which will be useful both to them and to society; to support impoverished eccentrics who have ruined themselves through extravagance, and merchants, ruined through misfortune as well, helping both for their own benefit and that of society; to support useful people on the land (who only wish to have provisions and materials for their nourishment, who for the most part, when they sense something is wrong in the world, leave the land and go over to foreign rule, much to the harm of themselves and the ruined fatherland, some falling into a life of dissipation, running off to war and destroying themselves or being cut off or removed in their first bloom, when they and others like them could people the land with families and thus be useful); to put them to work; to preserve them from beggary, to nourish them with their wife and family; to guard them and theirs from sin, disgrace, and ruination of the soul. On that basis, but without determining a definite time and place, rather everything being undertaken in a leisurely manner, this stratagem must be brought into motion with a small fund and some small advantages.

Gottfried Leibniz

Adam Smith Believed Man Is a Beast

Adam Smith's doctrine of "free trade" is derived from a dogma set forth in his 1759 book, *Theory of the Moral Sentiments*. There, Smith wrote that the responsibility for society and humanity as a whole falls outside of the purview of the common man, an outlook rejected by our nation's Founding Fathers—who also opposed Smith's rapacious free trade system. The kernel of Smith's argument is summarized in this quote from the book:

"The administration of the great system of the universe . . . [and] the care of the universal happiness of all rational and sensible beings, is the business of God and not of man. To man is allotted a much humbler department, but one much more suitable to the weakness of his powers and to the narrowness of his comprehension: the care of his own happiness, of that of his family, his friends, his country. . . . But though we are endowed with a very strong desire of these ends, it has been entrusted to the slow and uncertain determinations of our reason to find out the proper means of bringing them about. Nature has directed us to the greater part of these by original and immediate instincts. Hunger, thirst, the passion which unites the two sexes, the love of pleasure, and the dread of pain, prompt us to apply these means for their own sake, and without any consideration of their tendency to those beneficent ends which the great Director of nature intended to produce by them."

Adam Smith

designs and productive powers of labor at the base of the mountain, where production occurs.

In "crash program" mobilizations, not only scientific and related progress at its most intense, but every new conception is quickly turned into improved military or other applications. The machine-tool sector is expanded rapidly to accommodate to this. The rate of flow of tools proven in the highly mobilized military or aerospace applications, for example, spills at exceptional rates into the economy in general.

The way in which to think about such experiences is stop all the wimping and whining about budget-balancing and kindred mind-crippling, dog-like obsessions, and concentrate upon the crucial lesson to be learned from examining such an anomalous appearance. Concentrate upon the end-result, the effect of delivery of large masses of technologies, at accelerated rates, into both the improvement of product-designs and increase of the productive powers of labor. The lesson is, that if we would use our heads, unlike the King Louis XVI who failed, during 1783-89, to use his, we should always have the "moral equivalent of war-mobilization." To wit: We should insist that a large part of the total labor force be engaged in developing, investment in, and production by high rates of massive injection of newly discovered science and newly developed technologies into the promotion of improved product designs and high rates of increase of the productive powers of labor overall.

That object-lesson should reenforce our appreciation of a point which ought to have been clear beforehand. The sum-total of the lessons for statecraft from history and pre-history, is that creative, revolutionary progress in scientific and analogous knowledge is not an occurrence on the periphery of man's vision: It is the essence of human existence, it is what distinguishes us as the Mosaic heritage specifies, as in the image of God the Creator by virtue of our developable individual potential for creative reason.

The anomalous aspect of the mathematical picture of a growing economy is that the essence of the economy is not the production and consumption of objects, but rather the upward transformation of the cycle of consumption for production of the means of improved human existence. The creative powers of reason are the source, the cause for that growth upon which the avoidance of social collapse depends absolutely. The anomalous aspect of the economic process is that the characteristic feature of a viable economic policy of performance is human creative reason, that principle of reason which the economic doctrine of the late John Von Neumann and the contemporary "Chaos" theorists implicitly deny to exist.

Adam Smith Has No Morals

No nation as a whole has ever profitted from the dogma of "free trade" except by employing the doctrine as a ruse for looting another nation. The technical flaw in Adam Smith's dogma is not derived from a defect within his nonexistent science, but originates purely and simply in his

lack of all human decency. One has but to read the moral basis for his dogma of the "invisible hand," in his earlier, 1759, *Theory of the Moral Sentiments*. Ortes is the key.

From the beginning of Venice's deployment of the Fourth Crusade to loot and ruin the competitor power of its former master, the Byzantine Empire, in A.D. 1204, until the collapse of the Lombard debt-bubble during the middle of the fourteenth century, Venice ruled the Mediterranean and European usury as an imperial maritime power. This power was threatened by the A.D. 1440 Council of Florence, leading to the alliance of nations—the League of Cambrai—which came close to conquering and destroying Venetian power during the first decade of the sixteenth century. In the aftermath of that, Venice survived by placing each and all of its enemies against one another's throat, the Papacy, France, Spain, the German Empire, the Ottoman Empire, and England, chiefly. By playing upon the sexual susceptibilities of a possibly insane King Henry VIII of England, Venice split England from its close relations with Spain and with the Tudor House's ally in France. Thus, by the close of the sixteenth century, the leading circles in England had been captured as Venetian dupes: Walsingham and his circles around Queen Elizabeth, and the evil Francis Bacon, and so forth, around the unfortunate King James I. Even during the Civil War in England, Venice controlled both sides, including the Pallavicini-linked Oliver Cromwell, and the Restoration Stuarts after Cromwell's son and heir had been overthrown.

Those points are key to understanding the great control Venice exerted upon not only Adam Smith, Jeremy Bentham, and Thomas Malthus, but the entirety of what came to be identified as British political, social, and economic thinking from the middle of the eighteenth century to former President George Bush riding like a sick cat on the tail of Prime Minister Margaret Thatcher's broom. During the late seventeenth and early eighteenth centuries, in Britain, the Liberal Party of the Duke of Marlborough, Walpole, King George I, and the notorious Hell-Fire Clubs were already known as the "Venetian Party," as Disraeli referred to the imperial party of mid-nineteenth-century Britain.

Venice saw London as becoming the "Venice of the North," a worldwide maritime power, building a global empire, and moving on to establish a system of world-government consistent with Venetian financial and social principles. London's Liberal Party, in turn, was content to be guided by its Venetian mentors. Still, during the eighteenth century, until the city was weakened somewhat in its quarrel with the Genoese asset Napoleon Bonaparte, the Venetian intelligence service was very widespread, deeply embedded, ferally capable, and still very powerful.

The portrait of Venice's decadence during the seventeenth and eighteenth centuries would probably turn the stomachs of even the citizens of old Sodom and Gomorrah. Vile creatures such as Conti, Grandi, Ortes, Casanova, Cagliostro, and, later, Capodistria, were the appropriate instruments to devise the ultimate extreme in systematic immorality copied from Ortes's writings by Adam Smith, et al.

Nothing could be further from the truth than the British empiricists with their dogma respecting "human nature"; no one was more inclined to the unnatural than these Venetian bachelors who taught them. Man is not a creature of mere appetites and sensual passions; were man as Bacon, Hobbes, Locke, Hume, Smith, and Bentham portray the individuals of our species, our species would never have ascended above the level of baboon-like Yahoos subsisting precariously upon a few berries mixed with decayed flotsam cast upon the beaches of Africa's coast.

Human nature is that essential characteristic which sets our species as a whole absolutely apart from, and above the beasts. That quality is the potential for development of creative reason in every person, the quality which the tradition of Mosaic monotheism recognizes as man in the image of God the Creator. *Human nature* is a child whose mind and morals have not yet been destroyed by a modern Frankfurt-school-style day-care center, a loving child asking parents, relatives, neighbors, and virtually everyone else besides: "Why?"

1. See Bernhard Riemann's celebrated 1854 *Habilitationsschrift, Über die Hypothesen, welche der Geometrie zu Grunde liegen*, in *Collected Works of Bernhard Riemann*, Heinrich Weber, ed., Dover, New York, 1953, pp. 272-287. For a passable translation, see Bernhard Riemann, "On The Hypotheses Which Lie At the Foundations of Geometry," Henry S. White, trans., in *A Source Book in Mathematics*, David Eugene Smith, ed. (1929), Dover Reprint, 1959, pp. 404-425, *passim*.

2. The cult-fad of "Chaos Theory" in political-economy, for example, is a delusion of those Bourbaki and kindred idiot-savants who confuse reality with arithmetic estimates assigned to computer algorithms such as Mandelbrot figures. The influence of the late John Von Neumann is largely responsible for the spread of this and kindred lunacies within political-economy and other areas. Norbert Wiener, the author of *Cybernetics* and co-author of "information theory," was justly expelled from a Göttingen University seminar by the great David Hilbert, for reason of the same methodological incompetence which Wiener later exhibited in his outrageous notions of "negentropy," and his own and John Von Neumann's sick notions of the human mind.

These and kindred pathologies explain some of the reasons for the high rate of insanity among many highly trained mathematical formalists. If one attempts to define a "general field" theory of mathematical formalism on the basis of the false assumption of Bertrand Russell, John Von Neumann, et al., that externally bounding limits can be accessed as a theorem of the externally bounded theorem-lattice, the person so deluded must either give up that assumption, as Kurt Gödel did (for example), quit mathematics, or become an obsession-crazed fanatic, a lunatic dwelling in some wildly mystical paranoid's fantasy world. Thus, in the ancient Greek cult of Delphi, it was recognized that peering out from between the cracks of the mind of Apollo there is a leering Friedrich Nietzsche, a Bakunin, a Richard Wagner, a Martin Heidegger, a raving Dionysos-Python, or, as Herodotus underlines, a Satan, an Osiris, a Siva.

3. Kurt Gödel, "On formally undecidable propositions of *Principia Mathematica* and related systems I," in *Kurt Gödel Collected Works*, Vol. I, S. Feferman et al., eds., Oxford University Press, pp. 144-195.

How To Put the U.S. Economy Together Again

During his Democratic presidential candidacy in 1992, LaRouche issued a set of proposed economic measures to reverse the collapse, and restore the economy. On March 2, 1992, Democrats for Economic Recovery—LaRouche in '92, the campaign committee for LaRouche in the primaries, ran a nationwide half-hour program on network television, titled, "The Industrial Recovery of the United States." Key features of this program were also run separately as full page advertisements in *The Washington Times*, from January to April 1992, during the first half of the 101st Congress. Subsequently, the measures were issued as a book, with 70,000 copies printed to date, titled, The LaRouche-Bevel Program To Save the Nation; Reversing 30 Years of Post-Industrial Suicide.

On March 6, 1993, LaRouche further issued a call for the federal government to place a 0.1% per transaction tax on derivatives trading, as an initiative to dry out the speculative deluge, while emergency measures were enacted to begin re-building the economy.

This overall package of measures is now needed on an emergency timetable.

Federalize the Federal Reserve

In 1993, while still imprisoned, LaRouche described the process: "My recovery program depends on the initial action of federalizing, nationalizing, the Federal Reserve System. That is, to take away its status as a quasi-independent corporation controlled by bankers, and to make it an institution of the U.S. government, the kind of bank that the United States Bank represented under President George Washington.

"This bank would be a means, not for emitting currency, but for putting federal currency, legal tender, out as loans at very low interest rates to get the economy moving again.

"We are talking about loans on the order of magnitude of over $300 billion a year for public works, and a comparable amount of lending into the private sector for investment primarily in employment in high-tech and engineering types of activity.

"We are talking about, on the other side, another 3 million people at least, employed as a result of vendor agreements, which are made with spinoffs of these public projects. So we are talking about an increase in employment of about 6 million people within a year."

The interest rates on such loans would be between 2% and 4%. How would the money be paid back? Through increased tax revenues as a result of the productive economic activity that would be generated. This process stands in direct contrast to the way that the Federal Reserve Bank since its founding in 1913 as a non-public interest, private central bank, has functioned on behalf of a self-selected group of private financial interests.

'Let's Build Our Way Out of the Depression'

The following are excerpts from the March 2, 1992, half-hour national network television broadcast, titled, "The Industrial Recovery of the United States," giving the LaRouche economic proposals, sponsored by the Democrats for Economic Recovery—LaRouche in '92, the primary campaign committee of presidential candidate Lyndon LaRouche.

LAROUCHE: "This depression, like all modern depressions, is completely unnecessary. During the period 1939-1943, President Franklin Roosevelt proved that with the right measures the federal government can get us out of a depression any time it chooses; or can stop a depression at any time our government has the sense and willpower to take the necessary measures."

ANNOUNCER: That was what Lyndon LaRouche said back in 1984. Compare it to what other politicians and econmists have said. Lyndon LaRouche understands that the necessary measures for a general economic recovery must be based on a new industrial policy.

Build 5 Vital Areas of Infrastucture Create 6 Million Jobs

LAROUCHE: The federal government will issue over $600 billion in low-cost credit to state and federal authorities for infrastructural public works. This will create 3 million jobs in the public sector, and also an additional 3 million jobs among vendors to the government, in the private sector.

These combined 6 million new jobs will be devoted to rebuilding five vital components of America's industrial infrastructure.

First, the creation of a water management system capable of insuring a sufficient supply of fresh water into the 21st century.

Second, the rebuilding of our transportation grid, especially our rail system, and development of roads and ports.

Third, the construction of the energy grid needed to power an industrial recovery.

In addition to these three areas of "hard" infrastructure, I will develop two vital areas of so-called soft infrastructure,

which are of equal importance.

The fourth of the five, therefore, is the creation of a new health care infrastructure which is consistent with the already-established, but now much neglected, requirements of the Hill-Burton Act of 1946.

Fifth, we shall develop educational facilities suitable for the tasks of the rising productivity in the coming century.

Federal investment in these five areas of infrastrucutre will immediately halt the current depression collapse—as nothing less will do. But, on top of these measures, and in order to promote continued growth and increase in industrial productivity, we will need a sixth area of development. We will need a science driver, some great national mission, like the Kennedy Apollo program, whose goals will be the kind of scientific breakthroughs which will transform our productive, technological base.

ANNOUNCER: As Lyndon LaRouche has repeatedly explained in national broadcasts over the last 12 years, there is one, basic way out of a depression: We must build ourselves out of it.

LAROUCHE: That was how America got out of the collapse in the 1930s; that is how President John Kennedy reversed the recession of the Eisenhower administration; and that is the only way to start the process of recovery: through large-scale investment in public infrastructure projects.

These public works are the indispensable means for increasing the productivity of the entire economy, including the private sector.

Take, for example, auto production. Private corporations produce cars. But, to make a car, you need energy—lots of it—which comes from public utilities. You must transport the raw materials for the car, and the finished car itself, over public highways or waterways. The workers who make the car are the product of a public school system which is producing graduates capable of operating advanced industrial technology. Even water is key here: The production of a single automobile requires the direct use of over 10,000 gallons of water per car.

If the roads fall into disrepair, if labor becomes illiterate, if we stop generating enough power, then productivity in the private sector collapses and this collapse is passed on as poor product and increased cost to the consumer. The car will cost more, but will be worth much less.

A Science Driver for Growth

ANNOUNCER: The five areas of infrastructural development which we have just described must be done under any circumstances; they are long overdue, and, without them, there will be no sustained industrial recovery.

LAROUCHE: On the day on which I am inaugurated the President of the United States in Janaury 1993, I will send a bill to the Congress, accompanying my declaration of a national economic emergency, and the existence of a world depression.

That bill will feature asking the Congress, under Article 1 of the U.S. Constitution, to recognize the fact that I have nationalized the Federal Reserve System, converting it into a national bank; and requesting the Congress to give me the authorization to issue more than a trillion dollars in U.S. currency notes from the Treasury, to be deposited with the new Federal Reserve System, as a national bank, to be loaned at low interest for the purpose of getting the economy moving.

Approximately half of this money will go into public works, as I've indicated. And much of the rest will go to private sector vendors working in these five areas—that is, supplying these state and federal projects. And, the rest will go to promote high-technology investments—long-term investments, in particular—in the private sector.

To have a healthy and growing economy, we will need something more than these things. We will need a science driver, very much like, in principle, President Kennedy's Apollo program. The most efficient means of increasing industrial productivity is, purely and simply, applying scientific discovery.

This is what we saw in the Kennedy Apollo Project—a project which, for every dollar we put into it in government funds, we got back $10 to $14 in benefits from the spinoffs in the private sector. This was the last time—under Kennedy, into the early Johnson years—that the United States had a true science driver; it was the last time the United States had a healthy economy.

It was the combination of President Kennedy's crash aerospace program, together with his intelligent investment tax credit plan, which poured both public credit and private investment into the sectors of the economy to carry us through the 1960s.

Today we need desperately a program which is similar to the Apollo Project in principle. The available best such choice of program will be a long-range buildup toward the colonization of Mars.

A detailed plan for Mars colonization was presented in my television broadcast during the 1988 campaign ["The Woman on Mars" national broadcast]. At an international conference held in Virginia during the summer of 1985, I submitted a paper outlining a 40-year project for establishing a permanent colony on Mars.

ANNOUNCER: Mars colonization is not "pie in the sky." It, or something like it, is necessary for continuing industrial growth. It will give us the means of creating a new industrial base, combining the automobile sector with the aerospace sector—two industries with compatible engineering. This integrated aerospace-auto sector will become the leading section of our revived economy, and will lead the way to America once again becoming the world's leading industrial power.

What we need is a minimum of 6 to 8 million jobs. We have, for example, an operating deficit of the combined federal and state governments in the year 1992, of somewhere between a half-trillion and three-quarters of a trillion dollars. Unless you create enough employment and related activity—productive activity—to increase the tax revenues of combined federal and state governments, without increasing tax rates, by between a half- and three-quarters of a trillion dollars, you really are not going to move anything, to get us out of this continuing, downward-spiralling depression.

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