LaRouche: The World's Most Controversial Political Figure

"The measures already enacted by Volcker will cause a 15 percent recession in the U.S. economy . . . and plunge [it] into misery ultimately worse than the conditions of the Great Depression."

Lyndon LaRouche,
October 16, 1979

"Aaarrgh!"

Professor Milton Friedman, while publicly tearing up a book by LaRouche in 1980.

"Nuclear freeze ensures thermonuclear holocaust . . . beam weapons development is the only means for ridding ourselves of the unchallenged power of thermonuclear weapons."

Lyndon LaRouche,
December 22, 1982

"I call upon the scientific community . . . to give us the means of rendering these nuclear weapons impotent and obsolete."

President Ronald Reagan
March 23, 1983

"On the face of it, laymen may find it even attractive when the President speaks out about what seem to be defensive measures. But . . ."

Yuri Andropov
March 27, 1983

"It's LaRouche's people. He's persecuting me."

Henry A. Kissinger responding to a demonstration in April 1983

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LaRouche: Will this man become President?

LaRouche

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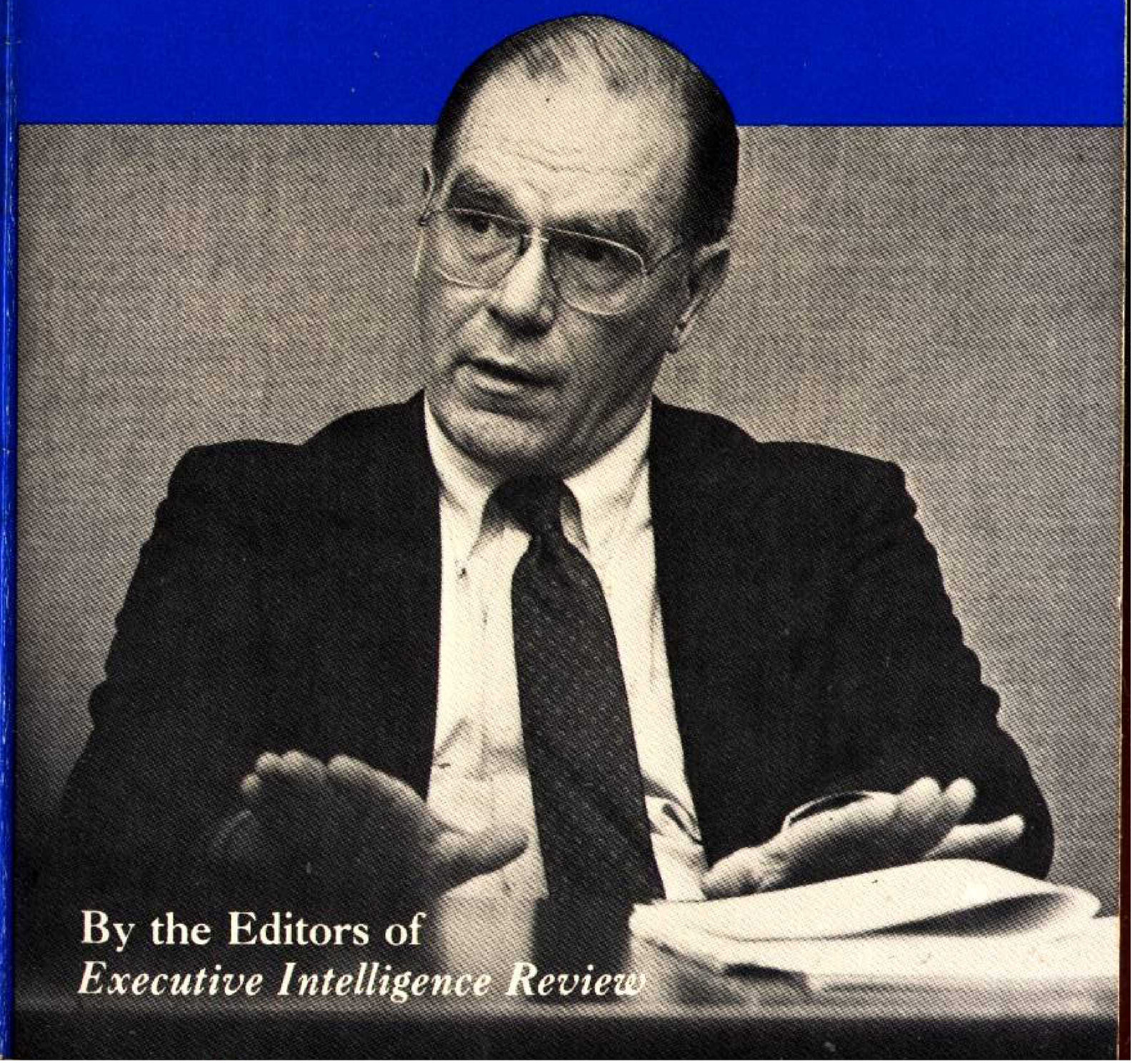

By the Editors of
Executive Intelligence Review

FRANKLIN

LaRouche

Will This Man Become President?

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LaRouche

Will This Man Become President?

by the Editors

Executive Intelligence Review

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LaRouche: Will This Man Become President?

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To See Ourselves As Moscow Sees Us

O wad some Power the giftie gie us
To see oursels as ithers see us!
It wad frae monie a blunder free us,
An' foolish notion:
What airs in dress an' gait wad lea'e us,
An' ev'n devotion!

—*Robert Burns*
"To A Louse, On Seeing One On A Lady's
Bonnet at Church," 1786

Briefly, imagine yourself a top official of the Soviet State Security Organization (KGB) or Military Advisory Committee (GRU) sitting in Moscow over the past twenty years, watching the internal changes in the United States and Western Europe. Imagine that you, playing the part of such an official in your imagination, were a member of one among those old Moscow or Kiev families which maintains the tradition of believing that one day the cities of Moscow, Kiev (Ukraine), Sofia (Bulgaria), and Belgrade (Serbia) will be the center of a new world-wide empire, "The Third and Last Roman Empire," the new Byzantine Empire.

For a few minutes now, continue to imagine yourself such a Soviet official, an official who is about sixty-five years of age, or slightly older. Try to see the way such

an influential Soviet official dreams of, and plans for the early doom of the United States. When you, such a Soviet official, were a younger man back in the 1950s, there were two thoughts you could never remove from the back of your mind, no matter how important the immediate problems of your personal, family life and struggle to advance your career. One of these thoughts was a nightmare, recurring dreams from your wartime experience, especially dreams which recall images from your experience as a Soviet junior military officer in the terrible counteroffensive into Berlin, from Stalingrad, under Marshal Zhukov. The other persisting thought is your image of a hatred against the former, wartime ally, the United States of America, a dangerous United States with almost magical capacity for turning breakthroughs in technology into new dimensions of economic and military power.

Back during the 1950s, you, that Soviet official, had still considered yourself a Marxist-Leninist. Nowadays, Marxists are to be found only in and around the universities of the United States, Western Europe, and the developing nations; even there, they are a dying breed. Lenin and Stalin left their mark on Russia, but today, you, like most of your contemporaries and juniors, no longer believe in such doctrines in the same way. Like most in upper echelons of power today, you are a pragmatist. The beliefs associated with the old religion, the beliefs of Raskol'niki and the Ukrainian church, have been coming back, memories of the sixteenth-century prophecy of the Third and Final Roman Empire, the New Byzantine Empire.

You, that Soviet official, have never forgotten the 1962 U.S.-Soviet missiles crisis.

You have heard the stories, in times past, of Nikita Sergeivitch Khrushchev's meeting with President Kennedy at Vienna, and remember how Khrushchev read that Vienna encounter together with the later

affair of the Berlin Wall as proof that this "rich playboy President" lacked nerve. Khrushchev had gambled too much on that psychological profile of the young President. The United States had called Khrushchev's bluff; in face of vastly superior U.S. power, Khrushchev had been forced to back down: a Soviet humiliation. Now, you believe it will be different with General Secretary Yuri Andropov; the United States and its NATO allies no longer have the material or moral strength they represented during 1962; today, the Soviet Union has a marginal, but significant advantage. You are convinced that Andropov will win the missiles crisis now developing, whether that comes during the middle of 1983, or is delayed until the beginning of 1984.

You, that Soviet official, have strong reasons for seeing this new missiles crisis with confidence. Those "useful fools," Lord Peter Carrington and Henry A. Kissinger, as Vladimir Ilyitch Lenin used to describe such liberals, will humiliate the "cowboy President" Reagan. Why not? Carrington and Kissinger will split the Western Europeans from Reagan, and Kissinger's friends in the United States will manipulate the U.S. State Department into spoiling Reagan's policies, while the U.S. Congress will chop Reagan's new strategic policies to pieces. Then, when showdown comes, the Soviet Union will prove that it has not been sleeping since 1962.

From where do you, this Soviet official, obtain such self-confidence?

You, like all leading Soviet officials, have watched the West destroying itself from within for twenty years. It began right after the 1962 missiles crisis and the assassination of President Kennedy. The U.S. Eastern Establishment around the former U.S. Ambassador to Moscow, W. Averell Harriman, had pushed through the policies worked out at the Pugwash Conference. At the same time that the Soviet Union had worked

out its long-range strategy for winning nuclear war, with Marshal Sokolovskii's *Soviet Military Strategy*,[1] President Johnson's Administration had adopted a doctrine which said that war between the two nuclear powers had been made so "unthinkable" that such war was almost impossible.

The United States thought it had tested the new doctrine of Nuclear Deterrence through President Johnson's escalation of the conflict in Indo-China into a full-scale colonial war. To many in the West, the Vietnam War had been seen as proof that what they called "local, surrogate wars" against the Soviet power could be fought without fear that such fighting could lead into full-scale war with the Soviet Union. So, the United States had decided to begin demobilizing its high-technology economy, and to permit its regular military forces to be eroded down to the level for fighting local wars on the outskirts of the industrialized section of the world. Once President Johnson had launched his "Great Society" program, Soviet officials had seen a new way in which to achieve world hegemony before the end of this century. The leading circles in the West were delivering on the promises they were making to Soviet representatives at the Pugwash Conference's meetings. They were tearing down the high-technology industrial power of the West from within.

If you were that Soviet official, you would decide that Marshal Sokolovskii had been right all along. The NATO powers had thrown away their capacity to continue fighting general warfare against the Soviet Union beyond the point of the initial period of nuclear exchanges. Once the Soviet Union completed its preparations for deploying a strategic anti-ballistic-missile defense-system, the Soviet Union could destroy over ninety percent of all the missiles the NATO powers could deploy in any launch; then, the United States would have no choice but to surrender.

If you were that Soviet official, you would frown at that point in your musings. "This fellow LaRouche!" The Soviet Academy of Science had watched this LaRouche closely for years, especially since that February 1982 conference in Washington, D.C., where LaRouche had unveiled his proposal that both the United States and Soviet Union agree to deploy the new strategic ABM defense-systems simultaneously. President Reagan had taken Moscow and London by surprise later, in announcing precisely that new doctrine, even after the British and the leadership of the U.S. Democratic Party had assured Soviet representatives that LaRouche's proposals would have no influence over U.S. policy-making. Soviet contacts at the highest levels in Britain and New York City had continued to be emphatic about this even after Dr. Edward Teller's address to the Washington, D.C. National Press Club on October 25, 1982.

Since the President had announced the new U.S. strategic doctrine, on March 23, 1983, the Soviet leadership had been forced to accelerate its development of strategic ABM systems. The program for reactivating the giant G-1 rocket-system would be accelerated. Instead of completing the new strategic ABM system by the early 1990s, the Soviet Union would have to accelerate its spending on these systems, to have the new system in place by 1988. The Soviet Union would beat the United States to development of such strategic ABM systems; Kissinger and the Democrats would hold back all U.S. spending for such systems until at least 1985; that would give the Soviet Union a margin of about two-years' head-start. Then, about 1988, one morning, the Soviet Union would announce the construction of a giant new, peaceful, manned space laboratory. The giant G-1 rockets, each carrying about 170 tons of payload, would put the components into space orbit. Inside the new space stations

would be X-ray lasers, powered by one-kiloton fission charges. Together with particle-beam terminal defense systems, the Soviet Union would be in a position to demand the surrender of the United States. "Unless they were crazy, they will surrender without firing a shot."

The old dream of the Third Rome would begin then to become a reality.

To a very large degree, such a Soviet official's views are highly accurate. The trouble with most of us is, that we become so accustomed to the changes in policy and practice we have undergone over the past twenty years, that we fail to see the wrongness of our own decision-making processes. We have worked ourselves into an impossible situation, and instead of thinking of correcting the policies which have misled us into this mess, we try to find solutions to our problems which do not upset the policies which have caused the problems. Any well-informed outsider, such as the indicated sort of Soviet official, may make exactly the same kind of commonplace error in judging the drift in his own nation's prevailing policy directions, but he may see what we are doing to ourselves much more clearly and accurately than we are willing to do. That Soviet official then prepares to take advantage of the weaknesses we refuse to correct in ourselves.

If we, or any other reporters, play back to you what typical U.S. politicians and ordinary citizens said and believed back during the 1950s and early 1960s, most readers would be astonished for a moment. After thinking about the matter for a moment or so, those readers would usually say, "Yes, it is true that I used to believe those things," but would then add, "Nowadays, my friends and I think differently. We have learned to think differently. . . ." Look at the pages of our newspapers, and compare the political-philosophical outlook of those papers during the 1950s and the early 1960s

with the same newspapers today. Compare the political figures in the Congress, the leadership of the Democratic Party, and lesser elected offices today, with those of the 1950s and early 1960s. Look at the differences in political-philosophical outlook between the typical campaign propaganda of then and now. Imagine ourselves, from then, looking at what we have become now; look at the ruin of our cities, our industries, our farmers, our defense capabilities, today, and ask what we would have thought during the 1950s and 1960s if some popular moving-picture had shown us what we were to become over the late 1960s and 1970s.

The well-informed Soviet strategist does make such a comparison from the outside. He smiles—he gloats, and thinks back to what Nikita Khrushchev said back then, "We shall bury you." Khrushchev was not threatening the United States with Soviet attack or communist insurrection at that moment; he was promising that we should destroy ourselves from within, and that his nation would serve as the undertaker. Think of what a Soviet official of today thinks as he remembers Khrushchev's quip from the late 1950s.

Then, we reacted to Khrushchev's quip with the certainty that we would never permit ourselves to be destroyed so from within. Today, the nations of the United States and Western Europe are collapsing into the social misery and wreckage of a "post-industrial society." Moscow did not do this; we did it to ourselves, by following the leadership of Henry Kissinger, Robert McNamara, and their backers. We must undo that quickly, must reverse the policies of "post-industrial society" and Nuclear Deterrence, or either we shall destroy most of the world, including ourselves, in nuclear warfare, or shall wait passively, miserably, sullenly, until the men and women arrive who will teach us to speak Russian.

The United States and most of the rest of the world,

are now locked in a deepening, world-wide economic depression. Already, all of the nations of Ibero-America are in a state of default on international debts totalling about $350 billions. The debts-to-assets ratios of our banking institutions are implicitly a condition of bankruptcy. When the effects of debt-collapse hit, perhaps eighty percent of the banking institutions of the United States, including many among our biggest commercial banks, will collapse, if we continue to operate within the framework of the International Monetary Fund, the World Bank, the Bank for International Settlements, and GATT. This world-wide depression and Volcker-triggered financial crisis are the root of our growing social misery; mass unemployment, termination of pensions, collapse of Federal, state, and municipal social services, and worsening misery of the permanently unemployed, cannot be relieved unless we dump the policies of Volcker's Federal Reserve System, and the policies of the International Monetary Fund; unless we dump those policies, things can only become much, much worse, and that at a rapid rate.

Under those worsening conditions, the majority of the people of the United States—and most of the world besides—are hungering for a fundamental change in the direction things are moving. This same economic and monetary ruin is the root of our strategic vulnerability. Things will change, and that very soon; they will change very much for the worse, or we will force them to change for the better.

This brings us to the subject of this Special Report: *Who and what is the prospective U.S. President, Lyndon Hermyle LaRouche, Jr.?*

LaRouche may or may not campaign for the 1984 presidential nomination of his Democratic Party. If not, and unless an assassin's bullet prevents this, he would probably choose to be a candidate for the 1988 presidential nomination instead. Those are not the most

important questions to be considered in this connection.

Over the course of the recent ten years, LaRouche has emerged from relative obscurity to become a center of controversy world-wide, a public controversy which has been escalated since the first libellous attack on him in a front-page feature of the *New York Times* during January 1974.[2] These libellous attacks, which have become frequent and massive internationally since, reflect the simple fact that the forces behind the *New York Times* regard him as a serious potential threat to their world-wide interests, the interests of the international drug-traffickers, as well as such present Soviet accomplices as Britain's Lord Peter Carrington and the Trilateral Commission of Carrington's business-partner, Henry A. Kissinger. Future President or not, LaRouche has become one of the international public figures influencing the perceptions and policy-making of governments, major political factions, and other powerful institutions. It is in this connection that LaRouche's activities and influence already touch the circumstances in which you and your family live in this world.

Despite the lies circulated world-wide against LaRouche by such agencies as the U.S. State Department and other accomplices of Henry A. Kissinger, LaRouche's name has been made a popular household word among readers of leading news media in some foreign nations, in contrast to the widespread libels and slanders spread by major U.S. and European news-media, by AFL-CIO President Lane Kirkland, and by the international drug-traffickers' lobby inside the United States. A few million individuals or so inside the United States already have an accurate estimate of LaRouche's policies and related activities, as well as some leading circles in Washington, D.C. Most citizens remain either in ignorance of these facts, or sim-

ply repeat the lying gossip they overhear, or have read in lying news media.

The persons best qualified to provide the reader with an accurate picture of who LaRouche is, and how he thinks about policy questions such as the strategic crises indicated here, are his close co-workers among the editors and staff of the international political-intelligence newsweekly, the *Executive Intelligence Review*.

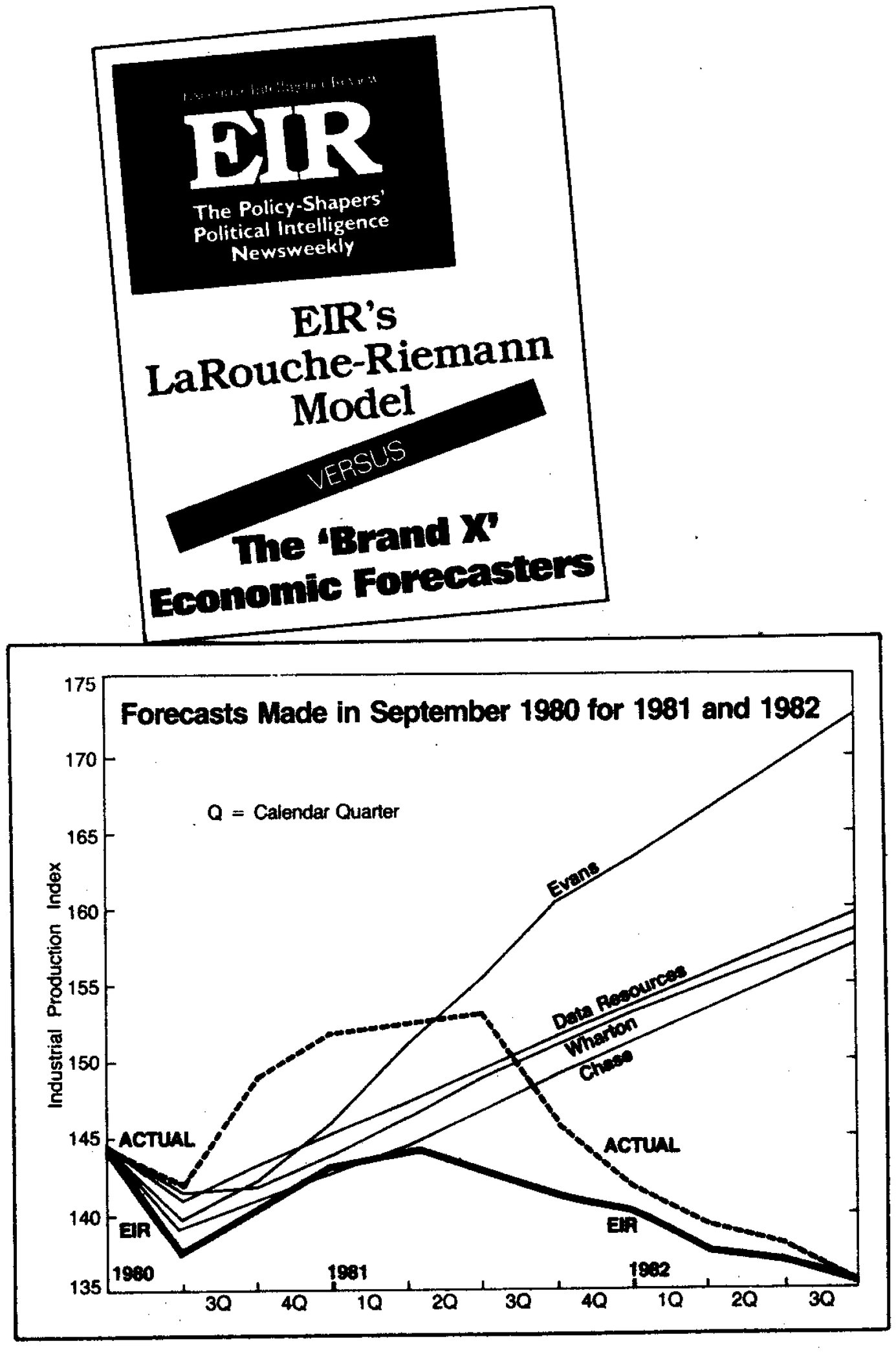
We present you Lyndon Hermyle LaRouche, Jr., as we know him, first, as provably the world's leading economist today, and his work on scientific method springing out of his work as an economist. We present him as a political-intelligence specialist in connection with the work of *Executive Intelligence Review*, and, in that connection, his influential work on matters of strategic analysis and strategic doctrine. With aid of some biographical materials, we present his political philosophy.

The Editors
Executive Intelligence Review
New York City
April 8, 1983

The Leading Economist *of the* Twentieth Century

It is not a matter of debatable interpretation, but is a simple matter of documented fact, that Lyndon H. LaRouche, Jr. has been established as the most accurate economic forecaster in the history of economic science. The most recent evidence is the spectacular success of the quarterly LaRouche-Riemann forecast for the U.S. economy, published regularly by the *Executive Intelligence Review* since November 1979. This forecast has been consistently accurate for the trends in the U.S. economy as a whole, whereas all competing forecasts published, including those published by the U.S. government, have been almost consistently wrong, and usually absurd by comparison with actual developments.

However, LaRouche's successes in forecasting are not limited to the recent years. During the period 1958–1959, he elaborated a long-range forecast for the U.S. economy, which forecast every principal trend, and the succession of trends, up to the present time. The LaRouche-Riemann method of forecasting was essen-



EIR published proof that the quarterly LaRouche-Riemann forecast had been the only accurate forecast published during the entire period beginning November 1979.

tially nothing but an application of refined forms of the same methods used for the 1958–1959 and later forecasting, to forecasting more tightly and in more detail by aid of modern computer-systems technology.

Despite his outstanding successes in this field, LaRouche is very much feared and bitterly resented by most of the economics profession in the United States and Europe, and is generally hated among the economics departments of the universities in those nations. The view is different among some leading circles of economists in the developing nations, where his writings are intensively studied, and exert an influence on policy-thinking today. He is hated in the United States and Europe, because his successes have discredited most of the adult life's work of those professionals. There was some willingness among leading economists to debate LaRouche into the Autumn of 1971, but after LaRouche demolished the late leading Keynesian, Professor Abba Lerner, in a debate before a large audience of students and professionals at New York City's Queens College, during the Autumn of 1971, only in one instance, the late Professor Oskar Morgenstern a few weeks after the LaRouche-Lerner debate, has any leading opponent of LaRouche's among economists dared to debate LaRouche or his conceptions publicly. The irascible Professor Milton Friedman, presented with such a public challenge during 1981, went into a carnival's geek-act, tearing up a copy of LaRouche and Goldman's book[3] before a startled public audience.

The problem which concerns the majority among academic and professional economists in Europe and the United States, is that, since LaRouche's forecasts are more or less consistently accurate, and the competing forecasts, based on their economics dogmas fail in the practice of forecasting, this tends to show that LaRouche's recommendations for U.S. economic policy must also be correct, and their own the kinds of failures

which comparison of forecasts suggests. If that is true, as the evidence shows it to be true, then what has been taught as economics in most universities during the present century has been founded upon false assumptions. Anyone who is familiar with the backstabbing politics of university faculty life understands immediately why the economics profession shows such irrational, ferocious hatred against LaRouche.

However, as we shall indicate, there are deeper motives of policy for the hatred and fear of LaRouche among economists than the petty venom which Professor Milton Friedman exhibited to an audience.

The 1958–1959 Long-Range Forecast

During 1958–1959, LaRouche elaborated his judgment that the 1957–1958 U.S. recession represented a critical turning point in post-war economic history, the beginning of a long-term slide in the direction of a new, world-wide economic depression potentially far worse than that of the 1930s. Unless the politics of the Bretton Woods monetary system were overturned, he forecast, the following long-range developments would unfold:

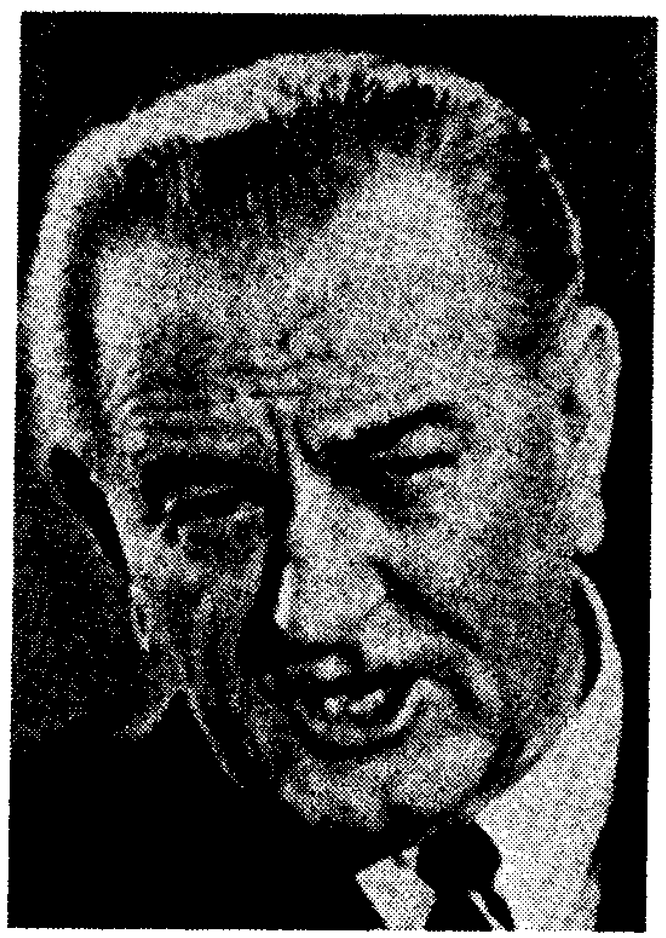
First, during the first half of the 1960s, there would be a significant economic recovery from 1957–1959 recession levels, an upturn led by capital investments in Western Europe and Japan. By approximately the middle of the 1960s, the rising ratio of debt to equity investments, among leading national economies, would set off the first of a series of successive general monetary crises. Unless the Bretton Woods system were scrapped, these crises would persist, leading into the later eruption of the worst world-wide depression in modern history. Most probably, he forecast, the defenders of the Bretton Woods system would respond

to the pattern of worsening monetary crises, by efforts to impose, world-wide, the fascist forms of austerity introduced to Weimar and Nazi Germany by Nazi Finance Minister Hjalmar Schacht.

Let us now compare the past twenty-five years with the LaRouche forecast from 1958 and 1959:

France, Germany, and Japan, led a capital investment boom in world trade levels. This was exploited to some advantage by the United States through the Kennedy Administration's combined investment tax-credit program and support for the NASA research-and-development effort started by the Eisenhower Administration. Following mid-1960s recessions in West Germany and Japan, the British pound slipped into a prolonged crisis, leading into the unpostponable British devaluation of November 1967. The British devaluation triggered an immediate monetary crisis of the

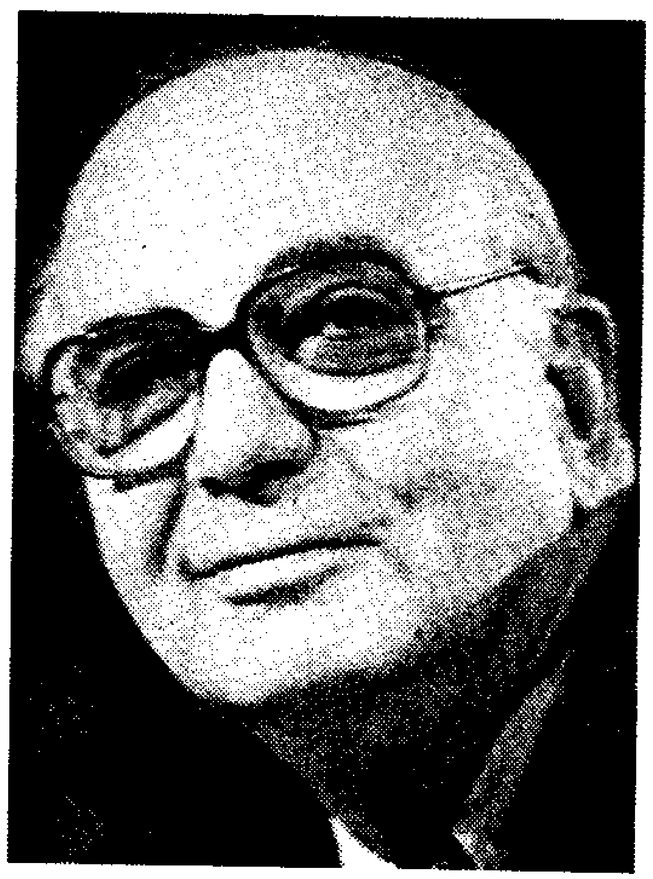
President **L. B. Johnson** *(left) and Federal Reserve Chairman* **Wm. Martin:** *Their bungling response to a crisis, during March 1968, began the countdown toward a new world-wide economic depression.*

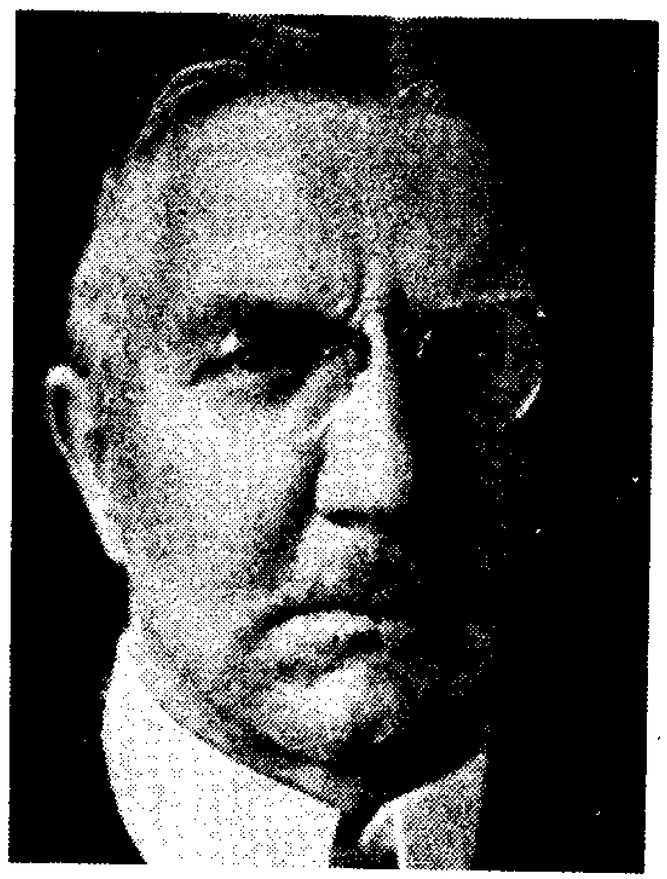


U.S. dollar, causing the first stage of breakdown of the Bretton Woods monetary system, under President Johnson and Federal Reserve Chairman William M. Martin in March 1968. President Nixon's mismanagement of the economy, featuring the advice of Professor Milton Friedman, worsened the situation, leading into the crisis of Spring-Summer 1970. The so-called Keynesian response by Nixon to the 1970 crisis merely led into the devastating monetary crisis of Summer 1971. Instead of up-valuing U.S. monetary gold-reserve stocks, Nixon, following the advice of Representative Henry Reuss, Undersecretary of the Treasury Paul A. Volcker, and John Connally, collapsed the gold-reserve provisions of the Bretton Woods System, thus creating the preconditions for the growth of monetary chaos world-wide. It was at this point that Nixon, on Connally's and other advice, introduced elements of Nazi Finance Minister Hjalmar Schacht's austerity to the U.S. economy.

Over the course of the 1970s, the Nixon, Ford and Carter Administrations took the worst possible courses of action on economic and monetary policies. In his 1977 book[4], present Secretary of State George Shultz credits himself with the international monetary summits of 1972 and 1975, perhaps slightly understating the part of his accomplice, Henry A. Kissinger, in threatening homicide against some governments which opposed Shultz in these matters. By beating back the proposals for monetary reform by France's President Pompidou in 1972, with aid of Treasury Secretary Connally's cowboy diplomacy, Shultz et al. ensured that the inflationary "floating exchange-rate" system came into existence as general policy for the period into the present moment. In spite of warnings of a future Third World debt crisis, by Algeria's President Boumedienne, LaRouche and others, during 1975, Shultz et al. gained the support of France's President Valéry

It was Treasury Secretary **John Connally** *(above) in collaboration with Undersecretary* **Paul A. Volcker** *(below left), who convinced President Nixon to wreck the U.S. dollar during August 15–16, 1971. Their actions introduced the austerity measures of former Nazi Finance Minister* **Hjalmar Schacht** *(below right) into the U.S.A.*





It was National Security Advisor **Henry A. Kissinger** *(left) and* **George Shultz** *who sent the international monetary system plunging toward bankruptcy during crucial 1972 and 1975 summit negotiations, and Shultz who took credit for both disasters in his book published in 1977.*

It was France's President **Valéry Giscard d'Estaing** *(left) and Germany's Chancellor* **Helmut Schmidt** *who capitulated to Kissinger's Shultz's ruinous demands at the 1975 Rambouillet conference.*

Giscard d'Estaing and West Germany's Chancellor Helmut Schmidt for the follies of the 1975 Rambouillet conference. President Carter was the international-monetary equivalent of a cholera epidemic, even in the eyes of President Giscard and Chancellor Schmidt, who launched the European Monetary System in June-July 1978, in an effort to stave off a chain-reaction monetary collapse.

It is instructive to compare the levels of international debt, both public and private, debt service, and borrowing costs for Mexico, Venezuela, Brazil, Peru, Chile, Argentina, for 1971–1972, 1974–1975, 1978, and 1982–1983, and to compare the total growth of such debt with the cumulative amount of borrowing for capital-investment purposes. These nations did not "overborrow" for domestic investment; directly the contrary. It was the floating-rate exchange system, and rising costs of refinancing previously existing debt, and the inflationary-recessionary trends of the OECD nations, which imposed the cancerous form of debt growth upon these economies. But for these outside factors, the external debt of Brazil today would be about $33 billions, rather than more than $100 billions. The parallel effect on the economy of black Africa has been outrightly economic famine, epidemic, and so forth.

Volcker's policies of October 1979 to the present were not, of course, included in LaRouche's 1958–1959 forecast. What Volcker and President Carter introduced in October 1979 was a policy which Volcker himself had identified as "controlled disintegration of the economy," while campaigning for the Federal Reserve chairmanship earlier that same year. This policy, "controlled disintegration of the economy," was first openly proposed by the New York Council on Foreign Rela-

tions, in a series of studies assembled during 1975 and 1976 under Cyrus Vance, Zbigniew Brzezinski, et al., outlining the policies to be followed by the Trilateral Commission's Carter Administration. Volcker's reference to that policy proves that Volcker did not blindly mislead the United States into a new world-wide economic depression; he fully intended to cause such a depression from the beginning.

LaRouche recognized this new development and its significance as soon as it began; during October 1979, in the middle of the New Hampshire Democratic primary campaign, he predicted, accurately, the exact results of Volcker's policies, as later elaborated with greater precision by the LaRouche-Riemann forecast published first in November 1979.

To summarize what we have reported so far: No economist has ever produced a long-range forecast as prophetically accurate as LaRouche's 1958–1959 "1958 turning point" forecast.

The problem, as LaRouche viewed it during 1957–1958, was that the Eisenhower credit-expansion launched in 1954 had been (under strong influence of

President **Carter's** *Federal Reserve Chairman Paul A. Volcker called the new Federal Reserve policy "controlled disintegration of the economy." Volcker's policy succeeded: the U.S. economy disintegrated during 1982.*

an Arthur Burns linked to the economic philosophy of Milton Friedman, George Shultz, and Paul Volcker) to foster a recovery through stimulating consumer-goods credit for automobiles, and so forth, instead of fostering a durable economic boom through directly fostering a capital-goods boom.

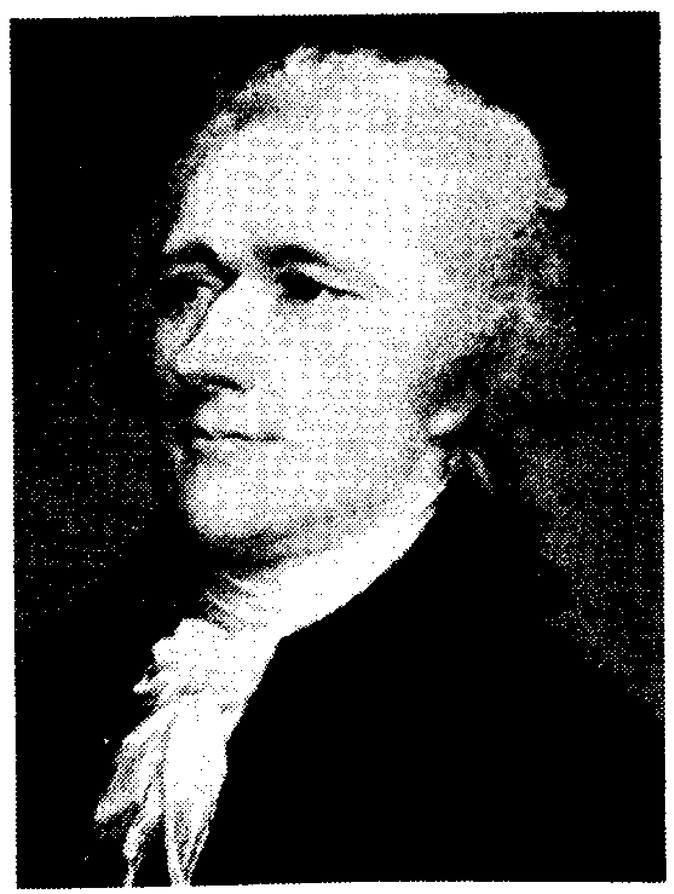
LaRouche had been led to recognize this problematic feature of the "Eisenhower recovery" partly by his included work as a management consultant, in detailed studies of the crises of automobile dealerships during the 1955–1956 period. In major categories of consumer-goods purchases, led by automobiles, the consumer-credit expansion was sustained solely by means of creating a chain-letter kind of financing, a credit "bubble," to the point that after about twenty-four months, increasing numbers of new-car purchasers owed more on the automobile than the replacement price of the same make and model on a nearby used-car lot. The result of a short-lived boom based on such consumer-credit bubbles was, as LaRouche foresaw by January 1957, a deep U.S. recession for 1957–1958. It was through examining this recession's causes more deeply, that the long-range 1958–1959 forecast was produced.

The "American System of Political Economy"

The elaboration of economic science which LaRouche developed over the period beginning 1952, he later recognized as an exact replica, in all essentials, of what was known during the later eighteenth century and the nineteenth century as the *American System of political economy*, the economic policies of U.S. Treasury Secretary Alexander Hamilton, the famous two Careys, Friedrich List, and so forth. As the very name of "LaRouche-Riemann" method of economic forecast-

ing implies, there are additional features to LaRouche's work, beyond the original specifications of the American System. Despite those added features, the foundation of LaRouche's work in economic science is the American System of political economy, as Alexander Hamilton defined the meaning of that term in his December 1791 Report to the Congress, *On the Subject of Manufactures*.

LaRouche's present position in economic science, throughout the world today, is centered around his role as a prominent spokesman for the American System of political economy, as this was first defined comprehensively by both Article I, Sections 8 and 9 of the U.S. Federal Constitution, and by supplementary papers of the 1789–1791 period of the Administration of President George Washington.[5] This is the basis in precedent and in U.S. law for LaRouche's proposed reforms of the U.S. Federal Reserve System and U.S. Treasury today; it is also the basis for his design of a new international monetary order, as detailed, for example in his August 1982 report to the governments of Ibero-America on a proposed Ibero-American Common Market, *Operation Juarez*.



U.S. Treasury Secretary **Alexander Hamilton:** *His refutation of Adam Smith makes the young United States an economic power. The acknowledged founder of the American System of political economy!*

Although LaRouche defends consistently the policies of Benjamin Franklin, George Washington, Hamilton, the Careys, List, and so forth, he is also distinguished for an important advance in economic science which he developed beginning with a crucial discovery of 1952. This discovery was the basis for his 1958–1959 forecast and the later design of the LaRouche-Riemann method of economic forecasting. We report the circumstances of that discovery later in this chapter, after clarifying the significance of LaRouche's position as a defender of the American System.

As a political figure, as well as an economist, LaRouche is most accurately pigeon-holed as continuing the political-philosophical world-outlook of the American Whigs of the late eighteenth and nineteenth centuries.

The name, "Whig," was first adopted casually among Americans from the Whig Party of early eighteenth-century Britain, a party which emerged in part as a spin-off of the English Commonwealth Party of Cromwell and John Milton. The private circles assembled to support the cause of American independence from Britain included a network of Whig clubs. When both the Federalist and Democratic-Republican parties had successively discredited themselves, through the period of the War of 1812, leading patriots of Henry Clay's "warhawk" faction and Philadelphia's Mathew Carey had regrouped patriots from both discredited parties into a new party, the Whig Party. In the ebbs and flows of politics from then into the 1850s, the Whig Party in some sections of the country was based in part as a current within the Democratic Party, while another portion led in forming the Republican Party.

LaRouche today would be immediately recognized as an American Whig by the leading Whigs of any of those forces from the late-eighteenth and nineteenth centuries.

The central feature of the American Whig Party, and of Whig currents in the Democratic and Republican parties, was a common support for the general policies of Benjamin Franklin's faction among the Founding Fathers, and, most specifically, the American System of political economy. To understand those Whigs of the past, or LaRouche's political-philosophical outlook, it is essential to know those leading facts of the American Revolution which have not been reported in the history departments and textbooks of our public schools and universities since British Fabians such as Charles A. Beard, John Dewey, and Walter Lippmann began their gross subversion of our educational institutions, at the turn of the present century.

As briefly as possible, the directly relevant historical facts are as follows.

Economic science was founded during the late seventeenth century by the scientist Gottfried Leibniz beginning with his 1671 *Society & Economy*. Since approximately the time of Leibniz's death, all leading doctrines of political-economy have been divided into two general, mutually opposed factions, separating the followers of Leibniz's discoveries in economic science from those bitterly opposed to these discoveries.

Leibniz's economic science was directly the basis for the American System of political-economy, a knowledge brought into the United States chiefly through Dr. Benjamin Franklin and his activities. The same principles of Leibniz were taught in Germany during the eighteenth century, and into the early nineteenth century, under the title of "physical economy," as part of the kameralistic program of higher education provided to members of Germany's statecraft-elite. These same policies were taught by the Oratorian teaching order in France, and were the basis for the work of France's Ecole Polytechnique and Lazare Carnot and

his former teacher, Gaspard Monge, both graduates of the Oratorian program.

Beginning 1816–1825, through the Marquis de Lafayette's position as head of the U.S. secret intelligence service abroad, run by the Society of Cincinnatus, the 1794–1815 work of the Ecole Polytechnique on science, military science, and economic science was brought into the United States. In 1825, a member of the pro-American German republican faction, a protégé of Lafayette, Friedrich List, was brought into the United States by Lafayette. List was assigned to collaborate with Philadelphia's Mathew Carey. List brought with him his earlier studies of the work of the leading economists of the Ecole Polytechnique, Ferrier, Chaptal, and Dupin, and worked with leading U.S. economists to refine the American System of political-economy into a more powerful instrument of policy-shaping. After assuming U.S. citizenship, List returned to Germany, writing books and papers on the subject of national-economy which made the American System of economy hegemonic among supporters of technological and industrial progress in that nation. List's successful design of the German Customs Union (*Zollverein*) established the indispensable basis for nineteenth-century Germany's rise to world leadership in science and industrial development.

Through E. Peshine Smith and others, the American System of political economy, of Hamilton, the Careys, and List, was introduced to Japan by 1868, and became the basis for the recurring "economic miracles" of Japan to the present period.

The opposing faction of political economy was organized by leading Venetian, Genoese, and Swiss banking interests during the eighteenth century. The opposition early took the form of the feudalist doctrine of the French Physiocrats, a dogma modeled explicitly

(by Dr. Quesnay, for example) on the zero-growth example of Mandarin China. It was not accidental that the later form of opposition to the American System developed in Britain. Britain had been taken over by foreign tax-farmers of Genoa, Geneva, and so forth in 1603, and these foreign interests had consolidated their grip on Britain's economy and leading families with the Restoration of 1660 and the reforms of 1688–1689.

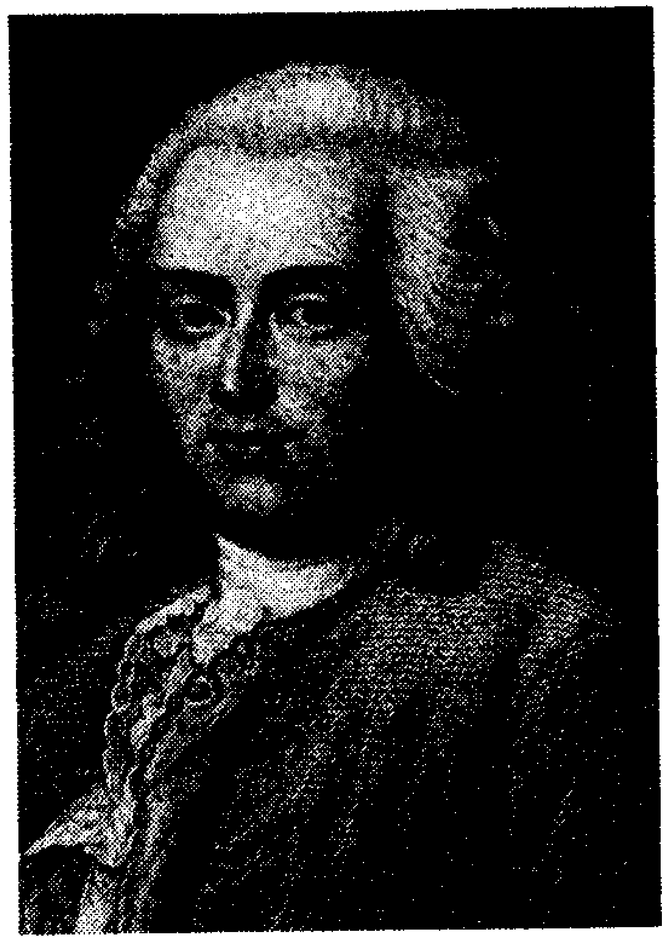
The direct outgrowths of this control of British finance by Venetian, Genoese, Swiss, and Dutch-Genoese financier interests, had been both the Bank of England and the evolution of the British (and Dutch) East India Company out of the Venetian-Genoese Levant Company. These, originally foreign interests controlled not only the powerful British East India Company, but also made the British Secret Intelligence Service (SIS) of the eighteenth century (in particular) virtually the same thing as the British East India Company. It was during 1763–1775 that the British East India Company developed a doctrine of political economy designed explicitly as an attempted antidote to the economic policies of practice of the English colonies in North America. Leading instances of British East India Company officials whose work was directly explicitly against the American System include most prominently, Adam Smith, Jeremy Bentham, Thomas Malthus, James Mill, David Ricardo, and John Stuart Mill. Karl Marx's *Capital* is, in all its main features, an attempted defense of the economics of Adam Smith and David Ricardo against, most directly, the defense of the American System by Friedrich List and Henry C. Carey.

The conflict between the American System and the British East India Company's opposing political-economic doctrines was the dominant issue of the United States' on-again-off-again wars and near-wars with Britain over the period 1766–1863, from the beginning

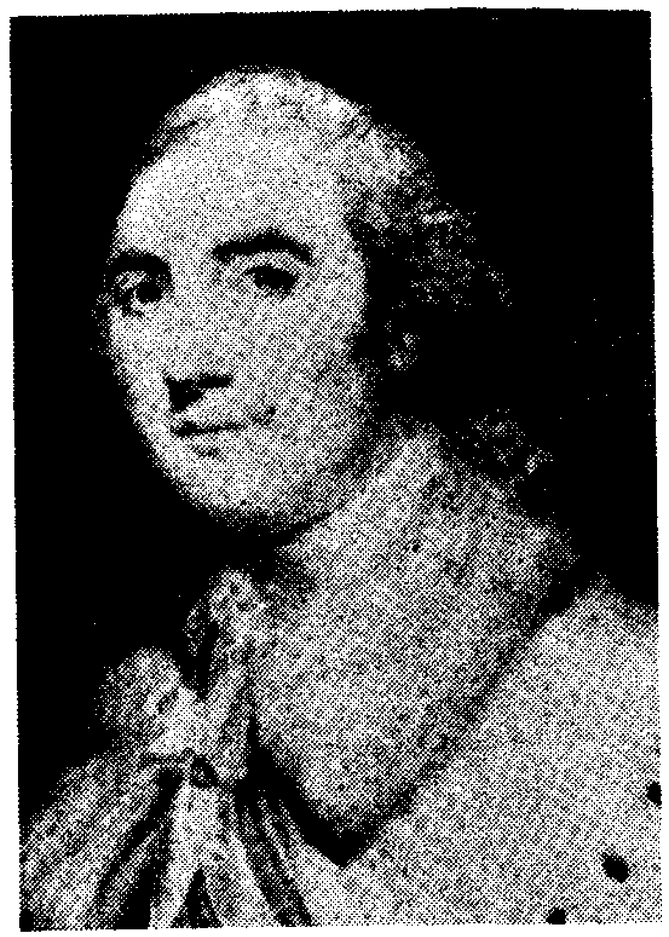
of Dr. Benjamin Franklin's conspiracy, ten years before the U.S. Declaration of Independence, until Prince Albert's negotiation of détente with President Abraham Lincoln, forestalling a British military attack on the United States which Lords Palmerston and Russell had planned for 1863.

The American Revolution was prompted by a long meeting between the British East India Company's Lord Shelburne and Shelburne's subordinate, Adam Smith, during a famous, long carriage ride of 1763. During that carriage ride, Shelburne outlined to Smith a plan for destroying the economies, and local self-government, of the English colonies in North America. The principal features of the planned economic warfare against the colonies were outlined later, on the eve of the American Revolution in Smith's plagiarism of the *Reflections* by the French physiocrat A. Turgot. Smith's plagiarism is known to this day by the popular title of *The Wealth of Nations*.

These anti-American policies, which the British began to introduce during 1763, caused Dr. Benjamin Franklin to be delegated to visit Britain in 1766. The reception he met there confirmed to him the advice of his friend and collaborator Dr. Joseph Priestley, that the English colonies in America and the British could not continue to live under the same government. So, that same year, Franklin began to assemble the vast, trans-Atlantic conspiracy which ultimately gave the United States victory over Britain. This conspiracy stretched from Leibniz's Academy in Petrograd, Russia, through the court of Spain's Charles III, into the republican circles of the Spanish colonies in the Americas. Franklin drew into this vast plot networks traced to such earlier celebrities as Naples' Tommaso Campanella, the French networks of Tremblay, Richelieu, Mazarin, and Colbert, and the Europe-wide networks of Leibniz. The economic policies later named the



A. Turgot, *the French physiocrat whom Adam Smith plagiarized in writing the anti-American tract called* **The Wealth of Nations.**



Lord Shelburne *(right) and* **Adam Smith:** *They took a long carriage ride in 1763, to plan the destruction of the economy of the future United States.*

American System of political economy were the common feature of this vast, republican plot which Franklin assembled over the period 1776–1789.

This conspiracy of Franklin's was the foundation of the future republics in Spanish America, the factions of Lafayette and Carnot in France, the American faction associated with Friedrich Schiller, Wolfgang Mozart, Ludwig van Beethoven, and many others in Germany, that Greek independence faction which Franklin assisted in organizing, and the republican faction of Cavour in Italy.

Although the American Revolution was organized and fought against the doctrines of Adam Smith's *Wealth of Nations*, Smith's policies began to be smuggled into the United States beginning about 1796, with the treasonous "Hartford Convention" organized by British intelligence's agents-of-influence among wealthy New England merchant-families such as the Russells, Cushings, Peabodys, and Perkins. These were families closely linked to both British and Swiss-banker adversaries of the American Revolution, and to the networks of the British agent Aaron Burr.[6]

The New England families themselves had been corrupted by the British East India Company by being given part of the British trade in African black slaves and the Far East opium trade. The seeds of corruption had been established earlier during the eighteenth century with Jonathan Edwards' Great Awakening subversion up and down the Connecticut River valley. These corrupted New England families were allied to families allied to British Dutch financial interests based in New York City, and also connected to powerful Swiss banking-interest enemies of the American Revolution, such as Mallet, de Neuflize, and Schlumberger. The Swiss component of America's 1766–1783 adversaries had given us the Prevosts, the Gallatins, and the Astors, as well as Britain's Hessian mercenaries.

Through their influence on President John Adams, an influence directed partly by an agent of British SIS's Edinburgh office, Sir John Robison, they had ruined and discredited the Federalist Party. Through their Jacobin operations, led in part by the Swiss agent, Gallatin, as well as British agent Aaron Burr, they were able to control much of the policies of the Jefferson and Madison administrations.[7] Under these two administrations, Smith's *Wealth of Nations* doctrine became rampant.

The same New England and other families behind these corrupting developments, the corrupted Congregationalists, Unitarians, and members of either the Church of England or Church of Scotland, all allied to Burr's plottings, were linked to corrupted families of New York, Philadelphia, Baltimore, and so forth, that constitute what has become known as the "Liberal Eastern Establishment" around such offshoots of Lord Alfred Milner's London Round Table and Chatham House, as the former, Morgan-directed National Civic Federation, and the New York Council on Foreign Relations of today.

The widespread exposure of the New England families' treasonous financing of Britain's war against the United States, and the ruinous depression of 1816–1818, sufficiently discredited those families' influence, that a revival of the American System occurred under Presidents Monroe and John Quincy Adams. The future Eastern Establishment later regained power with the elections of Andrew Jackson and Martin van Buren, reintroducing Smith's policies, and causing thereby the disastrous Panic of 1837. This Panic reminded Americans generally, that things had gone better under the American System. But for the sudden, mysterious deaths of two Whig Presidents of the 1840s, in which assassination was circumstantially proven in one case, the history of the 1840s would have been different than

it was; the Whig Party nonetheless maintained power within the Congress.[8]

The Boston crowd of the 1850s, which had gone from the East India Company's slave trade into the profession of Abolition (of slavery), were not actually opposed to black chattel slavery. Rather, as is documented from correspondence of the 1850s and 1860s, this New England crowd was complicit (with August Belmont) in a British plot to split the United States into several, squabbling, "balkanized" parts. To this purpose, the Boston Abolitionists entered into a conspiracy with the leaders of the future Confederacy, making the deals which elected Presidents Pierce and Buchanan in the elections of 1852 and 1856.[9] Pierce and Buchanan armed the future Confederacy and disarmed the future Union forces, and would have succeeded in their purpose had General Winfield Scott not discovered the plot in time to change the military units defending Washington, D.C. and key arsenals.[10] Adam Smith's policies were rampant in the United States of the 1850s.

President Grant's corruption by New York City financial interests made possible the treasonous U.S. Specie Resumption Act of 1876,[11] an act which explicitly violated Article I, Sections 8 and 9 of the U.S. Federal Constitution, placing U.S. public debt, public credit, and currency supply under the dictate of the Bank of England. The British-led European financiers grabbed U.S. railroads, industries, and prized mineral deposits and cattle-lands of the West at close-out prices, while cash-short Americans could but stand by, resentfully watching. Except under conditions of mobilization for major wars, the United States has not been truly sovereign in respect of its public debt, public credit, and issuance of lawful currency since. Today, through the powers granted to a government chartered but privately controlled Federal Reserve System, the Anglo-Swiss-Venetian foreign rentier-financier inter-

ests exert a controlling margin of influence over our nation's internal economic life.

Through systematic corruption of our universities and news media, through control over those institutions by foreign-linked rentier-financier interests during most of this present century, even the presumably well-informed public figure of the United States knows less than nothing about the realities of the eighteenth and nineteenth centuries' history of the United States. It is widely, if wrongly believed, for example, as the senior Senator Henry Cabot Lodge wrote in his biography of Alexander Hamilton at the beginning of this present century, that Hamilton's education in economic policy was based on Smith's *Wealth of Nations*. Although Hamilton's written work and practice as Secretary of the Treasury and later was explicitly directed against Smith's *Wealth of Nations* (and also the *Reflections* of Turgot which Smith plagiarized), the false myth accepted by Lodge prevails, to the point that well-intentioned patriots today sincerely believe that the solution to our economy's calamities is to turn away from John Maynard Keynes, and to go back to the Adam Smith "on which the early greatness of our national economy was based."

It is true that the British doctrine of political economy appears to many to have moved away from the original specifications of Smith, Ricardo, and Karl Marx, quite significantly, especially since the writings of the British East India Company's John Stuart Mill. What Mill, William Jevons, and Alfred Marshall did, in elaborating the monetarist dogma of "marginal utility," was to adduce the most radical interpretation of Smith's dogma, an interpretation which both Mill and Jevons based explicitly on the specifications for a "hedonistic calculus" contained in Jeremy Bentham's 1780 *An Introduction to Principles of Morals and Legislation.*[12]

This redefined economics as merely a matter of price which buyers and sellers, respectively, put on the pleasure and pain they experience in parting with (or gaining) money, and in losing (or gaining) that which is purchased by money. It was argued that all other issues but those involving the pleasure and pain experienced so by buyers and sellers of commodities, services, and labor, could be ignored: a purely monetarist, hedonist doctrine of political economy.

The difference between Smith and Bentham is the same as the difference between Adam Smith's immediate supervisor in the British Secret Intelligence Service, David Hume, and Bentham. Hume's doctrine agrees with Bentham's on the point that Hume argues against the possibility that human beings could discover anything deserving the name of "truth" concerning either natural law or morals. However, Hume insisted on the authority of an evolutionary tradition in both natural sciences and morality, and would not have, as Bentham did, published a proposal for legalization of pederasty. Bentham and his associate, James Mill, are thus regarded as the founders of "British nineteenth-century philosophical radicalism," the policies of John Stuart Mill's doctrine of "utilitarianism" (hedonism), of Oxford University's John Ruskin, of the British Fabian Society, and the "social Darwinists." Otherwise, there is no difference between Adam Smith and John Stuart Mill, nor between Smith and such liberal and fascist successors of Mill, Jevons, and Marshall, as the Viennese radical positivists, or John Maynard Keynes, the Chicago School, Hjalmar Schacht, or the British Fabian Society's Friedrich von Hayek, or the Hayek-Friedman Mont Pelerin Society offshoot of the British Fabian Society.

LaRouche's proposed actions, to return the United States to the American System of political economy,

are to be viewed not only as reasserting our republic's heritage, but as very practical steps for quickly stopping the present economic depression.

1. "Federalize" the U.S. Federal Reserve System by means of a single Act of Congress which transforms the existing institution into a duplicate of the Bank of the United States founded under President George Washington.
2. Restrict all lending by private banks to a portion (less required reserves) of lawful currency actually deposited with them by investors or other depositors. *This immediately eliminates the inflationary "Keynesian multiplier" from the private banking system.* That action prevents private banks from generating surrogate currency, in violation of Article I, Section 9 of the Federal Constitution.
3. Provide for adequate issues of U.S. Treasury currency notes, issued against the commitment to place gold reserves against these notes for settlement of imbalances in trade against such notes in foreign commerce, provided the central bank or treasury of the nation seeking such gold-reserve transfer shall have mutual agreement to settlement of currency accounts with the government of the United States.
4. These notes shall be issued in the form of loans through the national bank of the United States (the "federalized" Federal Reserve System) at not more than 4 percent per annum rediscount-rate, and preferably 2 percent rediscount-rate. These loans of U.S. notes shall be for participation in investment loans issued, usually by accredited private banking institutions, and for an approved percentile of the total value of such loan agreements. The categories for which this rediscounting participation shall occur, shall be such investments in production of tangible goods which either promote technological progress

in such production in basic industry or agriculture, or promote such effects in foreign trade, or improve the basic economic infrastructure, or are essential to the national defense or remedy of some exceptional catastrophe.

Such policies would halt all monetary inflation at the source, and would foster non-inflationary economic growth to the extent of existing idled capacity and labor, and willingness of private and public investors to make risk investments of the kind indicated. This proposal by LaRouche is both the fiscal and monetary part of his proposed general economic recovery policy, and is an exemplary illustration of what the policies of the American System mean in past and present practice.

An Important Scientific Discovery

Prior to a discovery first made by LaRouche in 1952, it was not possible to make a direct, mathematical connection between an injection of more advanced technologies into an economy, and the resulting changes in rates of economic growth. The American System, like the work of Leibniz and the Ecole Polytechnique, based its entire economic policy-making on the fact that such a causal connection exists, but until 1952 there was no known method by which this connection could be expressed mathematically. LaRouche was the first known person to discover that this task could be accomplished by aid of leading features of work accomplished by the famous nineteenth-century physicist, Professor Bernhard Riemann of Göttingen University.

What LaRouche first recognized during 1952, was that by adopting a conception of *energy* which is fully

Gottfried Leibniz: *He founded economic science beginning with his* Society & Economy *of 1671.*

consistent with Riemann's 1854 dissertation, *On the Hypotheses Which Underlie Geometry*, it is possible to measure both *technology* and economic growth in terms of *energy* so defined.

The idea, that economic science is a "branch" of thermodynamics, was by no means LaRouche's original idea of 1952. Gottfried Leibniz had founded thermodynamics as part of his development of economic science. Leibniz's work had focused upon the significance of the heat-powered machine, which he described as a means "by which one man might do the work of a hundred." He developed an economic science in which all production is implicitly studied, including production with machines, in the same terms of reference as the heat-powered machine. From this study, Leibniz created the definitions of *work* and *power* to do work, as those terms occur properly in both economics and thermodynamics. The difference in quality and organization among machines, such that, using the same amount of heat, one machine enables a man using a machine of one design to accomplish more work than

with a machine of another design, is the root of Leibniz's creation of the term *technology*.

Long before Leibniz's development of economic science, mankind had known the principle that *economic growth* must be measured as the effect of advances in technology (science) to increase the productive powers of labor, as Hamilton insists in his 1791 *On the Subject of Manufactures*. This principle is implicit in the famous injunction of the Book of Genesis: that mankind must be fruitful and multiply, and exert dominion over nature. The Naples school of Tommaso Campanella was not original on the point of showing that it was not such accidents of geography as natural resources' abundance in a locality, which determined the wealth of a nation in total or per capita, but rather, the development of the productive powers of labor.

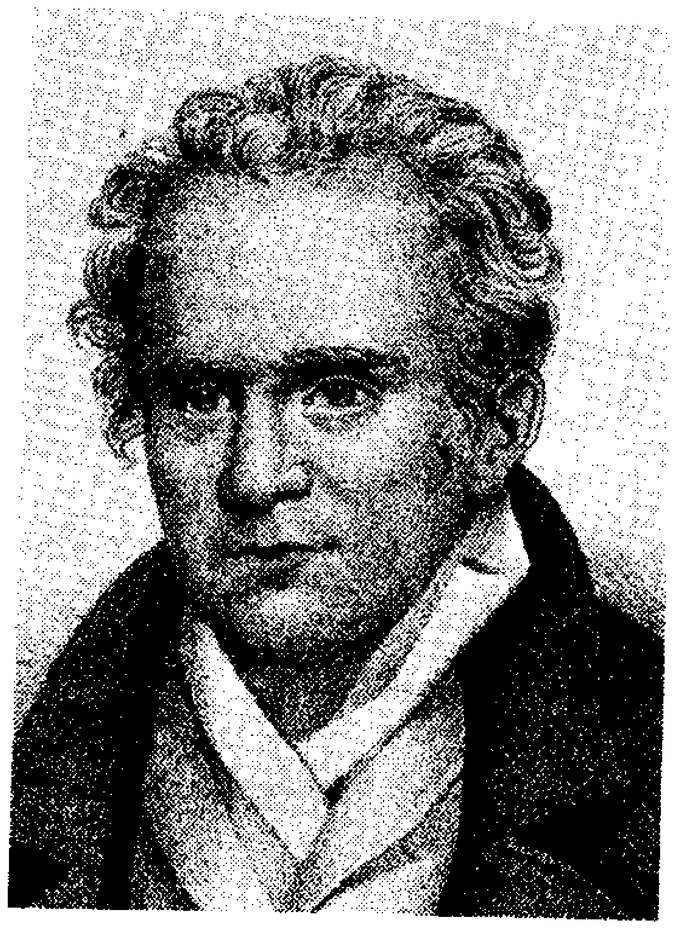
In LaRouche's work, *economic value*, *economic growth*, is measured primarily in terms of increases of the *potential relative population density* of society. How many individuals can be sustained per average square kilometer by society, through means of nothing but the productive labor of that society? *Economic value* is measured as an *increase of the potential relative population density of society*. In LaRouche's work, this measurement of economic value is equivalent to Leibniz's definition of an increase in the average power to do work. LaRouche and his associates have proven that such increases correlate, in first approximation, with the average number of kilowatt-hours of usable energy a society employs, both per square kilometer of inhabited area, and per capita. LaRouche et al., have also shown, however, that the measurement of "energy" in such arithmetical counting units as watts, calories, joules, and so forth, is neither an adequate nor sound definition of "energy," either for economic science or for mathematical physics generally. It is the

corrected definition of "energy," the definition implicit in Riemann's work (among that of other scientists), which enables us to measure *technology* thermodynamically.

The central feature of the fundamental advances in science accomplished by the Ecole Polytechnique under the leadership of Gaspard Monge and Lazare Carnot, was the effort to master precisely this conceptual challenge of Leibnizian economic science. It was the fusion of the work of such leading figures of that Ecole Polytechnique as Fourier, Legendre, Poncelet, et al. with the work of Karl Gauss, through the collaboration between Lazare Carnot and Germany's Alexander von Humboldt, which led directly into the accomplishments of Riemann. It was the attack on the implication of Keplerian elliptical functions by Gauss, which is the principal point of reference for the entirety of the work of Riemann. The standpoint of the Ecole Polytechnique under Monge and Carnot was Leibnizian economic science: "polytechnique" was the French term for technology, as Leibniz defined technology; the central feature of the work of the Ecole under Monge and Carnot was to uncover the direct, causal link between fundamental advances in scientific knowledge and increases in the productive power of labor through advances in applied technology. There was none of the foolish, modern nonsense, which wrongly assumes there is some function difference between "fundamental research" and "applied science."

So, there was nothing new to economic science since Leibniz in LaRouche's 1952 choice of approach. Economic science and the work of Riemann were two branches of the same tree of Leibnizian science. LaRouche's original accomplishment was merely to recognize the coherence of the two branches. The remarkable thing is not that LaRouche was the first to make this discovery, but that the same discovery had not been made at almost any time during the ninety years before LaRouche's discovery of 1952.

LaRouche's discovery had been prompted by an intensive effort, conducted over the 1948–1952 period, to prove that the conceptions of "information" and



Clockwise from top, **Lazare Carnot, Gaspard Monge,** *and* **Karl Gauss:** *They created the 19th-century revolution in mathematical physics!*

"negative entropy" (negentropy) employed in Professor Norbert Wiener's *Cybernetics* were fundamentally absurd. The Shannon-Wiener notion of "information theory" was based on the false assumption, that all "information," whether in communications among persons, or as improvements in technology, must be defined from the standpoint of textbook versions of the statistical theory of heat. This theory assumes that the normal condition of matter is a "perfectly random" distribution of motion of particles, such that the universe is "running down," from improbable distributions of concentration of heat-equivalents, in the direction of more probably, more random distributions. LaRouche rejected the Shannon-Wiener doctrine as an absurdity from standpoints of reference which included his adolescent study of the Leibniz-Clarke correspondence. LaRouche combined studies of classical philosophy, of sources on eighteenth and nineteenth centuries progress in physics, with treatments of biology including Professor Nicholas Rashevsky's writings on mathematical biophysics. By way of an intensive working-through of Georg Cantor's notion of transfinite orderings, he was led to a correct view of the work of Riemann, most emphatically the significance of Riemann's 1854 dissertation, *On The Hypotheses Which Underlie Geometry*.

In the final chapter, we summarize LaRouche's methodological approach toward matters of mathematical physics, which we have located in that concluding portion of this report, so that that section might be skipped over by those who find that portion of the discussion too difficult to follow. However, since it deals with an important aspect of the mental life of a man who could become a future President of the United States, and since it also bears directly on important features of his accomplishments as an economist, that

part of his work is indicated in the conclusion of this Special Report.

LaRouche's first attack on matters of economics from the standpoint of Riemann's work, was a 1952–1953 treatment of the implications of what was then being much discussed under the title of Automation. Once this initial rebuttal of the cyberneticists was completed, LaRouche turned to a comprehensive study of the U.S. economy, combining work on historical material, with insights developed from day-to-day work as a management consultant.

The focus of the first phase of his investigations during the 1955–1959 period was the problematic features of the mid-1950s consumer-goods expansion of the U.S. economy, an expansion based on the credit and tax policies of the 1954 period. It was clear to him then, that the Eisenhower Administration (under the influence of Arthur Burns) had committed a grave error in not choosing to promote a high-technology, capital-goods export-boom, and had instead relied on stimulation of consumer demand by means of credit expansion. Exemplary, toward the close of 1956, the effort to maintain the market for Detroit's automobile production by loose credit practices in financing of automobile sales, had created the spectacle, that numerous new-car purchasers purchasing on thirty-six-months terms with low down-payments, reached the point, about two-thirds of the way through, that they owed more to the finance company than the price of the same make and model on a nearby used-car lot. At the same time, by overpricing allowances for used-car trade-ins, to cover down-payments by aid of fictitious values, new-car dealers were carrying used-car stocks in inventory at values even far in excess of current wholesale prices for such makes and models!

Through a dubious sort of standard automobile deal-

ership accounting procedure, dictated to dealers by Detroit manufacturers, the records showed that dealers were earning substantial profits on new-car sales and apparently losing on used-car sales. Exactly the reverse was generally true during 1956. So, misled by such accounting statements, new-car dealers pushed new-car sales, and dug themselves deeper into the hole.

This nonsense, most nakedly obvious in the case of automotive sales, gives us an insight into the qualifications of that accountant from the Ford Motor Company, Robert S. McNamara, who ruined the defense of the United States with the program he introduced during the 1960s, qualifications replicated in his mismanagement of the World Bank during the 1970s. It also illustrates the general conditions detonating the 1957–1959 U.S. recession.

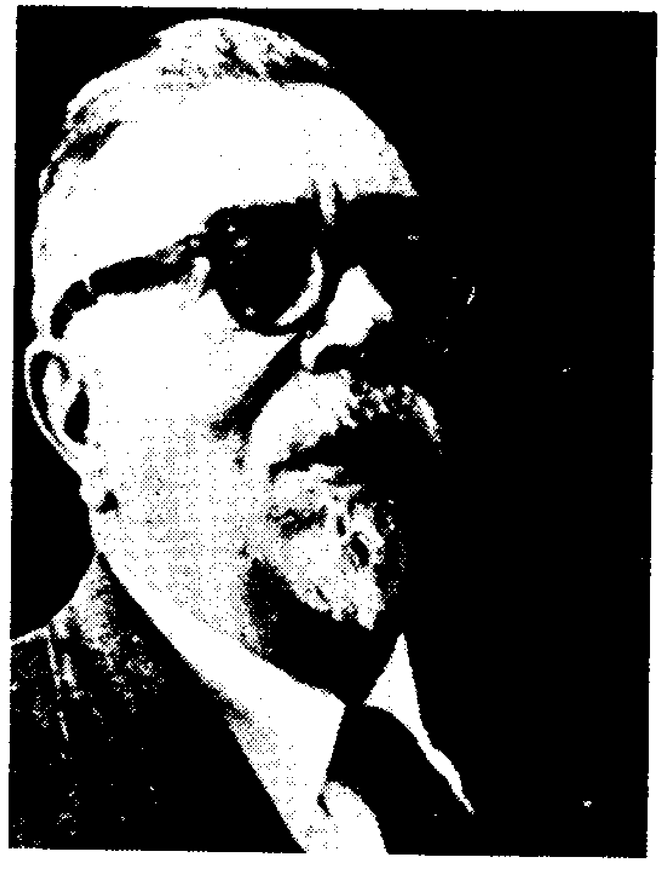
Through understanding the implications of this 1954–1956 direction in the U.S. economy, against the backdrop of the earlier post-war developments, LaRouche, in January 1957, forecast the first-quarter 1957 breakout of a deep economic recession with long-term implications for the U.S. economy. The evidence which had accumulated by October 1957, encouraged him to undertake the long-range forecast we described earlier.

At the end of the 1950s, LaRouche returned to the question of Automation. He reworked his earlier criticism of Wiener's *Cybernetics*, this time to refute the premises of the "artificial intelligence" projects at MIT and elsewhere: no computer-system based on Dr. John von Neumann's principled specifications could ever simulate human intelligence. As later work by Professor Marvin Minsky et al. has demonstrated, the computer programmed for such attempts produces a mimickry of acute schizophrenic psychosis, a lack of the characteristic principle of human intelligence. To

a more positive purpose, he projected the implications of business applications of new types of large-scale computer-systems during the 1960s and beyond, and also designed 1958–1962, simplified adaptations of his forecasting method for comprehensive management control with aid of large-scale computer-systems.

Beginning 1966, he began teaching a one-semester course in economics and method at various campus locations, until Spring 1973. From among professors, graduate students, and undergraduates participating in these courses, a portion became associated with him in various undertakings. In this connection, at the beginning of the 1970s, he proposed to develop a basic program in rudiments of Riemannian physics, then intended chiefly to aid students in going beyond the scope of the one-semester course. Dr. Uwe Parpart-Henke led a team of specialists in developing such a course. This work contributed most significantly to the establishment of the presently influential scientific association, the Fusion Energy Foundation, in 1974.

During December 1978, the Fusion Energy Foundation and the *Executive Intelligence Review* held two jointly sponsored seminars in New York City, to com-



Professor **Norbert Wiener:** *It was LaRouche's 1948 objections to Wiener's "information-theory" which led to the LaRouche-Riemann scientific breakthrough.*

pare results learned at a Moscow inertial-confinement fusion energy conference with the state of progress of U.S. work. The centerpiece of these discussions was Bernhard Riemann's 1859 paper, *On The Propagation of Plane Air Waves of Finite Amplitude.* The question posed was, how to accelerate attention of U.S. laboratories to the deeper implications of Riemannian physics.

During these seminars, LaRouche proposed a flanking operation. The time had come, he stated, to apply his forecasting method to a computer-based quarterly forecast for the U.S. economy. Since his method was based on the principles contained within Riemann's 1859 paper, the inevitably vast superiority of such new economic forecasts over existing U.S. government and private forecasting, would serve as a way of demonstrating to U.S. laboratories the importance of Riemannian physics as such. Eleven months later, the first of the continuing series of quarterly LaRouche-Riemann forecasts for the U.S. economy was published.

By developing growing data-bases of current and historical statistics, the constantly refined LaRouche-Riemann computer programs have not only provided increasing precision in regular forecasting. This data-base and these programs have provided means for rapidly exploring many important questions in a way which would not be possible without the ability to process such large data-bases with aid of computer systems. This has permitted an increasing rate of experimental inquiries into what might be described as special properties of economic processes, including, most importantly, the correlation among "energy," technology, and growth rates.

Through the same methods, LaRouche and his associates have developed a number of special studies used as basis for recommendations to foreign nations

and institutions. During 1979, the staff completed a 40-to-50-year forecast-study of the prospective development of India. A special study of the development of the economy of South Korea was done during 1981. Ongoing studies of the economy of West Germany have been made. LaRouche himself included results of such studies in his book-length outline for a long-range development of the Sahel region of Africa and his more recent outline of the development of an Ibero-American Common Market, *Operation Juarez* (August 1982).

The Life *of a* Strategic Analyst

For years, Lyndon H. LaRouche, Jr. has not had a place he could call "home." He has moved continually from one hotel or other temporary quarters arranged for him at that moment. In part, this is a result of the fact that he has been an assassination target, off and on, throughout this period; on a scale of "10," the level of assassination-threat to him and his wife hovers between "7" and "8." The chief reason for his unusual life-style is the nature of his duties as chief intelligence officer for the *Executive Intelligence Review*.

Except for occasional travels to Ibero-America or Asia, his daily routine in Europe or the United States is almost constant, usually seven days a week. His waking day begins with a review of reports transmitted overnight from various parts of the world, and the work ends between eleven p.m. and one a.m. most days, usually ending with a long session together with those members of the executive committee available in that locality. In between, the rest of the day is spent in meetings, on the telephone, or working at a desk.

Out of these daily routines have come numerous decisions which have affected the circumstances of various nations, decisions which have directly or indirectly affected the circumstance of your life.

In broad terms, the form of his influence is not unlike that of a chief executive of any important weekly publication. Such executives and their immediate associates are the "fourth estate's" command, the power of the press to influence policy and opinion. Otherwise, the form and character of LaRouche's influence is significantly different than the average among chief executives of influential publications.

First, as the *Executive Intelligence Review*'s annual subscription rate implies, it is a specialized publication. The price of $396 for the U.S.A. and $490 for most foreign countries, indicates a kind of publication which is more costly to produce per copy than a popular newsweekly, and which is designed to meet the specialized needs of its clientele among executives of governments, financial institutions, trade associations, political parties, industries, security agencies, and trade-union organizations.

Like political-intelligence weeklies in that same or higher price brackets, *EIR*, as the publication's name is usually abbreviated, produces subsidiary, specialist publications and special reports. Its security counter-intelligence publications circulate among public and private security agencies internationally, and are widely regarded as the most authoritative source of counter-terrorist and related leads by many governments and private agencies. In addition, there are special, in-depth reports of subjects, including specially commissioned studies, which sell for hundreds, or thousands of dollars each.

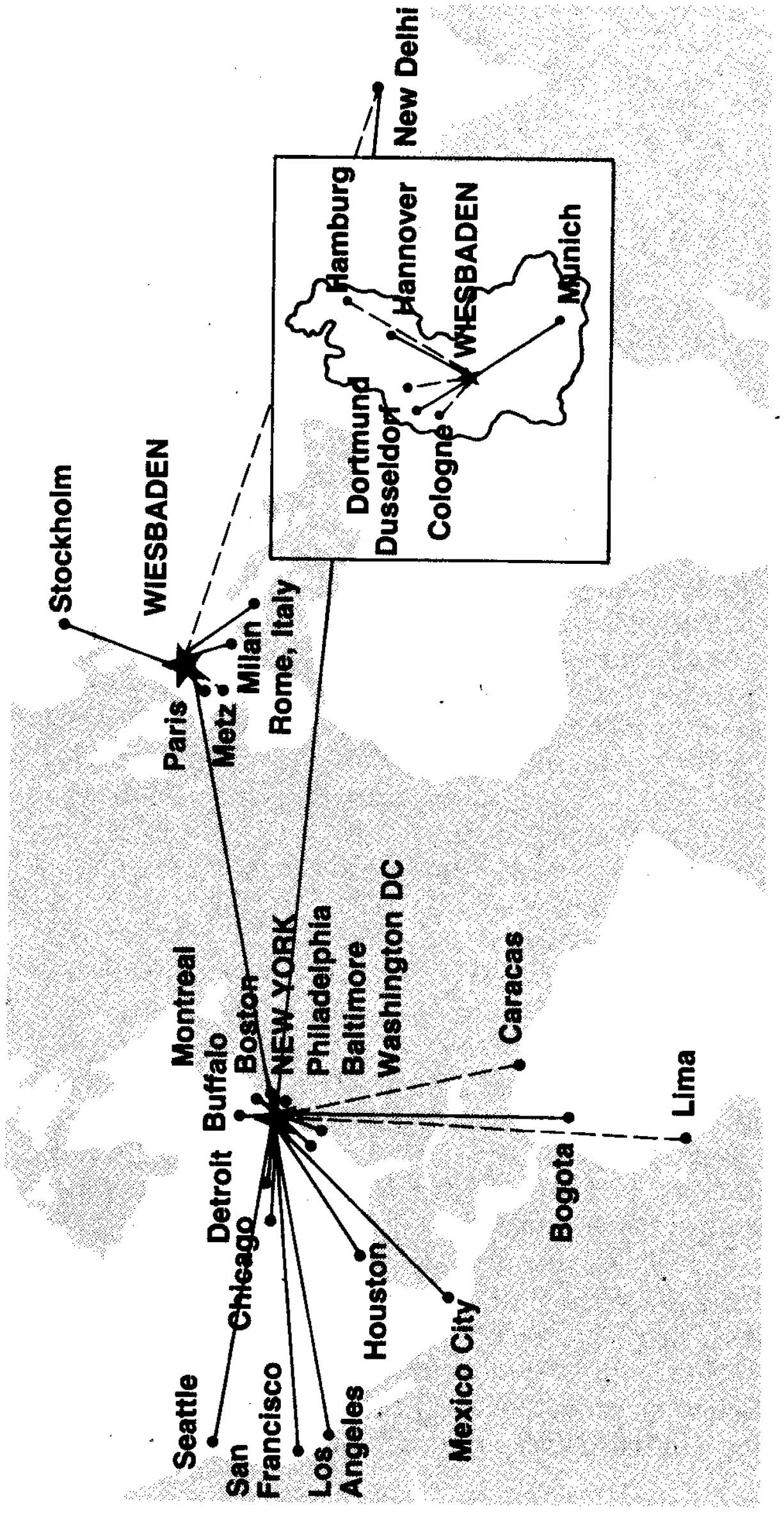
Behind this production, there are about one thousand persons working as editors, specialists, and full-time or part-time investigators and journalists for *EIR*

world-wide. There is a major center in New York City, and another in Wiesbaden, West Germany. There are fully functioning news bureaus in Mexico, Colombia, Venezuela, France, Italy, West Germany, Sweden, and India. There are additionally, *EIR* reporters or contract journalists working full-time on the ground in such countries as Canada, Peru, Argentina, Denmark, and Israel. *EIR* executives and specialists are frequently in Madrid, Brussels, London, Tokyo, and not infrequently in Africa, and Southeast Asia.

The special significance of *EIR*'s coverage is not only the greater depth and focus, as contrasted with popular newsweeklies. There are two principal additional features to be noted.

First, most of the major news media and wireservices of the world are part of a "club," whose members usually cooperate with one another in deciding what is to be reported, what news is to be suppressed, and what kind of interpretation of a news development is expected from among the news media which are members of the club. For example, if one places three television sets side-by-side, so that one can view the three television networks' evening national news broadcasts simultaneously, the evidence that the networks' news reporting is rigged jointly to a very large degree, becomes immediately clear after a few nights of such comparisons. A recent, almost total news media blackout of major policy statements by Defense Secretary Caspar Weinberger, is another illustration of the way in which a "club" of news media executive regulates what most citizens of most nations are permitted or not permitted to know.

LaRouche et al. represents a significant news gathering organization which operates outside the reach of control by the "club." It is the only international news agency presently existing which provides citizens of the United States vital information otherwise sup-



The main offices of EIR world-wide. These offices keep LaRouche better informed than your Congressman. Direct telecommunications are indicated with solid lines, telephone communications are dashed lines.

pressed by all other major news media. For that reason, citizens who have followed regularly either the *Executive Intelligence Review* or news publications supplied by the same news agency for six to twelve months or more, are among the best-informed citizens in the United States, better informed than most elected government officials.

The second feature which distinguishes *EIR*'s work and influence from that of popular newsweeklies is fairly described by the statement, that *EIR* does not study and report current events, but rather *current history*.

This standpoint was illustrated by the discussion of the American System of political economy during the preceding chapter. Going back to the starting point for the American Revolution, in 1763–1766, we summarized the ebb-and-flow in the influence of the American System against the opposing dogmas of Adam Smith, and indicated the earlier roots of that controversy from the time of Leibniz. We located the origins of the present-day "Liberal Eastern Establishment" in the United States. We indicated that today's leading factions and policy conflicts cannot be understood without tracing the way in which previously prevailing beliefs, among contending, institutionalized forces, are altered over the course of time. We indicated, in the introduction to this Special Report, that the commonplace fallacy among our citizens and many leading governmental officials today, is their lack of historical sense: They seek ways to overcome the problems preventing success of existing policies, without understanding that often those existing policies are the cause for the problems, that the adoption of those now-habitual policies was a bad mistake when those policies were first adopted, ten, fifteen, or twenty or more years ago. We fail to see that we must, so to speak, go back and replace those mistaken policies, insofar as we are able

to do so after the fact, otherwise the problems which threaten us cannot be solved.

The present is the present continuation of past history. Leading British policy-shaping circles with which *EIR* discusses current issues frequently, view the present and continuing history, and identify themselves and their present policies as flowing from their conscious attachment to the eighteenth-century faction of Lord Shelburne, and the faction of Shelburne's grandfather, the Sir William Petty who founded the London Royal Society in the period of the 1660 Restoration. The leading rentier-financier aristocratic families of Europe also see the present as a continuation of past history. Some Americans think it quaint of European aristocrats to hang portraits of their ancestors in their homes; those portraits have the very practical function of reminding present members of those families of their family's history over centuries, the continuing efforts of such a family, over centuries to date, to find new ways, under new circumstances, to secure a certain kind of power, and to obtain success for a policy objective which has been modified. Families, and their hired retainers, which form rentier-financier syndicates and other forms of alliances, on behalf of such centuries-old causes, are, together with certain long-established religious orders, the elites of the world, the elite circles which steer contemporary history, chiefly out of sight and knowledge of the ordinary citizen.

The problem facing the United States today is that we have no corresponding elite consciously based on long memories of the republican cause. What passes for the American elite "families" are politically junior branches, "colonial" branches, of the European aristocratic elites. They are predominantly, like most "old New England families," consciously self-identified as the "colonial branch" of the British aristocracy. Others

are "colonial branches" of the old banking families of Burgundy—the "two hundred families" of Geneva, for example, orbited around such names as Mallet, de Neuflize, and Schlumberger. A few of these families trace themselves, accurately, directly to the ruling *fondi* of Venice. We have no, opposing, republican elite of the same weight.

Today, our universities, our public schools, our news media, our dominant cultural and popular-entertainment institutions, are controlled top-down by either the European rentier-financier aristocracy directly, or by junior, "colonial" adjuncts of that European elite. Popular ideology among our ordinary citizens, as that ideology selectively defines what prevailing opinion describes variously as "respectable" or "acceptable," represents the ideology of a "colonial," subject population, a people so accustomed to foreign ideological occupation that this ideology is no longer recognized as foreign.

What might save us from the social misery being imposed upon our nation by such "foreign occupation" is the fact that most Americans still possess what might be fairly described as an "instinctive" sense of the principle that all citizens are equal to one another in respect of the right to the pursuit of happiness for themselves and their posterity. That American republican tradition is tarnished and tattered by cultural decay, especially over the recent quarter-century, but these are values which can still bring tears to the hearts of many among us.

We are poor on this account by comparison with republican elites in many parts of Ibero-America or among the long-memoried Brahmins and others of India. It has been refreshing for *EIR*'s executive and specialists to meet numerous among leading circles in Mexico, Colombia, Argentina, and so forth, which can trace the political origins of those republics back to the

Mexican revolution and beyond, or, in the instances of other nations, to beginnings among the leading Ibero-American republicans from the period of Spain's King Charles III. The great Indian leader, Bal Gargadhar Tilak (1856–1920) built the foundations of the republican movement Gandhi and Nehru were later to lead on his own work of the most profound scholarship respecting modern India as the current history of a vast expanse of preceding history. We have a long, good, and in part, beautiful history as both a republic and respecting the deeper roots of that republic's creation. Unfortunately, in most cases, we do not know anything at all about that history, but only a few names, dates, and a few pieces of gossip which we repeat without the slightest suspicion that what we say, and believe, is chiefly a vicious lie.

LaRouche's most significant general contribution to the development of the intellects and capacities of his associates, including *EIR* itself, has been his leading role in imparting the historical outlook necessary to the formation of a republican elite equal to that associated with Dr. Benjamin Franklin in his trans-Atlantic conspiracy of 1766–1789. His discoveries and work in economic science have become one of the most important developments of recent years, but his accomplishments in economic science are themselves chiefly a reflection of his emphasis on history.

To account for *EIR*'s special competencies, and LaRouche's own emergence as an influential strategic analyst, we must look at the history, and pre-history of *EIR*, a pre-history which begins during the Spring of 1966.

The Path Leading Into *EIR*

LaRouche's political history begins, according to his own reflections on the matter, in the process which led

into his break with his parents over the traditional "conscientious objection to bearing arms" of the Quakers (Society of Friends). It was this questioning of formerly, deeply engrained family values, which obliged him to break with all sectarian notions of "rightness" and "wrongness," and to re-examine the question of what is right and what is wrong from the standpoint of studying the processes by which people come to believe what they do.

This took explicitly political form during the closing period and immediate aftermath of World War II. The citizen army was a bringing-together of representatives of every section and current of philosophical outlook of our republic; to be in the armed forces during that period was an opportunity to gain a sensuous grasp of what our nation, our people, represented as a whole. All of that mixture of strengths and weaknesses, nobility and depravity, which characterized us then, was concentrated in one, unified social experience, which was our armed forces. The most important feature of this social experience was that much of it occurred overseas. It was his experience in Calcutta, during the months between his return from Burma and the boat home, that the benefit of this experience reached a critical point.

According to his account, there were two kinds of GIs encountered by the people of the foreign countries in which U.S. forces were stationed. Discounting those who seldom left the poker game from war's-end to demobilization, there were soldiers who viewed the local population as "natives," and a source of sexual recreations and other merely touristic encounters, and those who took the opportunity to learn to know a foreign people in that people's own terms of reference.

What the British had done to India was monstrous. The facts concerning the condition of Bengal during the first half of the nineteenth century were readily

available. It was possible to verify the facts by visits to relevant rural sites, to verify first-hand the degree of ruin which had been imposed. The literate Indian, Bengalis and others, were a highly educated people, in no sense culturally less-developed than Americans, but perhaps more interesting to an American than Europeans because of historically determined differences in cultural development, especially to an American familiar with most European cultural heritages from the melting-pot areas of New England. In addition, the Indians were in a cultural and moral upsurge, prompted by their anticipation of early establishment of an independent republic. Moreover, any American soldier who troubled himself to make friends and acquaintances was both gratified and touched in conscience by the repeated communication that many Indians, even down to the social level of illiterate sweepers in the streets of Calcutta, looked to the United States as an exporter of machinery and other capital-goods the new republic of India would require to fulfill its purpose.

This experience defined his general conception of the vital foreign-policy interests of the United States during the post-war period. Numerous among the returning GIs had similar views at the time. "We had gone out into the world to fight a war, reconciling ourselves, before going overseas, to the fact that we must prepare to face death with honor if it might come to that. Few of us knew, that it was influential Americans, such as the Morgans and Harrimans, who had collaborated with circles around the British Royal Family and Swiss bankers in imposing Hitler's Nazi dictatorship on Germany. We knew, from our experience overseas, that the world outside the United States was an unconscionable mess, and believed, with more or less definite or vague opinions on this point, that the United States would have been wiser had it done something about these foreign conditions in time to prevent the war,"

LaRouche has reported his personal recollections from early 1946. "We must provide the world with the flow of capital-goods exports nations such as India require to develop."

Returning home, to Truman's United States, not Roosevelt's any longer, was for him a depressing let-down. "That little man!" LaRouche has referred to President Truman with anger in recent years, as he did then, during 1946–1947. The prospect that General Dwight Eisenhower might run on the Democratic Party's ticket encouraged him. He wrote to Eisenhower, urging him to run. Eisenhower graciously replied from Columbia; he noted that LaRouche's objections to present trends in Washington were "non-arguable," but indicated that other considerations had caused him to decide not to run in 1948. That reply depressed LaRouche very much at the time, because of what he saw as the moral degeneration among former GIs under the depressing influence of the Truman Administration. He was glad that Eisenhower won in 1952, but sensed that it had come four years too late.

He became briefly involved in "left politics" through some former GIs in the American Veterans Committee, and became active briefly in a campaign against Senator Joseph McCarthy, whom he saw as the distilled essence of Trumanism, and whom he described in published statements as both "The Appleton Ape" and a replica of the seventeenth-century Sir George Jeffreys of the Bloody Assizes. After McCarthy was defeated, LaRouche "lost my stomach" for "left politics," and concentrated on his researches and management-consulting work. He did not begin to think of political activity until after 1957, as he thought of developing a vehicle for propagating his proposed redirection of U.S. economic policy. He was back, on a new basis of developed competence, to where he had

World War II GIs returning home from overseas. They thought of building an American Century world-wide, but Truman had replaced Roosevelt!

been politically in Calcutta and in proposing that Eisenhower seek the 1948 nomination.

By the middle 1960s, he decided that the only pathway to building an institution which might influence the course of U.S. economic policy was to plunge into the area of university ferment, attacking and challenging the dangerous influence of the "New Left." This led him to begin teaching a one-semester course

at various campus locations in the Spring of 1966, a part-time practice he continued into Spring 1973. It was through "field projects" proposed to approximately a score of students of his courses in economics, during September 1966, that the association began which led later into the establishment of *EIR*.

He proposed three "field projects." The first was a study of the infrastructure of the New York City economy. The second was a proposal to probe new developments in urban politics being organized in New York City by offshoots of the Reform Democrats, the Committees for Independent Political Action. The third was an intervention by graduate students of the group against the New Left developments at Columbia University.

The first project centered around an historical study of New York City real-estate, with emphasis on housing, and the connection of patterns of finance in real-estate to the New York City economy and municipal budgets. On the basis of the findings of this study, LaRouche reported, during a 1967 address to the City Board of Estimate, that (then) present trends in municipal taxation and interrelated policies were impelling the City toward early-future municipal bankruptcy and eruptions of social crises, forecasting precisely what began to erupt the following year, and led into the New York City bankruptcy of the mid-1970s. New York City is not part of a capitalists' economy, but predominantly a feudal enclave, in which financial investment is directed predominantly to looting of the economy through pyramiding of fictitious valuations of ground-rent, looting the municipal tax-base, expelling industrial employers from the city, and looting municipal and state revenues, as well as looting Federal tax-revenue-sharing, to subsidize the pyramiding of ground-rent speculation, chiefly in real-estate.

The second project enabled the growing association

to penetrate nationwide networks deployed to generate what later became known as "McGovernism" in the post-1971 Democratic Party. It was the association's first coordinated work in counterintelligence: uncovering the networks, funded by the Ford Foundation and allied institutions, behind the orchestration of changes very much for the worse in our national life.

The third project became briefly a near-success, even by superficial standards, during the period from January into the end of April 1968. The small group based at Columbia succeeded briefly in preempting control of New York SDS from the agents deployed on Ford Foundation funds through the League for Industrial Democracy (LID) and Thurman Arnold's left-wing intelligence-organization, the Institute for Policy Studies of Marcus Raskin, and later also of Philip Agee. As part of the same operation, the group preempted and briefly held control of a "student strike" which the Ford Foundation-backed forces had prepared for Columbia, with a group of a half-dozen actually directing the operation, and a total of thirty-six or thirty-seven assisting in total.

The Ford Foundation countered by funding a counter-operation out of which later emerged the Weatherman terrorist organization. The conduit through which this counter-operation was run was a front-organization called the East Side Service Organization (ESSO), originally created under auspices of the Institute for Policy Studies to provide backing for an anarchist organization on Manhattan's Lower East Side. Future Weatherman leader Mark Rudd was the figurehead of the counter-operation. The Institute for Policy Studies' ESSO conduit was coordinated by Tom Newman, a nephew of Herbert Marcuse, with funding coming substantially from McGeorge Bundy's Ford Foundation. Many other elements were involved, but these elements were central.

Later, the same counter-operation was directed to attempting to foster anti-Semitic race-riots in New York City, during the New York teachers' strike of Autumn 1968. LaRouche and his associates deployed a counteraction designed to neutralize the SDS component of the anti-Semitic riot operation, using its knowledge of the Ford Foundation and related connections to both the provocation of the strike itself and the deployment of the SDS anarchists. It was in the course of these developments that the New York Office of the Federal Bureau of Investigation (FBI) deployed against LaRouche and his associates, in support of the future Weatherman terrorist organization—the Weatherman terrorists the FBI consistently failed to apprehend later on.

LaRouche and his associates developed not only basic counterintelligence capabilities during these events of the 1966–1968 period, but also, beginning June 1968, assessed the development of the anarchist, self-styled "Crazies," formation around the nominal leadership of Mark Rudd, as a proto-fascist grouping, which would undergo a rapid evolution into a full-fledged fascist political formation within much of the New Left nationwide. This assessment was based on studies of the Mussolini and Gregor Strasser varieties of fascism from the 1920s. This study served as the beginning-point for a developing capability, the emphasis on psychopolitical profiling of social formations as an integral feature of both counterintelligence and design of political counter-operations. This capability, featured in first application in operations against the anti-Semitic deployment of SDS elements during the Fall of 1968, was used more broadly in the early 1969 effort to assist the dissolution of SDS.

The most significant feature of the activities of this early period of the pre-history of *EIR* was the process of emergence of an independent, "home-grown" political-intelligence capability. There are many instances, over the past fifteen years and more, of organizations which have learned political-intelligence craftsmanship under the sponsorship of official or privately controlled intelligence agencies. The obvious defect in such controlled organizations is of the same character as attempting to develop scientists by trade-school methods of education in shop-work. Persons so trained may become skilled at doing what they are instructed to do, but they could not produce consistent advancements in scientific knowledge. The sometimes invisible source of superiority in *EIR*'s "home-grown" sort of political-intelligence capability, is that *EIR*'s capability is not mere techniques, but is a developed capability of matured competence to create new techniques, to enlarge the spectrum of capabilities as circumstances require, to "change the rules of the game," when "playing according to established rules" cannot obtain the information required.

How *EIR* Developed

To account for the founding of the *Executive Intelligence Review* in its initial form of a weekly publication during 1974, one must look back to a point about two-and-a-half years earlier, to September 1971, a few weeks after President Nixon's tragic blunders of August 15th.

LaRouche proposed to a national-committee meeting of his associates, that they establish a new news-agency modeled in organization on a major newsweekly. His argument in support of this proposal was that Nixon's decision had unleashed the potential for a new succession of monetary crises, spiralling toward the worst world-wide depression in modern history. The results of the spiral would include sweeping upheavals in choice of values and in institutions around the world, espe-

cially now that Nixon had unloosed the kinds of austerity practices employed earlier in Weimar and Nazi Germany under Schacht. To act competently under such conditions, the association would require a quality of information not available through readership of major news and financial publications generally available. Effective assessments and decisions would require a new, independent source of intelligence, a counter news-agency.

This proposed capability began to be assembled during October and November of that year. During 1972–1973, the association established branches in Western Europe (Britain, France, West Germany, Sweden, and Italy), and during 1973–1974 into Ibero-America (Mexico, Venezuela, Peru). As this expansion occurred, with it went LaRouche's insistence that specialists working each section of the news-agency must base their work on in-depth studies of the history of the country or other topic assigned, including an historical approach to defining "national ideologies" and kindred "ideologies" in such areas as natural science, and so forth.

The qualitative breakthrough leading into the establishment of the weekly publication occurred during 1973 and very early 1974; major operations intended to crush the association out of existence were launched, in what proved to be a coordinated fashion, in both Western Europe and the United States that year. It was various operations, including counterintelligence operations, developed to defend the organization's existence successfully against these coordinated attacks, which gave *EIR* the basis for a major quality of international political-intelligence capability.

The principal forces cooperating against the association during 1973–1974 were the association's old enemy, the Institute for Policy Studies and its ally, the League for Industrial Democracy (LID), top levels of

British intelligence, including MI-5, and the Soviet KGB.

The developments appeared to begin in the following sequence; later investigations showed that the appearance of the sequence was partially deceptive.

It began in Europe, coming to a head during 1972. Among the extensions of the association into Europe had been a very significant, initially quite successful building of an organization within the Greek-exile movement. Against this had been deployed several capabilities of British intelligence, including the British intelligence capabilities run through the International Socialists, through a Hamburg Tri-Kont grouping, and a direct operation of the psychological-warfare division of British intelligence, the London Tavistock Institute. This latter was, specifically, Tavistock's Sussex-Glasgow-based "Russian Studies Division," a branch of British intelligence closely interfaced with the Institute for Policy Studies in the U.S.A. The initial, British-intelligence operation against the Greek-language organization, proved to be merely the wedge-end of an operation intended to eliminate the organization as a whole.

The connection to developments inside the U.S. itself was not immediately obvious. It appeared at the time, that the operations launched during January 1973 from inside the U.S. were provoked by the association's mobilization against a project copied directly from the pages of Nazi practices, coming out of the Health, Education & Welfare Department. In an effort to prevent and destroy a Philadelphia conference mobilized against that HEW policy, the Institute for Policy Studies used the Communist Party U.S.A. as the most active component of an attempt to organize a race-riot against LaRouche and his associates in Philadelphia. When countermeasures had neutralized continuing ef-

forts by the Communists to mobilize such violence, the entire U.S. left mobilized its resources to attempt to accomplish the violent purposes the Communists had failed to complete.

So, at first, it appeared that what the Soviet KGB did against a member in West Germany was a "Soviet reprisal" for the defeat administered to the Communist Party in the U.S.A. Investigation proved that this was not the motive. There was photographic evidence conclusively proving that it had been the Interior Ministry of East Germany which had participated in drugging and attempting to brainwash this member, but the operation had begun no later than February, a month before the mid-March deployment of the Communist Party by the Institute for Policy Studies in Philadelphia. Moreover, the agents complicit in the operation run by the Soviet KGB's East-Germany section were British-intelligence operatives! The operation was proved to include projected assassination of LaRouche later during 1973. Whatever further plans were associated with this particular operation, they were neutralized for the moment by a successful rescue and debriefing of the member victim of the immediate operation.

East German intelligence official Berger: his photograph in a Danish newspaper proved East Bloc intelligence services' complicity in an international operation against LaRouche launched in February 1973.

It continued. By November 1973, according to an FBI agent reporting on the content of a meeting of the Communist Party leadership in New York City, the Communist leadership was conducting a discussion of LaRouche's prospective early-future disappearance. During December, Puerto Rican terrorists of the Havana-linked MIRA organization were discovered surveilling the neighborhood in which LaRouche lived. Simultaneously, British MI-5 conducted an elaborate drugging operation against a leading British member, using openly two of MI-5's best-known agents, Paul Walsh and Mrs. Schroeder, an almost legendary pair, to conduct the drugging itself.

The elaborateness of that drugging operation coincided with what was later discovered to be the objective of an operation bearing the code-name "Chaos and Confusion."

Through the advice of a British agent who had infiltrated the orbit of the association's members in Britain, the targeted member was steered to the price-advantages of an arrangement for trans-Atlantic travel through British Caledonian airlines. The member boarded the booked flight for a trip to New York City, with MI-5 agents Walsh and Schroeder also booked under their own names on that flight. Near the border of Scotland, the plane developed reported engine problems, and instead of landing at the nearby commercial airfield used regularly by that airline, it returned to its London departure-point. There, all of the passengers but the member, Walsh, and Schroeder, were promptly transferred to a New York-bound flight from Heathrow. The three were sent, not to a nearby hotel regularly used for delayed passengers by British Caledonian, in which ample space was available, but to another, seldom-used, some distance away. Again, MI-5 agents Walsh and Schroeder booked under their

own names, and within approximately an hour, Walsh administered the drug.

Three months later, the effects of the potent psychedelic administered to the member wore off.

In the same time-frame, networks associated with the Institute for Policy Studies activated their part of the operation inside the United States. A group created for the purpose, bearing the acronym NAG, ran two operations, including a faked kidnapping incident. Several agents planted into the organization earlier did a pre-scheduled "geek act," and another member was slipped a psychedelic, all calculated to create the maximum disorientation and confusion around a major conference of the association, which LaRouche was addressing that year-end. There was an optional assassination of LaRouche in place, but the principal character of this elaborate, trans-Atlantic operation was, we learned in due course, "Chaos and Confusion," an attempt to destroy an entire organization at almost one stroke through psychological warfare methods. Into the midst of this stepped the *New York Times*, which published the first of its major, page-one libels against LaRouche during January 1974.

As to the assassination potential, New York Police Intelligence took the matter seriously, especially after the identities of the terrorist group were confirmed as being in New York City. Relevant agencies confirmed to members of the New York City press that there was a threat of potential assassination against LaRouche. The New York office of the FBI, which had direct knowledge of the plottings around the leadership of the Communist Party, refused to concern itself with a matter involving a terrorist group linked to Havana; politically, they were allied with the forces behind the operation, just as they had been earlier in connection with their covert-operations support for the future Weatherman terrorist group.

In the midst of counterintelligence work on this particular problem, some associates pieced together a jigsaw puzzle. The jigsaw-puzzle pieces of our research into the Watergate affair and the pieces from counterintelligence investigation into Institute for Policy Studies operations in connection with "Chaos and Confusion" were in significant part the same pieces. The evidence was conclusive: Henry A. Kissinger, working with the Institute for Policy Studies networks, had set up the entire Watergate affair, beginning with the "Pentagon Papers" developments, all as part of a prepared operation for the impeachment of Nixon at the beginning of his second term. Clark Clifford had spelled out the purpose of the operation clearly enough in a *New York Times* guest-column.

We didn't like President Nixon much, but the issue was not Nixon. The issue was Henry A. Kissinger's and the Institute for Policy Studies' complicity in a "banana-republic"-style coup d'état effort against the constitutional institutions of the United States. "Tarnished ally" or not, President Nixon must be defended against such an evil, seditious, almost treasonous operation.

In the midst of this 1972–1974 operation against himself and his associates, LaRouche drew the conclusion that British intelligence and the Soviet KGB were cooperating with the CIA in the operation. The inclusion of the "CIA" was based then on the belief that the Institute for Policy Studies was a "left-wing front organization" of the CIA, a judgment grounded on the list of Eastern Establishment figures, including McGeorge Bundy, verified as steering Institute for Policy Studies operations from 1968 onwards, and earlier. Of the Soviet KGB collaboration with British intelligence, there was no doubt then, and the evidence on the matter is much stronger from the standpoint of additional knowledge accumulated since. Perhaps ele-

Henry A. Kissinger: *Accused of ordering the killing of Italy's Aldo Moro (right), Chile's Salvatore Allende, Pakistan's President Bhutto, Spain's Carrerro Blanco, and many others. On the record, he has been after LaRouche since 1975. His record in the 1972 ABM-treaty negotiations smelled of potential treason; was he really the Soviet agent, "Bor," he was accused of having been by top intelligence circles?*

ments of the CIA were involved, as overwhelming circumstantial evidence indicated at the time; perhaps time will clarify that 1973–1974 opinion.

We were shocked, in 1973, to discover that Western and East Bloc intelligence agencies could cooperate so intimately in a joint operation against us, but that such connections existed otherwise did not really surprise us. During 1972, we had assessed certain crucial developments around "détente" as demonstrating a trend toward transforming the internal organization of Europe as a whole into a kind of federation best described as a "New Byzantine Empire," constructing this around a new role for a reunified Germany. In its published version during that period (1973), we entitled that direction of developments around Willy Brandt's part in the "détente-process" as the "New Constantinople" hypothesis. We knew much less about such trends then than we know ten years later, but we were on the right track. What surprised us during the 1973–1974 events identified was not that certain influential parts of Western intelligence were collaborating intimately with agencies tied to the Soviet KGB; what astonished us was that such combinations of forces could regard us as being sufficiently important to deserve such attention.

It was these developments, and their implications, which forced our association to mature very rapidly over that period. By the first of January, 1974, we had accumulated sufficient depth and maturity of capabilities to recognize the general significance of a terrorist incident staged at London's Heathrow Airport. With what we had learned, we had learned to ask new questions, and seeking answers to those new questions, had discovered important dimensions to national and international political realities. We did not have the full answers to such new questions, but we had enough to make our news agency a valuable source of regular

information to many other persons besides ourselves. So, we decided to begin publishing a weekly summary of the most important breaking developments as a regular press service. That was the beginning of the *Executive Intelligence Review.*

LaRouche's Strategic Doctrine

At the close of 1981, the United States was heading for an almost assured strategic missiles-crisis with the Soviet Union. The crisis was scheduled to erupt no later than the final quarter of 1983, and could not be postponed foreseeably beyond the second quarter of 1984. The U.S.-NATO policy for stationing of Pershing II missiles in Western Europe, and the combined Soviet deployment of the medium-range SS-20s plus a spectrum of short-range missiles of the same generation, created a condition from which neither side could back down unless the Soviets traded off destruction of most of the SS-20s for the non-stationing of the Pershing-IIs. Henry A. Kissinger had made this inevitable, through his 1979 intervention to push the so-called "Double-Track" missiles-negotiations policies through NATO.

What was looming for the Autumn of 1983, possibly even earlier, was not merely a replay of the 1962 Cuban Missiles Crisis. This would be much worse. The placement of U.S. high-accuracy intermediate-range thermonuclear missiles within about seven minutes' time-to-target distance of Soviet territory implicitly placed the Soviet Union in a position it would go to "launch on warning," or "launch under attack" posture against the homeland of the United States: a full-scale intercontinental salvo against all available targets inside the United States the moment any nuclear missiles were launched against the Warsaw Pact nations by

any U.S. ally, not excluding Israel's present Lavie-2 intermediate-range, thermonuclear-armed ballistic missiles. The indicated Soviet response to the threat of deployment of Pershing II missiles would be to place up to 250 Soviet thermonuclear warheads within five-to-seven minutes time-to-target off the coast of the United States, forcing the United States to a "launch under attack" posture for full-scale intercontinental barrage against the Soviet homeland.

Neither superpower would have any option but to adopt such a "launch on warning" posture. It means a hair-trigger on total thermonuclear warfare, but neither superpower has any choice. Present generations of thermonuclear missiles are so accurate that they can accomplish the assured destruction of the hardened missile-silos against which they may be directed. They are what are called "counterforce" or "first strike" weapons. No superpower will leave its missiles waiting on the ground once a potential counterforce-assault is in progress: a full-scale launch is the only military option.

It is argued by some that submarine-based "second strike" forces permit us to risk losing some land-based missiles to Soviet counterforce-attack—as preferable to risking immediate, all-out thermonuclear warfare. The belief in the "invulnerability" of missile-carrying submarines is a child's myth: such submarines are implicitly detectable and targetable as "first-strike" targets.

By the time the U.S. and Soviet negotiators went to the table, the world would be on hair-trigger for a thermonuclear war more devastating than anything possible back in 1962. Worse, under the conditions which would exist by that time, there would be no solution except a decisive backdown by one power to the decided strategic advantage of the other. The negotiations would have the general character of two

automobiles racing down the center of the highway toward one another at top speed; whoever turned "chicken," and ducked first, would lose the strategic ballgame.

There was no other foreseeable course for the missile-crisis negotiations as long as strategic-arms-limitation negotiations continued to be dictated by U.S. adherence to Nuclear Deterrence—the Kissinger-McNamara strategic doctrine of Mutual & Assured Destruction (MAD). There could be no rational solution to the crisis-negotiations unless the Kissinger-McNamara strategic doctrine were dumped efficiently before the crisis-negotiations developed.

So, during the closing weeks of 1981, LaRouche designed a new strategic doctrine for the United States, the replacement of Mutual & Assured Destruction (MAD), or Nuclear Deterrence, by a new doctrine, aptly described by former National Security Advisor Richard Allen as "Mutually Assured Survival" (MAS). This new, proposed U.S. strategic doctrine LaRouche unveiled before a blue-ribbon audience including both U.S. and Soviet representatives, during a two-day *EIR* Seminar held in Washington, D.C. during February 1982. To lay the basis for the 1983 negotiations such a doctrine implied, it was necessary that the Soviet Union also have the opportunity to contemplate possible U.S. adoption of such a doctrine well in advance of its actual promulgation.

Immediately afterward, LaRouche put the proposal into published form, in the form of a policy study issued by the National Democratic Policy Committee (NDPC), for whose Advisory Council he is Chairman. This was supplemented by a review of the non-classified applicable technologies written by one of his collaborators, physicist Dr. Steven Bardwell.[13]

Based on his incomplete but adequate knowledge of directed-beam technologies, and his similar knowledge

of the general state of development of such technologies in both the Soviet Union and United States, LaRouche proposed that both superpowers agree to develop and deploy, independently of one another but in parallel, strategic anti-ballistic-missile defense systems capable of assured destruction of about 99 percent of a full-scale missile launch by the opposing superpower. This would require a "crash program" by the United States, modeled on such precedents as the World War II Manhattan Project and the pre-1967 research-and-development phase of NASA. To a group of European military leaders, LaRouche estimated, weeks before March 23, 1983, that developing and deploying a first-generation strategic system would cost approximately $200 billions, an average of between $40–$50 billions a year over four to five years of full-scale development, a mobilization of the U.S. economy for combined defense production and expansion of the civilian-economy base comparable to the 1939–1943 mobilization out of the Great Depression.

There was no competent objection to the technical feasibility of such a strategic ABM defense-system.

From the standpoint of Riemannian physics, with emphasis on hydrodynamic principles contained within Riemann's 1859 paper on generation of "sonic booms," there is nothing really very complicated about the way in which a high-powered laser can destroy a thermonuclear missile with a "shot" as brief as of microseconds' duration.

A laser-beam is simply a monochromatic beam of electromagnetic radiation. By tuning the beam to the right frequency, we can move the beam through a medium, such as air, without losing an appreciable amount of its energy in transmission; however, when it strikes its target—moving at the speed of light—it delivers a powerful shock. Through those harmonic-resonance characteristics of such beams, not unrelated

to harmonic-resonance which enables us to tune to specific radio-station frequencies, the beam focuses its transmitted energy to the target over included areas determined by its wave-length. This behavior of laser-beams against targets is usually described as "self-focusing." Beams of very short wave-lengths (high frequencies) thus focus their transmitted energy over very small areas of their targets. The entire energy transmitted is thus focused on a very small area of the target, creating the effect of a very, very high temperature. A beam of a few tens of kilowatts' energy, in the X-ray part of the electromagnetic spectrum, can thus blast its way through the side or warhead of a missile in a very short burst, making a hole which is sufficient to cause an ascending missile to tear itself apart, or disrupting the firing mechanisms of the warhead; moreover, it is not practicable to attempt to make warheads so heavily resistant to such beams as to prevent a very short burst of such a beam from punching its way through to the inside.

When we extend the lasing principle to very high frequencies of the electromagnetic spectrum, to wave-lengths in the order of the diameter of an electron, for example, the beams behave as "wavicles," electromagnetic beams which are also called "particle-beams." As we approach this, in the gamma-ray part of the electromagnetic spectrum, we go beyond the range of kinds of physical effects of lower-spectrum laser-beams; we no longer "boil away" metal or ceramic, so to speak; we act on the nuclei of atoms, producing powerful kinds of shocks.

Moreover, since lased beams concentrate their energy so greatly, what might seem a small amount of energy transmitted can do the job assigned to a strategic ABM defense-weapon.

There are already engineered U.S. laser-beam systems which can destroy aircraft or missiles in mid-

flight; also in the Soviet Union. In other cases, we may not have engineered prototypes of such weapons, but we have tested all the essential principles, and feasibility, of such weapons under laboratory conditions. What we presently have available, in the various stages of development so illustrated, may not yet be sufficient for each of the kinds of defensive weapons-systems a full-scale, strategic defense requires, but what we do have, as is known already even outside classified-secret areas of research and development, is sufficient basis for saying without hesitation, that we could have a first-generation, full-scale strategic ABM defense system within this decade, or perhaps even as early as 1987–1988, if we committed sufficient effort to the program.

There is no "star-wars fantasy" in the proposal to develop such systems now—except in the minds of people who are completely ignorant of the physical principles involved, or in the mouths of people who are lying about the matter out of sympathy for the Nuclear Freeze cause.

When Soviet sources argue, as they have repeatedly recently, that such systems cannot work, they are simply lying outrightly. The Soviet Union is significantly ahead of the United States in developing such systems, and probably will have such systems in place before the end of the present decade—whether we develop such systems or not. It is interesting to observe, in this connection that the same Moscow sources which argue in one breath that such systems are unworkable, add just as loudly in the next breath that the United States will have such "unworkable" systems working very successfully in a short time, and, Moscow alleges, intends to use this "unworkable system" to permit the United States to risk launching a "first strike" against the Soviet Union.

There are several reasons that the Soviet Union is

significantly ahead of the United States in developing such systems. First, beginning with the first (1961) edition of Soviet Marshal Sokolovskii's *Soviet Military Strategy*, the Soviet Union has been guided by a doctrine for winning a nuclear war against the United States. As early as 1962, Sokolovskii based the possibility of winning such a nuclear war on Soviet work then in progress toward development of strategic ABM defense systems based on directed-beam principles.

Sokolovskii writes in 1962:

> In our country the problem of eliminating rockets in flight has been successfully solved by Soviet science and technology. Thus the task of warding off strikes of enemy missiles has become quite possible.
>
> It is interesting to note that the problem of anti-missile defense is far from being solved in the West. The United States has developed the "Nike-Zeus" and "Wizard" systems . . . for direct encounter between a missile and an anti-missile missile. . . Work is being conducted on the use of space means (anti-rocket "screening" systems).

and, later, in the same book, explains his sneer against the U.S.A. ABM development:

> Possibilities are being studied for the use, against rockets of a stream of high-speed neutrons as small detonators for the nuclear charge of the rocket, and the use of electromagnetic energy to destroy the rocket charge in the descent phase of the trajectory or to deflect it from its target. Various radiation, anti-gravity, and anti-matter systems, plasma (ball lightning), etc., are also being studied as a means of destroying rockets. Special attention is devoted to lasers ("death rays"); it is considered that in the future, any missile and any satellite can be destroyed with powerful lasers.[14]

That was 1962. By 1975–1976, the Soviet Union was far in advance of the United States in both important aspects of directed-beam research, and in extent of expenditures on laboratories and so forth, devoted to this field, as well as moving ahead of the United States rapidly in developing the kinds of space systems indispensable for deploying and supporting the most important, space-based, component of the total strategic system. Might not the Soviet Union agree to banning such weapons from space, as has been strongly indicated? They might agree, but the entire Politburo would cross their fingers behind their backs as Foreign Minister Gromyko signed the treaties. In all countries, including the Soviet Union, it is considered permissible to lie extravagantly to gain a decisive strategic advantage. They are presently committed to beating us in the deployment of such a system, and are encouraging their friends of the international Nuclear Freeze movement and of Lord Peter Carrington's and Henry Kissinger's circles, to do everything possible to slow down U.S. spending on such systems, to the point of giving Moscow an additional two years' head-start on U.S. deployment of such capabilities.

The United States can catch up with the Soviet Union, if we proceed quickly with a crash program for this purpose. The two superpowers are at the critical point now, that if both proceed more or less full-steam with such development, both superpowers would reach a balanced strategic position at about the same time. That was the technical basis for LaRouche's confidence at the end of 1981, that 1982–1983 would be the critical time for U.S. adoption and rapid implementation of a new strategic doctrine based on the feasibility of such systems.

It should be noted and emphasized here, that the "High Frontier" proposed for ABM defense-systems associated with Lt.-Gen. (ret.) Daniel Graham and the Heritage Foundation is essentially a worthless "Rube Goldberg," predominantly a collection of old parts and drawing-board designs from 1960 or even earlier, hastily thrown together. If the U.S. were foolish enough to accept the Heritage-Graham "High Frontier" proposal, and the Soviet Union continues to develop beam-weapon systems, the Soviet Union would win World War III hands-down.

To be certain that no reader misunderstands this, a few basic points should be noted here.

First, there is the matter of *firepower*. A directed-beam's laser travels towards its target at the speed of light, and, at worst, can destroy an ascending ballistic missile in a tiny fraction of a second. By contrast, a counter-missile missile faces a major problem in attempting to reach the speed and accuracy, combined, needed to intercept a ballistic-missile warhead (for example) traveling at three kilometers per second or faster. Second, there is the matter of the cost of killing an average ballistic missile. With anti-missile rocket systems, the average cost of the defense is far greater than the offense; the attacker can defeat such a defense-system simply by supersaturating it with the offense. With directed-beam ABM systems, the shoe is on the other foot; the defense has the advantage in both cost and firepower.

Treating General Graham as an honest patriot, who was simply mistaken by lack of competent technical advice, LaRouche's associates approached Graham during 1982. Graham showed interest, and stated that he agreed substantially with LaRouche's proposed strategic doctrine, but that he could not cooperate publicly, since he was on the payroll of the Heritage Foundation, a front for British intelligence and the British

Fabian Society which has been attacking LaRouche with wild libels since May 1978. Then, despite the corroboration of LaRouche's proposals by Dr. Edward Teller's public statements, and from other experts, Graham participated in a Heritage Foundation effort to sabotage U.S. funding of development of directed-beam technologies, and has been in nagging kind of opposition to the present U.S. strategic doctrine even after the President's announcement of March 23, 1983. What Graham has proposed may whet the appetites of some defense contractors, but it will do no good for the United States.

It is true that LaRouche's proposed new U.S. strategic doctrine of February 1982 pivots on the development of a directed-beam form of strategic ABM system. That, however, bears only on the technical feasibility of immediate implementation of such a doctrine in the way he has proposed it be implemented. The directed-beam systems themselves are not his strategic doctrine.

The problem is, LaRouche has insisted, that the United States must abandon twenty years of strategic folly, the Kissinger-McNamara doctrine of Nuclear Deterrence (MAD). It is that MAD doctrine which has misled the world to the brink of the new strategic missiles-crisis; unless we change the doctrine now, we shall be involved in a thermonuclear war either this year (a remote, perhaps, but real possibility), or almost certainly before the decade is ended. The same emphasis on doctrine, not technology, was made by President Ronald Reagan, in his announcement of the new U.S. strategic doctrine on March 23, 1983. Now, since we have outlined the technological features of what LaRouche proposed, we shall set the stage for discussing his strategic doctrine, by indicating the forces which LaRouche was up against in opposing MAD (Nuclear Deterrence) over the period since he first sup-

ported U.S. beam-weapons development, in 1977, to the present.

Pugwash & MADness

For more than twenty years, U.S. strategic doctrine has been shaped through Anglo-Soviet collaboration chiefly by a channel known as the Pugwash Conference. To afford the reader some sense of the influence of this channel over U.S. policy-making, a partial listing of influential figures involved is helpful. In alphabetical order, these include:

Hans A. Bethe, a former member of the London Royal Society and longstanding opponent of Dr. Edward Teller, as well as an opponent of the President's strategic doctrine. *Harold Brown*, a leading figure among the band of "whiz kids" who imposed the MAD doctrine on the U.S.A.; *McGeorge Bundy;* former Senator *John Sherman Cooper; Clark Clifford; Richard A. Falk*, associated with Ramsey Clark's backing for Khomeini's taking of power in Iran; *Bernard Feld*, a leading Pugwashite; the influential *Raymond Garthoff;* Nuclear Freezer *Richard Garwin; Donald Hornig; David R. Inglis; Carl Kaysen; Henry Kissinger; Franklin S. Long; Robert S. McNamara; Senator Daniel Moynihan; Paul H. Nitze; David Packard; Wolfgang Panofsky; Walt Rostow; Marshall Shulman; Gerard Smith; Jeremy Stone; Richard Ullman; Paul Warnke; Steven Weinberg; Jerome Wiesner;* and *Herbert York*.

Perhaps, in one or two instances, these individuals have been functioning as undercover operatives for patriotic agencies. In most cases, beyond all doubt, these people have been engaged in what they either knew or should have known was an effort to undermine the United States. Worse, the list indicates only a few among the more notable names from a relatively vast spectrum of persons of equal or somewhat lesser influence, directly engaged in the Pugwash Conference aspect of this tarnished enterprise.

As LaRouche documented, in a report of investigations recently submitted to the U.S. Senate, many among these people, including Henry A. Kissinger, knew, before, during, and after the 1972 U.S.-Soviet ABM treaty was negotiated, adopted, and ratified, that the Soviet Union was advancing significantly in its continuing efforts to develop a war-winning directed-beam technology ABM capability against the United States.

Step by step, most of the new strategic doctrines and arms-negotiations policies formulated and adopted by this Pugwash Conference channel have been successfully smuggled into the policies of the U.S. government, with a significant role in this smuggling activity by persons from the list given above. The MAD doctrine itself is the centerpiece of that seditious process.

The MAD doctrine of Nuclear Deterrence was established under President Lyndon B. Johnson, through the most visible role played in this by Defense Secretary Robert McNamara and his political harem of Pentagon "whiz kids." This was introduced during the same period the first and second editions of Sokolovskii's *Soviet Military Strategy* were already in circulation, during a period in which the development of first-generation, effective systems of anti-ballistic-missile systems was in full swing. The ABM systems then engineered would not have made the United States invulnerable to missile-attack, but they would have destroyed a sufficient portion of such attacking missiles to tilt the balance more than appreciably.

From a narrowly defined military vantage point, the leading features of MAD were, first, that by curtailing

development of anti-ballistic-missile systems, thermonuclear missile arsenals could be established more or less permanently as "the ultimate weapon" of warfare, and, second, that under such conditions, the penalty suffered by both superpowers in a war would be so great that general warfare between the U.S.A. and U.S.S.R. would be rendered "unthinkable."

This doctrine required three additional arrangements. It required, first, that the "balance of terror" be maintained, that neither power acquire so large a margin of offensive nuclear capabilities over the other as to make an attempted surprise-attack possible. It required political arrangements, sometimes called crisis-management arrangements between the principal powers, to prevent conflicts from escalating to the point that one or the other side might trigger war by strategic miscalculation. To seal the arrangement, it was necessary to put a stop to the growth of existing modes of anti-missile systems in both superpowers.

Those arrangements were essentially sealed by the close of 1972—Henry A. Kissinger and his accomplices were free to proceed, after September 1972's ratification of the U.S.-Soviet ABM treaty, with the Watergate Affair against Nixon.

Those were the featured aspects of the MAD doctrine and so-called détente. It is in the broader and deeper implications of the same doctrine that LaRouche found the connection between the ratification of the 1972 ABM treaty and the countdown toward the imminent strategic missiles crisis which erupted beginning early 1974. The facts he took into account were as follows:

In the traditional military doctrine, thermonuclear ballistic missiles are an awesomely powerful form of heavy artillery. In the conduct of actual warfighting, the initial bombardment of the heavy artillery would open the way for the general assault, and warfighting

would continue—with added doses of the same "artillery" throughout—up to the point that one force exhausted the capacity and will of the other to continue resistance. That traditional military doctrine is the essential feature of Sokolovskii's *Soviet Military Strategy*, Soviet military policy for fighting a new general war down to the present day. It is the inclusion of directed-beam ABM systems within Sokolovskii's design which solves the crucial problem of how to apply traditional military doctrine to the circumstances of a thermonuclear ballistic missile variety of heavy artillery.

The MAD assumption, that thermonuclear arsenals were the ultimate weapon, implicitly asserted that no warfighting continued beyond the initial phase of general thermonuclear barrage; it was presumed that all forces had been so depleted by the bombardment and secondary radiation effects that any survivors would have lost their inclination for continuing the fighting. The assumption followed from this, that if we define the point of general, post-bombardment assault as 00:00 hours on the day of World War III, and that the general, pre-assault bombardment begins thirty minutes before this hour, then all military capabilities for land-fighting between this superpower-alliance's forces associated with the time from 00:00 hours and beyond, no longer need exist. Apart from rocket, aircraft and naval forces deployed to conduct the thermonuclear assault prior to 00:00 hours of D-day, no "conventional" war-fighting forces have continued *strategic* significance.

The result of such a conclusion is that those discontinued categories of strategic capabilities for continuing general warfare in depth can be lopped out of the military table of organization and budgets. Or, if the general public and other boisterous and influential fellows object to simply lopping off such capabilities all

at once, the subtler approach can be followed: let the superfluous categories gradually wither away, as the Executive and Congress have done, under Johnson, Nixon, Ford, and Carter.

LaRouche argues: think of total military capabilities as of three general sub-categories. *Category 1:* Rocket, Air, and Naval capabilities to deliver and support delivery of a strategic thermonuclear assault—the so-called Deterrent capability. *Category 2:* Air, Ground, and Naval forces and logistical support for fighting a continuation of general warfighting after 00:00 hours on D-day. *Category 3:* Forces assigned to fighting colonial-warfare-type local wars in Ibero-America, Africa, and the southern strip of Asia. Then, view the past twenty years as a process of collapsing Category 2 by erosion, combined with salvaging elements of Category 2 as part of Category 1, and, chiefly, Category 3.

Since Lazare Carnot's revolution in warfare, LaRouche states repeatedly, beginning 1793, the war-winning capability associated with Category 2 has been associated with high rates of technological progress in promoting both improved weaponry and the productivity of labor and economic growth in the civilian economy of the nation. If Category 2 itself is judged to have ceased to have any real strategic significance, what is the strategic significance of maintaining high rates of technologically progressive modes of economic growth? *In other words, provided the economy is adequate to maintain the requirements of Categories 1 and 3, it is strategically permissible to allow the economies of Western Europe and the United States to collapse into the collapsing rubble and impotence of a "post-industrial society."*

Such a post-industrial drift was already being proposed by many including later Defense Secretary James R. Schlesinger as early as 1960. Bertrand Russell's

accomplice, former University of Chicago President Robert Hutchins, proposed what became President Johnson's "Great Society" nonsense in the Ford Foundation-funded Fund for the Republic's *Triple Revolution* proposal, in 1964. It was not until 1966 that Johnson dared to make a bold move toward tearing down the U.S. economy. Johnson acted on orders from British intelligence, specifically the psychological-warfare division of British SIS, the London Tavistock Institute, an old LaRouche adversary.

The orders came by way of a Tavistock study of the cultural impact of the research-and-development work of NASA on the general U.S. population, the so-called Rapaport Report. Tavistock complained that NASA's research-and-development successes were promoting rapid growth of not only technological optimism in the U.S. population, but that the strengthened respect for science fostered by "post-Sputnik" mobilizations of this sort was prompting the population to place a premium on rational behavior. This must be stopped. Johnson obeyed, destroying a major chunk of U.S. aerospace R & D immediately, and launching the "Great Society" program, together with the psychological-warfare measures against the U.S. population known as "consumerism" and "environmentalism."

LaRouche emphasizes, that what was begun under Johnson as pilot-programs became savagery under Henry A. Kissinger as National Security Advisor. During the late Autumn of 1969, the orders went out to create an "environmentalist" ("ecologist") mass-based movement out of the wreckage of SDS and other elements of the anti-war movement. Through Kissinger and Moynihan, CCMS, the Committee for the Challenges of Modern Society, was established in NATO, using NATO's political arm to force environmentalism down the throats of Western European nations. The close of the U.S. operations in Vietnam coincided with

the 1972 phase of détente, and with an end to the era of the citizen-soldier.

LaRouche lists: the Johnson tear-down of research and development, the 1970–1971 monetary crisis aftermath, the launching of the "environmentalist" movement, the 1972 McGovern wrecking of the Democratic Party, the petroleum crisis of 1973–1974, and the escalation of Watergate. These, he notes, deprived the U.S. economy of the means to reverse the massive damage already done to Category 2 strategic capabilities, either in the military forces as such, or the logistical basis in the civilian economy.

He stresses, that, despite détente agreements, the Soviet Union had not gone so far in these directions. Moscow used détente as an easing of pressures of military urgency, to permit popular concessions in consumer-goods categories, but it pursued Sokolovskii, especially in the direction of developing a future directed-beam strategic ABM capability, and maintained in all essentials its Category-2 capabilities in both its military as such, and logistical features of the Soviet economy otherwise.

It has been his analysis, that the growing disparity between a Soviet buildup consistent with Sokolovskii's doctrine, and the collapse of U.S. progress in Category 1, as well as a continuing collapse of Category 2, led lawfully to the 1974 "Schlesinger Doctrine," which was otherwise called Forward Nuclear Defense or Flexible Response. Schlesinger proposed a "limited nuclear war," to destroy most of Western Europe and parts of the Soviet Union, arguing that the Soviet Union would agree to such limitation of nuclear warfare to a single theater, rather than risking the terrible penalties of full-scale intercontinental warfare. *Hardly had the ink dried on ratification of the U.S.-Soviet détente agreements, than, by 1974, we were already openly plunging to the very nuclear war which Nuclear Deterrence insisted would be impossible once détente agreements were reached.*

This apparent paradox, LaRouche argued, evolved out of the "post-industrial" trends flowing out of a policy of collapsing Category-2 strategic capabilities. It was Forward Nuclear Defense, the placing of thermonuclear-assault capabilities of Category 1, as substitutes for collapsing Category-2 forces, in the front lines. It was this process of substituting Category-1 deployment for Category-2 deployments, which LaRouche shows as leading toward intercontinental nuclear warfare. It is this effect of continuing the Nuclear Deterrence (MAD) doctrine, which LaRouche has identified as the cause for the foolish NATO "double-track" policy Kissinger and Germany's Chancellor Helmut Schmidt pushed through in 1979, the "double-track" policy which is the direct cause for the imminent strategic missiles-crisis.

Were the forces behind the design and adoption of Nuclear Deterrence simply honest bunglers, or was there some wicked motive behind their pushing of this monstrously incompetent strategic doctrine?

LaRouche and numbers of his associates have published massive documentation on this point. The drift into the helpless wreckage of "post-industrial society" was not caused by the MAD doctrine; the MAD doctrine was designed by neo-malthusians such as Bertrand Russell, as a way of allowing their desired post-industrial-society utopia to be brought into being. The Pugwash Conference, like the Aspen Institute founded by Bertrand Russell's accomplice Robert Hutchins, like McGeorge Bundy, 1966–1979 head of the Ford Foundation, like the Rockefeller Foundation, like Dr. Alexander King's OECD during the 1960s, like King's and Lord Solly Zuckerman's Club of Rome and McGeorge Bundy's, King's and Zuckerman's Anglo-Soviet International Institute for Applied Systems Analysis

(IIASA), were neo-malthusians first, and military policy-makers second.

By duping governments and military professionals into accepting Nuclear Deterrence doctrine, these neo-malthusians misled governments and military professionals into either supporting, or at least tolerating a destruction of Category-2 capabilities. Had this latter been attempted under any other conditions but misguided faith in the myth of Nuclear Deterrence, those military professionals would have howled, "Treason!"

The case of Bertrand Russell is only of exemplary importance. Bertrand Russell is on record as a dedicated "pacifist," from the point he stormed out of a luncheon meeting of Lord Alfred Milner's Coefficients' organization in 1902, until the end of his life. Nonetheless, it merely appears paradoxical that Russell was the leading public voice for a "preventive nuclear war" against the Soviet Union during 1947–1948. Russell was not against war; he complained publicly, in fact, that the deaths caused by major wars and the side effects of such wars have failed to wipe out as large a part of the world's population as Russell desired.[15] What Russell objected to in 1902, and ever afterward, was the organizing of wars by means which perpetuated the institutions of the sovereign nation-state, and by promoting technological progress in connection with preparations for such wars. During 1947–1948, Russell was for one last high-technology war, "preventive nuclear war," because he believed that the nuclear conquest of Russia would bring about the conditions needed to eliminate nation-state institutions and bring a halt to all technological progress thereafter. Once the Soviet Union had the H-bomb, Russell became a pacifist again.

This point is made clearer by comparing Russell's case with that of H. G. Wells, the Fabian who stayed behind—to become World War I chief of British foreign

Bertrand Russell: *The life-long "pacifist" who demanded a "preventive nuclear war" in 1947. He once said he was disappointed with wars because they failed to kill enough people. Beginning 1938, he did more than any other single person to destroy the United States from within. His followers bitterly hate LaRouche today.*

intelligence—when Russell walked out of Milner's circle in 1902. Like Russell, Wells hated industrial capitalists and technological progress. His favorite hate-word for industrial-capitalism was "The Morlochs," the hateful fictional figures of his *The Time Machine*. Russell and Wells were members of the British Fabian Society subdivision of a current in British policy-making traced most immediately to Russell's godfather, John Stuart Mill, and to the Pre-Raphaelite Brotherhood of Oxford University's John Ruskin. Cecil J. Rhodes and the executor of Rhodes' estate, Lord Alfred Milner, were a continuation of the pro-feudalist-utopia faction of Ruskin and the Acton family. They were also, beginning with the promotion of Charles Darwin by Thomas Huxley, rabidly Anglo-Saxon racist "neo-malthusians."[16]

With the founding of neo-malthusian Chatham House (the Royal Institute for International Affairs, RIIA) by Milner, after World War I, Russell and Wells patched up their earlier, slight differences on matters of tactics,

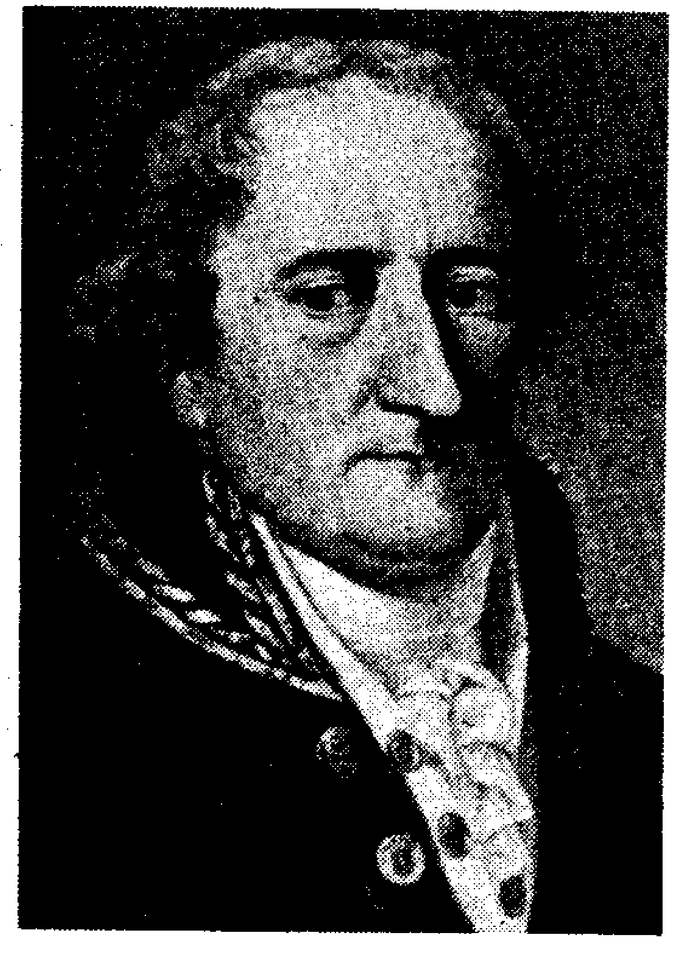
and focused their efforts against the United States, playing a leading part in organizing the networks which later provided the U.S. complement for the Pugwash Conference process and the introduction of the Nuclear Deterrence doctrine.

The Historical Basis of LaRouche's Strategy

The central reference-point for LaRouche's thinking about strategic doctrine is the successive stages of the revolution in modern warfare effected by France's Lazare Carnot and by the Prussian reformers of the 1809 Stein-Hardenberg reforms. These developments in military science of the 1793–1813 period, he defines as the pivotal point of reference for a long process, reaching back into the fifteenth-century work of George Gemisthos (Plethon) and Leonardo da Vinci, running through the thinking of Franklin's 1766–1789 conspiracy, and more or less completed on principle by the U.S.A. experience of 1861–1865.

LaRouche does not overlook the infantry and naval tactics and strategic policies of classical Greece, nor the forerunner of modern military science in the "grand-strategic" policies of combined policies of Alexander the Great and his advisers from both the Academy at Athens and the Cyrenaic temple of Ammon. Nor does he overlook Niccolò Machiavelli's appreciation of Rome's tactics. There are in the whole sweep of history, numerous presciences of the development leading from the fifteenth-century work of Plethon and Leonardo da Vinci into the work of Carnot. The point which LaRouche stresses, is that the Prussian reforms of Freiherr vom Stein, Wilhelm von Humboldt, and General Scharnhorst, incorporating the policies of Carnot, contain the essentials of a perfected general doctrine of military science.

Clockwise from top, **Wilhelm von Humboldt, General Scharnhorst,** *and* **Freiherr vom Stein:** *Together with Lazare Carnot, they made a revolution in military strategy.*



In his various writings dealing with military science, LaRouche focuses his attack against two popularized kinds of misinterpretation of these 1793–1813 developments. The first is the tendency to greatly overemphasize Jomini's and similar treatments of the

campaigns of Napoleon Bonaparte, and thus to greatly overrate Napoleon's significance. The second leading source of errors is an uncritical view of a central flaw in the *On War* of Clausewitz: Clausewitz's politically opportunistic misrepresentation of Scharnhorst's conception of the relationship between "state interest" and military policy.

Since these two issues are of foremost importance in defining the distinct way in which LaRouche approaches strategy, a summary discussion of the issues is required at this point.

The French military instrument which was undefeatable under Napoleon, until the 1812 campaign, was developed beginning 1793–1794 under Lazare Carnot's direction of the military forces of France, during a period Bonaparte was an obscure, but talented captain of artillery attached to the Jacobin faction of the Robespierres and the Duke of Orléans. The revolution in warfare which Carnot effected, with collaboration of Gaspard Monge and other leading figures of the Ecole Polytechnique, was pivoted on two central features: the unleashing of scientific progress as never before, in a "crash program" of development of the industrial power of France—already the most advanced and powerful in the world—and the production of masses of mobile field-artillery of improved design. Around the improved conceptions of logistics of warfare and massed fire of mobile field-artillery, Carnot et al. redesigned the arms of warfare and produced the mode of warfare since called *mobile development*.

The important things about Carnot's revolution in warfare included the fact that the French officer-corps was the best qualified in Europe to assimilate such reforms for practice immediately; the Jacobin artillery captain who became general, Bonaparte, is merely exemplary of the superior training of the French officer corps as a whole. This superiority centered in the em-

phasis on engineering, and a mastery of principles of firepower and fields of fire, in the way illustrated by the work of Vauban, and on the revolution in mapping, fortifications, and fields of fire accomplished by Gaspard Monge. Although the tradition of Vauban is easily shown to have been qualitatively inferior in understanding of artillery fire to Leonardo da Vinci, respecting the methods for producing qualitative "shock-effects" through properly coordinated artillery fire, the French officer corps' education in geometry of fields of fire qualified it in an exemplary degree to assimilate the new principles of Carnot and his collaborators.

The result of this revolution—until 1812—was that in the deployment of French armies against adversaries, the essential feature of warfare was not the numbers of troops in the respective armies, nor the tactical aptitudes of the commanders. The comparative desertion-rates among deployed forces, and the battlefield conduct of the contending forces, LaRouche emphasizes, made the respective armies merely predicates of two opposing military doctrines: Carnot's doctrine of mobile development pitted against what is commonly identified as "eighteenth-century cabinet-warfare" doctrine. The destruction of Prussia's military in virtually a single day, at the battle of Jena, is the exemplary demonstration of this principle: the French army based on Carnot's doctrine pitted against the best cabinet-warfare army of Europe.

The exaggerated emphasis on Napoleonic tactics as such obscures the fact that Napoleon's strategy was directly opposed to the strategic doctrine underlying Carnot's development of the capabilities which Napoleon later commanded. That difference in strategic doctrine, LaRouche emphasizes, is the key to Napoleon's defeat. The analogy, LaRouche stresses, is the defeat the World War II Wehrmacht command brought upon itself by not overthrowing the Nazi regime no

later than 1936–1938. It was Nazi strategy, not tactics, which led German forces to defeat.

The most obvious, immediate feature of Carnot's strategy was a policy of deploying "crash programs" for the highest possible rate of scientific-technological development of the economy of France, and the mobilization of capabilities of warfare up to the limits made possible by a science-driver behind the development of the French economy. Permeating this, was Carnot's earlier collaboration with Dr. Benjamin Franklin; his strategy was based on the same doctrine which Secretary of State John Quincy Adams later defined as the strategic principle underlying his design of the 1823 Monroe Doctrine. The strategic policy of Carnot was the creation of a community of principle among the forces committed to republican nation-states—whether as presidential republicans directly modeled upon the constitutional republic in the United States, or constitutional monarchies, as the Marquis de Lafayette then proposed as the French version of such republics.

Napoleon's policy, already evident, to the bitter disappointment and rage of Italian republicans during Napoleon's first campaign in Italy, was an "imperial" policy, of rule of imperial France over the subjugated nations of Europe, nations degraded into mere satrapies of France. The difference between Carnot and Napoleon, LaRouche stresses, was a fundamental difference in definition of *state interest*, a different conception of state interest which made the aims and subsumed objectives of warfare under Carnot essentially different than those under Bonaparte. Republican France, as exemplified by Carnot's leadership, and by Carnot's 1816–1823 collaboration with Alexander von Humboldt in laying the foundations for German supremacy in science, was committed to creating a global environment of allied sovereign nation-state republics, republics with a common fundamental interest in mutual fostering of high rates of technological progress in developing the productive powers, and conditions of life and culture, of their populations. Carnot's strategy was based on the reality of the American Revolution and the U.S. republic's organized and potent forces of sympathy and support throughout Europe. To those forces, Carnot, in opposition to the hideous Jacobins before him, was a liberator; to those same forces, Bonaparte was a pestilence, an oppressor.

There is, in the political side-effects of the mode of conduct of warfare, a mobile development paralleling and interacting with the aspect of mobile development identified with military capabilities as such. It is that interconnection, which LaRouche defines as the primary substance of strategy.

The improvement of strategic doctrine, over that accomplished in France, accomplished by Stein, Humboldt, and Scharnhorst, was on the political side of mobile envelopment. The political mass-base for Stein, Humboldt, and Scharnhorst in early nineteenth-century Germany, was the republican networks assembled during and after the American Revolution, centered in the western, Rhine axis of Germany, from Stuttgart to Aachen. The leading political figure of this republican movement until his death, a few years before the battle of Jena, continued to be—long after his death—the poet, dramatist, and leading historian, Friedrich Schiller. Schiller, since his first, youthful drama, *Cabale und Liebe*, electrified audiences to support of the American Revolution, was the single most powerful intellectual figure of Germany, vastly outshining such among his sometime collaborators as Goethe, in the affections of and influence upon the German population. It was Schiller's influence, and also his historical studies which enabled his collaborator Wilhelm von Humboldt, together with vom Stein and Scharnhorst, to

design, bait, and close the trap which destroyed Bonaparte.

LaRouche's work on this point has been greatly assisted by scholarly work of his collaborators in Germany, especially the work on Schiller and the Weimar Classic circles by his wife, Helga Zepp-LaRouche. The work of Helga Zepp-LaRouche and others, on a mass of primary documentary sources from the period into 1866 and beyond, has shown conclusively that most presently accepted interpretation of that period of Germany's history, including Clausewitz's *On War*, is permeated with fraud. What leading figures of Germany actually did and wrote during that period, and the popular response of the citizenry, are quite different than the actions and opinions present-day textbooks and related publications have made up as "historical fact" in later times. The situation in this matter of history is much the same as it is with the misleading gossip peddled as documented U.S. history by our public schools and universities during most of the present century to date. In both instances, Germany and U.S.A. history, the generally accepted gossip today is not only grossly false to fact, but represents falsehoods employed to mislead governments and others to incompetent choices in policy-making.

Until the humiliating defeat of Prussia at Jena, the Hohenzollern court had stubbornly resisted both republican reforms, such as those attempted by Prussian official vom Stein prior to 1806, and proposals to reform the Prussian military in accordance with lessons of French victories. It was only the humiliation of the Prussian monarchy and court by Bonaparte, which prompted a frightened, desperate Prussian monarch to tolerate the reforms vom Stein et al. launched beginning 1809.

What the reformers accomplished was not only an emulation of the Carnot reforms, and a system of trained

reserves superior in political character to the French levée en masse—like our own National Guard in its best periods. Using Schiller's studies of the 1618–1648 Thirty Years War, the reformers designed, baited, and closed the Russian trap on Bonaparte. They not only designed the Russian strategy for that campaign, but leaders from Germany assigned to the Czar actually directed the Russian campaign, to ensure that Russian commanders did not botch any of the critical features of the plan. Then, when Bonaparte retreated, these reformers organized the forces to defeat him there and then, before he could reach France to raise a new army to turn and crush them all. It was only Carnot's assuming command of the military forces of France at that moment which terrified the British and others to abandon the plan for dismembering France itself.

The fraudulent element in Clausewitz's *On War*, LaRouche has stressed, is a product chiefly of the outcome of the 1815 Congress of Vienna, where the Venetian Capodistria dictated the policies of his puppet, Prince Metternich. The wicked, and perhaps slightly stupid, Prussian monarch was only too willing to comply with Capodistria's (and Metternich's) demand that the leading Prussian reformers be sent into internal exile and their republican reforms largely nullified. Although the heritage of the Prussian reformers persisted within leading circles of the Prussian military and the faction of German science behind Alexander von Humboldt, the Prussian court imposed a conception of state interest directly opposite to that through which the war against Bonaparte had been won, a definition of state interest corresponding to the pre-1806 period, a definition of state interest much resembling Napoleon's own. It was this, post-1815 direction in definition of Prussian state interest around which Clausewitz constructed his delphic *On War*.

LaRouche's strategic doctrine is, essentially, that

the United States must return to the historically determined definition of state interest reflected in John Quincy Adams' design of the 1823 Monroe Doctrine, the notion of state interest defined by Franklin's trans-Atlantic conspiracy of 1766–1789. As to military policy as such, the United States must define and adopt an equivalent to the Carnot reforms, as the 1809–1813 Prussian reforms supplements, which corresponds to the strategic problems and scientific-technological realities and imminent possibilities of today.

The new U.S. strategic doctrine, which LaRouche first announced during the two-day Washington, D.C. seminar of February 1982, was developed from the starting point, that the United States' most vital long-term strategic interest of the present moment is to develop a powerful community of principle among the nations of Ibero-America, Africa, and the southern strip of Asia, and to draw the nations of Japan and of Western Europe into that strategy, that enterprise. This community of principle shall be based on a mutual commitment to the advancement of science and proliferation of improved technologies, wherewith to foster rapid growth in the productive powers of labor, through aid of greatly expanded trade among the partner nations.

The ordering of relations among the partner nations of this community of principle shall be centered around new monetary institutions, replacing the shattered, bankrupt relics of the Bretton Woods system, new institutions based on the same principles of credit, banking, and promotion of technological progress, established in both Article I, Sections 8 and 9 of the U.S. Constitution, and the policies for credit, national banking and promotion of technological progress elaborated under the first administration of President George Washington: the American System of political economy—as we proposed a post-war order called the "American Century" during World War II.

The only political basis for war-avoidance between the United States and Soviet Union, is Soviet cooperation with the kind of world-order such a community of principle implies. Under conditions of such cooperation, there is no political basis for general warfare. If the Soviet Union refuses such a policy, we must respond by developing an overwhelming war-winning potential at the most rapid rate possible, under the accompanying condition that we state our war-aims would be nothing but the defense of that community of principle. If the Soviet Union wishes to be secure and prosperous, and to manage its internal affairs as it chooses in its capacity as a sovereign nation-state, that is the affair of itself and its people. If it prepares to make general warfare against us, or to destroy the community of principle, we shall be resolute and effective in defending the policy and institutions associated with such a community of principle. That is the kernel of LaRouche's strategic doctrine for the United States.

Our essential strategic problems, LaRouche insists, are two. First, beginning with the so-called "Roosevelt Corollary" under President Theodore Roosevelt, the United States' foreign-policy has seldom, except under President Franklin Roosevelt, and to a more limited extent under President Eisenhower, been anything but opposite to the definitions of strategic interest expressed by the 1823 Monroe Doctrine and Franklin's trans-Atlantic conspiracy. We tend toward the same fatal misperception of state-interest in conduct of our foreign policy as did Napoleon Bonaparte, for example; we foster not allies, but rather that ever-treacherous breed known as foreign lackeys. In a moment we are perceived weak, they will desert us, just as Bona-

Dr. Edward Teller:
His influence tipped the balance in favor of "Mutually Assured Survival."

parte's lackeys destroyed him. Second, we have attempted to maintain strategic hegemony while destroying the material basis upon which such hegemony depended, through the malthusian policies of self-destruction of our economies, our military capabilities, and our youth, which the neo-malthusians' doctrine of Nuclear Deterrence has fostered.

To set such a new U.S. strategic doctrine into motion, LaRouche has indicated that we require both an explosive rate of growth in the tangible-goods production of both our own nation and those of our friends. This explosive growth in our economy demands use of the same kind of available scientific-technological revolution we require for development of required military capabilities. As the world's leading economist, with more than adequate knowledge of the kinds of scientific and related breakthroughs now in progress, he was exceptionally suited, as economic scientist and historian, to define the basic solution to both.

Not all of LaRouche's proposed new U.S. strategic doctrine has been officially adopted so far, although Dr. Edward Teller, speaking to the National Press Club on October 25, 1982, stated independently then

not only the strategic military principles of such a doctrine, but also proposed that this strategy include attempting to induce the Soviet Union to cooperate with us in fulfilling the "common aims of mankind," the use of breakthroughs in science and technology required by military ABM systems, to advance the productive powers of labor among the so-called developing nations.

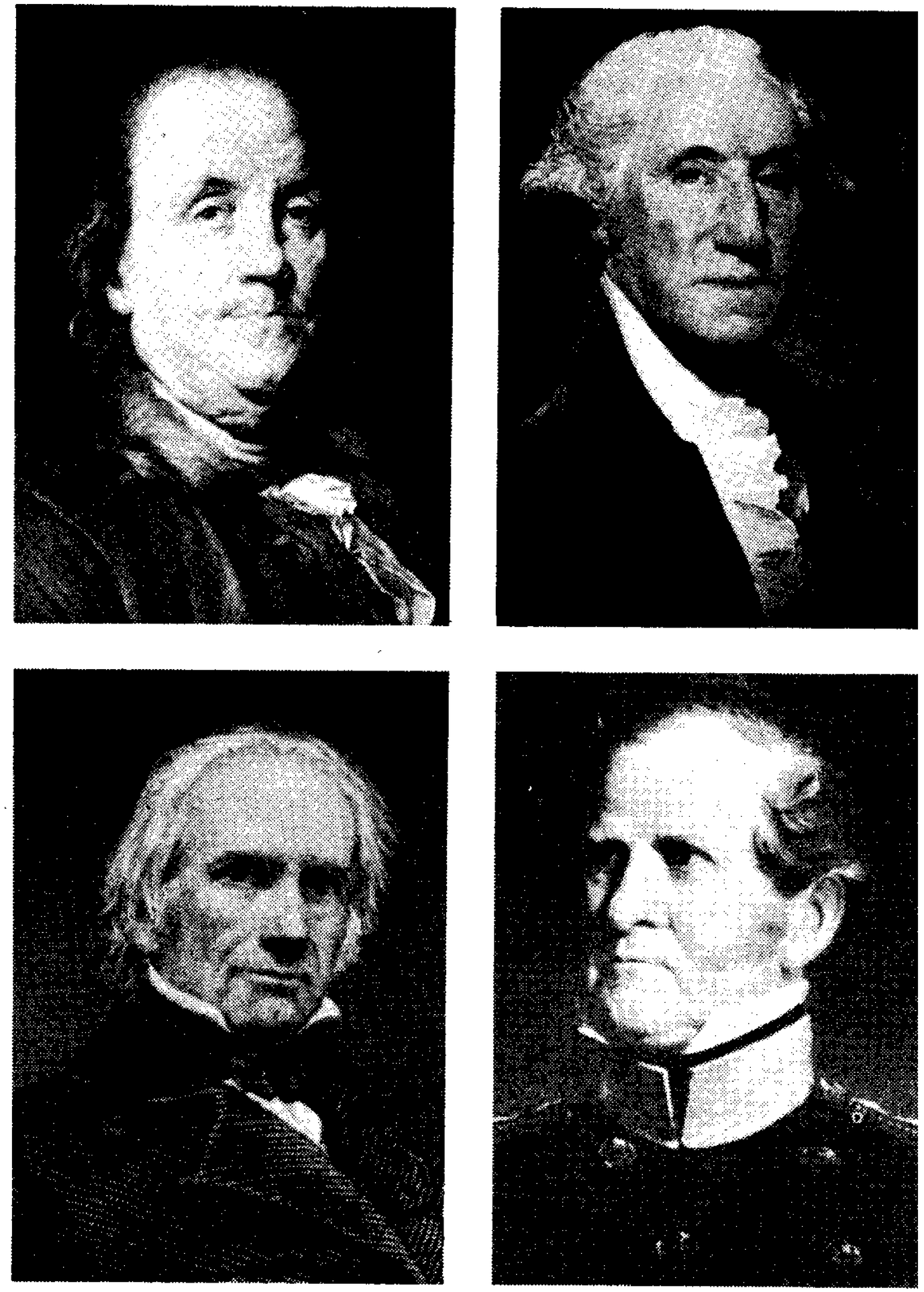
In large part, leading scientific, political, and strategic specialists of the United States clearly agreed. After subjecting LaRouche's proposals of February 1982 to nearly a year of intensive scrutiny, and weighing alternatives, they proposed to the President the new strategic doctrine which he announced on March 23, 1983. LaRouche and the President may or may not agree entirely on the economic and monetary policies required, but they clearly agree on all of the most essential objectives of strategic doctrine otherwise.

Like all of his work, whether in economic science, in political intelligence generally, in the internal history of physical science; so as a strategic analyst the method of LaRouche is the historical method, a view of the present as present history, rather than merely current events.

His Philosophy *of* Government

As we indicated earlier, the only modern political pigeon-hole into which Lyndon H. LaRouche, Jr.'s philosophy of government can be fitted is "American Whig." Earlier, we identified the significance of that label, "American Whig," as it applies to his work as an economist. That same connection exists in all aspects of his philosophy of government. To the degree Benjamin Franklin, George Washington, Alexander Hamilton, the Careys, Henry Clay, and General Winfield Scott agreed among themselves as to what the purpose and practice of our Federal government should be, their views from the past are in agreement with those for which LaRouche stands today.

It would be simplistic and false to attempt to explain his attachment to the Whig tradition merely from circumstances of his family background. He broke with the spillovers from Jonathan Edwards, Pusey, and so forth into his parents' version of "Quaker evangelicalism," made a hard break against the Society of Friends' "conscientious objection to military service," in which he had been explicitly and consistently indoctrinated since the time of the morning breakfast he left his home to attend his first day of school, in the First Grade at



Clockwise from top left, **Benjamin Franklin, George Washington, Winfield Scott** *and* **Henry Clay:** *Like Hamilton, they would have described LaRouche as an "American Whig."*

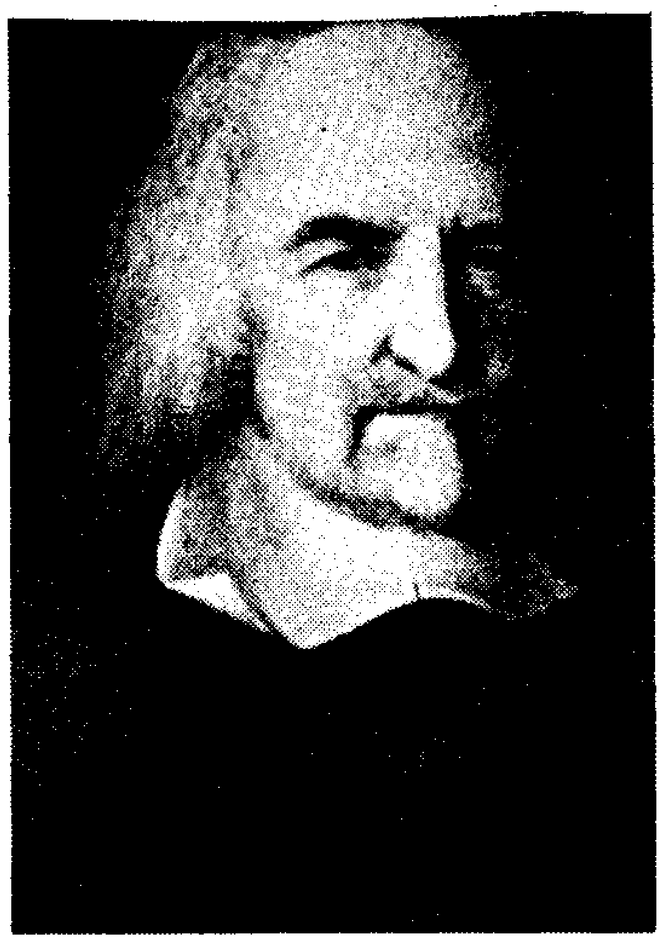
Rochester, New Hampshire's School Street School. Although he retains a deep affection for his family's Whig tradition, the mere fact he was exposed to it repeatedly from his earliest recollections of childhood, is not in itself the cause for his adherence to that Whig cause. These childhood circumstances did not determine his philosophy of government, but they did strongly influence him then. As he reports himself to have been taken by surprise more than once to this effect during the course of the 1960s and 1970s, some childhood memories in this connection lingered more powerfully in the back of his mind than he had suspected.

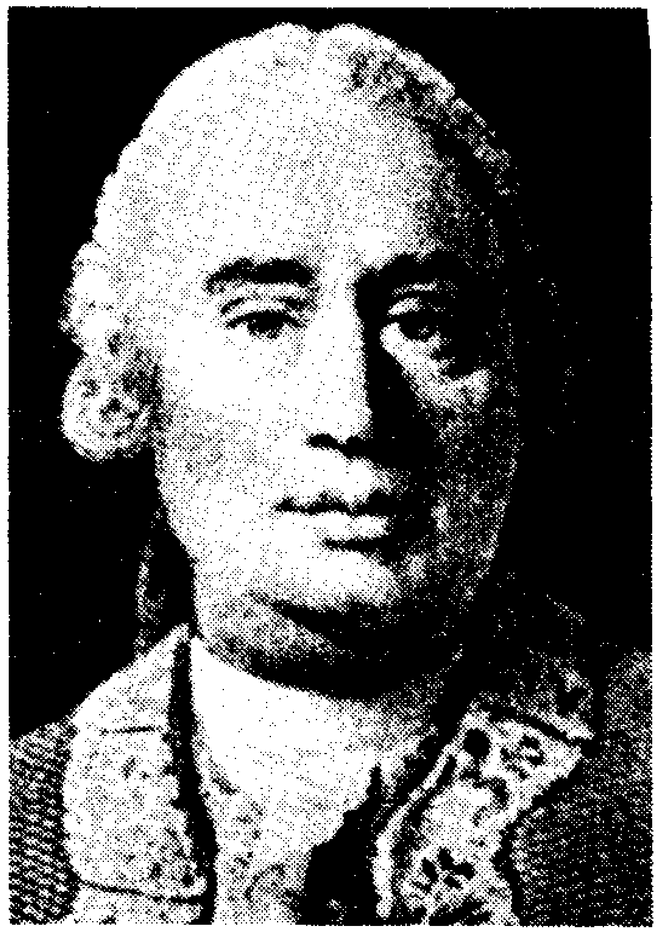
He was born in Rochester, New Hampshire, on September 8, 1922, to native-born U.S. citizens who were steeped in the fact of their ancestors' first-arrival in North America during the seventeenth century. Both parents were hard-rock New Hampshire Republicans by prejudice, his father emphatically so, and unflinching adherents to the evangelical faction of the Society of Friends (Quakers). His paternal grandfather, a naturalized citizen of Quebec extraction, was also Republican. On the maternal side, the political heritage was traced in some attention to fine, if anecdotal details, to a great-great-grandfather, Daniel Wood, who had not only been a "Henry Clay Whig," but had known Clay personally.

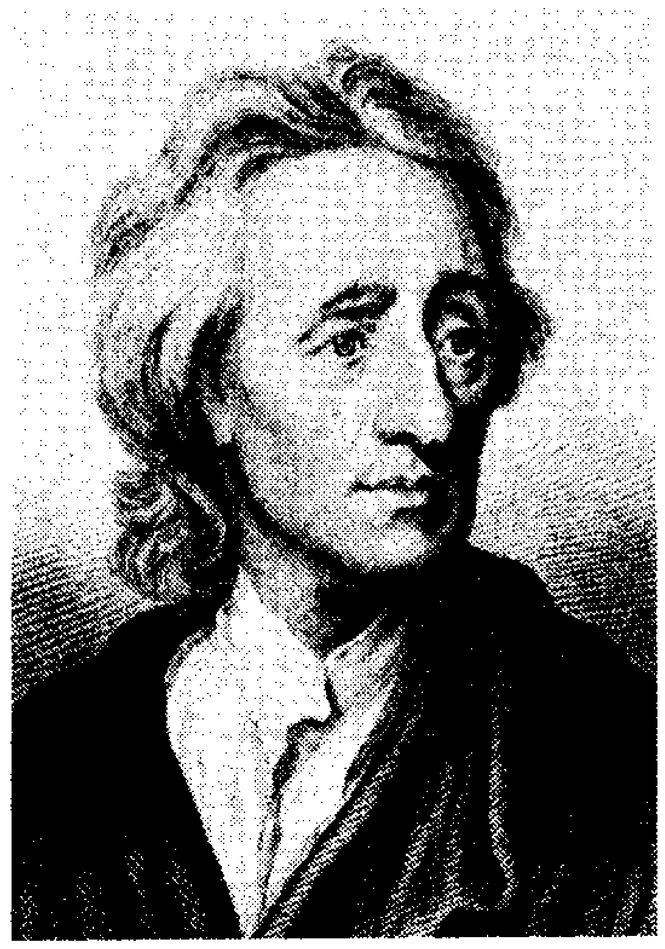
About the age of twelve, the young LaRouche's intellectual development took a turn toward decided, increasing independence from the prevailing opinions of family household. It was at this age, he reports: "For some reason or other I cannot fully recall, I decided to become a philosopher. I went through the family library, pulling out as many of the writings of European philosophers as that library contained, and then arranged the assembled collection in order of date of birth of the author in question. I then supplemented

this by as much as the Lynn [Massachusetts] Public Library had to offer in addition. By the age of sixteen, I reached Immanuel Kant's *Critique of Pure Reason*, which I was still fighting through until 1940. I recall that I emphatically disliked Bacon, Hobbes, Locke, Rousseau and Hume; my first year in high school, when I was fourteen, was dominated by Leibniz. In two notebooks from that period which turned up again in some attic-collections back during the 1960s, I was amused to discover that my fourteen-year-old mind had worked out a credible comprehension of the *Monadology* and the Leibniz-Clarke correspondence. Later, Kant threw me off balance for a while, but I returned to Leibniz. After Leibniz, I could never force myself to accept ideas about mathematics or physics which were philosophically contrary to what I had assimilated from Leibniz about the time I was fourteen. Until I became more deeply acquainted with Plato's work and with Cusa's work later on, Leibniz's was the most powerful and convincing mind I ever met." The other strongest influence on his outlook from childhood through adolescence was the King James Bible. "I carried it around with me more or less constantly, even to school, into my sixteenth year. Once I had reached Leibniz, I studied much of it, especially the New Testament, all over again." The other important development of this adolescent period, was his discovery that the variety of British liberalism confronting him then in the guise of the American Friends Service Committee was something very unwholesome, sickeningly irrational.

The impact of the Whig political tradition on him during childhood was the original source of his preoccupation with history and shaped the way in which he adopted the family's strong support for scientific and technological progress. The strongest impressions to this effect from within the family were mediated by







The young philosopher read (clockwise from top left) **Francis Bacon, Thomas Hobbes, Jean-Jacques Rousseau, David Hume, Immanuel Kant,** *Gottfried Leibniz and* **John Locke.** *He chose Leibniz, studied Kant, and rejected the rest.*

his two grandfathers, by the strong impression of one meeting with his maternal great-grandfather, and the legends, broadly true to fact, associated with other nineteenth-century forebears.

His paternal grandfather, Joseph LaRouche (then, of Lynn, Massachusetts), was a picaresque, widely travelled, naturalized citizen, who had fled the backwoods of Quebec for Paris during adolescence. His father, Antoine, had been an amateur musician and violin-maker in that remote Quebec region; Joe LaRouche played well enough to secure employment for awhile in a Paris orchestra, and to recall later, being awakened after a night's work early in the morning, by the carts and wooden sabots of French farmers clattering over the cobblestones, on their way to market. In the United States, he had become a pharmacist for awhile, and had travelled abroad for awhile on behalf of the United Shoe Machinery Corporation, fighting a pre-war duel with a German national in Colombia over a point of strategic political differences shortly before the outbreak of World War I. Echoes and legends of "Joe LaRouche" continued to ambush his grandson into the middle of the 1950s, a quarter-century after his death in 1931. He was a lovable, witty, fighting bantam-rooster of a man, a strong personality, a little too strong for his son, but delightful to a grandson who will always cherish that last goodbye to his grandfather at his deathbed, an hour before he expired. In his own way, he had a sense of the world and a sense of the efficiency of history, LaRouche has said of him.

His maternal grandfather, the Reverend George Weir of various Ohio United Brethren parishes, over the decades until his retirement at the close of the 1930s, had arrived in the United States a baby, in 1862. His father, of a family of professional dragoons associated with the Greys, had arrived to join the First Rhode

Island Cavalry. Toward the close of the 1960s, LaRouche had stopped on impulse at a New England maritime museum, to discover the name of his grandfather's legendary uncle, Captain William Weir, the subject of one of the historical exhibits. According to the exhibit, this Captain Weir had left Cunard service to take one of the first New England-made steamships on its maiden voyage to the South Atlantic. This was the same great-uncle who had been enlisted on one occasion to go down to the local saloon and take from his brother the dragoon that great saber with which the dragoon was playfully terrorizing the other clientele of the premises. The legend had it, that Captain William Weir was the only man alive who could have obtained the saber peacefully.

The young George Weir had been recruited to the ministry, and dispatched to a skid-row mission in Columbus, Ohio. In due course, he met and married Martha Wood, the daughter of an old Quaker squire's family of Woodbury, Ohio, a distance north of Columbus. In their last years, during and after the war, the couple settled in retirement in a Wood family cottage not far from the main house in Woodbury, and died within a few years of one another after the war. In some parts, he resembled Joseph LaRouche; the two met once, during the period of the latter's last illness and got along famously. Reverend George Weir was a strong, little man, with a great, booming bass voice, and, when need be, as tough a little bantam-rooster as was consistent with his cloth. He had a large mind, an inexhaustible but never sadistic wit, and a vast compassion for people, especially people with troubles.

In the orbit of the Reverend George Weir, one never forgot about history. Naturally, this centered around Biblical history, but did not ignore matters which merely intersected that history. There was also considerable emphasis on family history. The old schoolhouse and

barns associated with the larger, squire's house on the top of the slight rise in Woodbury, had been an underground-railroad station during the 1850s, and Daniel Wood had been advised to leave his native Carolinas for reason of his views on slavery, thus arriving in Ohio.

LaRouche's opinion has been that the difference between his grandparents' generation and his parents' was not only that the two grandfathers were distinctly strong figures, who perhaps overawed their children too much on that account. He stresses that a similar pattern is shown in the internal history of modern science.

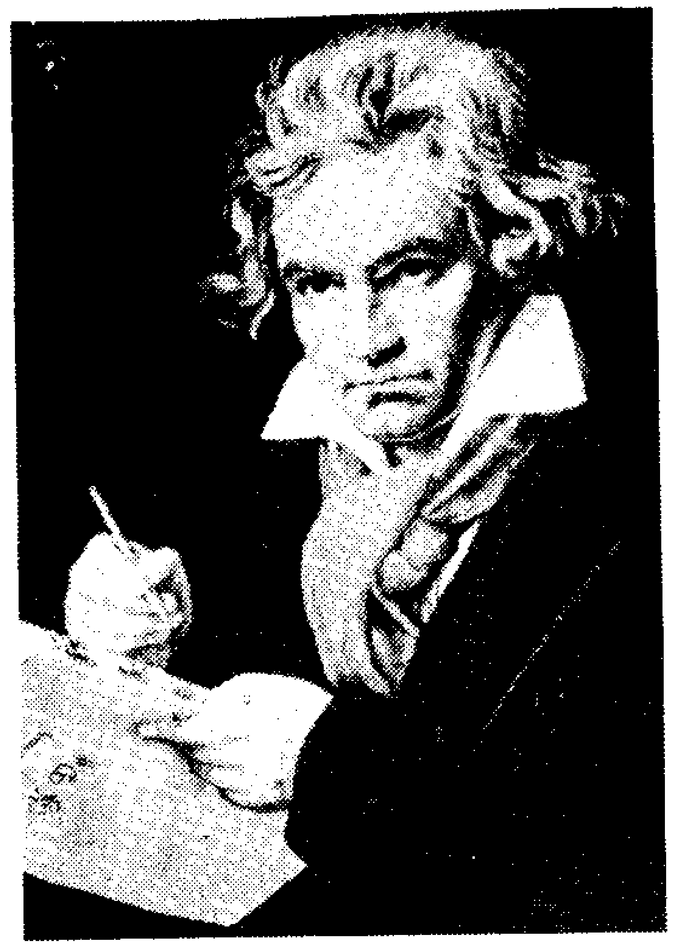
A man as dominant a figure in Germany's science as Professor Felix Klein, dedicated himself chiefly to attempts to rediscover and defend those earlier achievements of German science, especially from the early work of Karl Gauss through the work of Riemann and Weierstrass which, in Klein's view, were on the verge of being lost to humanity at the beginning of this present century. A similar problem exists in music, to the effect that when Johannes Brahms died, the last great composer died. Despite the excellent achievements of European (and American) civilization during the first sixty to seventy years of the last century, at the close of those decades, European culture seems to have "run out of steam." The great upsurge unleashed by the fifteenth-century Golden Renaissance, with all its ups and downs in between, seems to have described a generally upward progress in the human condition into about 1789, reasserted itself during the 1793–1814 period, recovered somewhat in parts of Europe during the 1820s and 1830s, was set back by the radicalism of the 1840s, surged forward again in some respects during the 1850s and 1860s, and collapsed during the course of the 1870s and 1880s.

We did not cease making useful, important advances,

but no fundamental breakthroughs on the frontiers of knowledge occurred, but, rather, occasional successes in applying the tools of knowledge created for us by earlier generations.

LaRouche has made a preliminary survey of this pattern of developments, concentrating his attention on the first sixteen or so years of life of leading figures of science, music, and so forth: those first sixteen to eighteen years of new human life during which the potentialities of the child and adolescent are broadly developed in the way they will determine the adolescent's direction of and potentiality for accomplishment in later life. He begins that survey with attention to the remarkable teaching orders, such as the Brothers of the Common Life, developed by the conspiratorial networks of Dante Alighieri's faction, including Petrarch at Avignon, during the fourteenth century. The Brothers of the Common Life, for example, until its suppression by the Jesuits during the last half of the sixteenth century, produced Thomas à Kempis, Nicholas of Cusa, Erasmus, Hieronymous Bosch, and many others among the most celebrated and fruitful minds of the Golden Renaissance, as the Oratorian order did in France and Italy into variously the Jacobin Terror and into the nineteenth century in Italy. Beethoven's genius was the result of his thorough schooling in the work of J. S. Bach prior to his eighteenth year. It is through special educational programs, or through the impact of culture on the young mind's development otherwise, that the potentials of a generation are founded. So, to account for the sum of what an individual has achieved during his or her lifetime, LaRouche judges, we must look back about forty to fifty years, and to the two-decades interval before that.

He stresses, in this connection, that his grandparents were matured during the 1860s and 1870s; his parents over the late 1890s into the eve of World War



Ludwig van Beethoven: *To understand a great historical figure, one must look back to his first sixteen to eighteen years.*

I. If we compare the literature produced during the two identified periods, including the newspapers and other influential periodicals, the profound difference in intellectual quality and prevailing philosophical outlook of the earlier period, compared with the latter, is evident at once. Although the 1930s in the United States were far better culturally, than the 1950s and 1960s, the 1930s were superior morally to the 1920s only in the respect that hard times made us soberer about life than during the careless, giddy, Flapper Age of the 1920s; the 1930s were therefore more sensible that ideas, although usually wrong during that period, at least were presumed to be measurable against the reality of their practice.

"I don't know exactly how it occurred to me at twelve to become a philosopher," LaRouche has reflected on his experience in such contexts, "But, I do recall vividly that these studies in philosophy during adolescence were a point of reference I used to resist that which I disliked in the pressures of peer-group opinion around me." His identification with what he saw as the cultural standpoint of his grandparents and their forebears, as

distinct from his parents' and other influence, he has identified as the most important of the family's influences acting upon his early development.

The phase-change began with him, as for most adolescents of his peer-group, during his junior high-school years. Although his inner loyalties continued to be strongly family-centered, especially the family's heavy schedule of religious activities, the family ceased to have much influence over shaping the premises of his further intellectual development. What was unusual in the new direction of his personal development from that point onward, was his increasing emphasis upon settling issues from the standpoint of his studies in modern European philosophy from the seventeenth and eighteenth centuries. "Most of the adolescents I knew then were content to be unwitting followers of David Hume," he has said.

"The usual situation, with most of my immediate adolescent peers, and as I observed my sisters' conflict with our family's customary values later," he has reported, "is that adolescent development took the form of a conflict between the parental household's values and the values of what the adolescent described as the values of 'my friends.' As I observed it, the conflict between family's and peer-group's customary values expressed itself most openly in the common-place adolescent's exclamation, that he or she was ashamed of the family's customary values in the eyes of 'my friends.' "

It is probably the case, that what is different about Lyndon H. LaRouche, Jr. is most readily located in respect to his adolescent development, the difference in the way he approached the adolescent's conflict between family and peer-group customs. This has been his view of that difference, which he describes in the following terms.

He said: "What fools we have been, not to recognize

the importance of providing children from no later than early adolescence with a grounding in classical Greek philosophy and history, as well as pre-nineteenth-century classical European philosophy and history.

"The pre-adolescent child in our culture, as I have been able to observe this, sees the world outside the family-cocoon as more or less a simple extension of playing inside the house or the yard of the family's or neighbors' houses. The child and his companion, his pet puppy, have a kind of philosophical agreement on this point. Both leap for joy at each prospect of an excursion out of the house, and after exhausting themselves in that excursion, enjoy all the more the safe return to the cozy family-cocoon. Such a child may accomplish a more or less impressive intellectual development, a development which we trace from our first observations of his building with blocks. Intellectually, this may be the foundation of later scientific accomplishment; emotionally, it is an extension of simple play, whether in the environs of the family-cocoon or at school.

"About the point of adolescence, play becomes the point of reference for developing conflicts between the child and the prevailing customs and associated social values of the family-cocoon. As I experienced this myself and observed it in others then, and through observations later in life, the child begins to feel that the family household is in some respects a prison. He or she 'cannot be myself' within the confines of the household and family-centered activities. The child complains to adolescent peers, 'I can't stand it in the house!' In the family household, the child expresses a boredom bordering on anarchistic outbursts, complains of being 'suffocated.'

"In most instances I have observed, this conflict converges upon a conflict between the values the child associates with 'what my friends do' and a father's

rebuking 'Do as your mother says,' or a mother's injunction, 'Wait until your father comes home!' This child is bored because the rules of obedience to family customs within the household and other family-centered frames of social reference prevent the child from 'playing' under those circumstances. 'Play' has come to signify an expression of customary values of peer-groups which are 'outsiders' to the family-cocoon, peer-groups not acting by the standards for 'rules of play' set earlier for inmates of the family-cocoon.

"Parents usually saw the affair, in my experience, as simply a conflict between family customs and outside peer-group influences. Parents usually either fought guerrilla warfare against 'outside influences' on this account, or a father and mother 'gave in to the effects of outside influences' permissively. The parents usually overlooked the fact that 'both sides are wrong' in this matter.

"The commonplace, dangerous error on the family's side, is the reaction of a possessive mother, who attempts to prevent 'losing my baby,' and who may express this by attempts to treat her daughter, for example, like a doll from the mother's own childhood doll-play, to project herself into the inside of the adolescent and adult life of her daughter. The problem is, that the adolescent is approaching the point of development at which he or she must become a true citizen of a republic, and thus a rational adult who must judge whether such things as the foreign policy of the nation are 'right' or 'wrong.'

"What I did, in attempting to deal with such conflicts, was to use study of modern European philosophy as a vantage point from which to attempt to judge for myself what were right and wrong value judgments. I rejected the 'Be like everybody else,' which was the often-stated axiomatic basis of association among adolescent peer-groups. What I fought against in my

parents, was my mother's more subtle and my father's more vociferous and narrow-minded insistence upon keeping me tightly 'cooped-up,' as the jargon of those days put the point. My real fight intellectually was against the institutionalized values of the school and its adolescent peer-groupings.

"My weakness at the time was chiefly that I was self-educated in philosophy, in the sense of conducting my readings without any real opportunity for discussing the content of this material meaningfully with either qualified teachers or other adults, or as an approximation of a socratic dialogue among persons from available peer-groupings. I felt often very much like the legendary 'ugly duckling' for this reason. I sought to develop acquaintances and friendships according to the values I developed through aid of these readings in philosophy, rather than, as did most among my peers, choosing new values introduced through association with some specific adolescent peer-grouping. I believed, and rightly so, that each individual is accountable for what he believes, and must be prepared to defend that choice rationally out of his own knowledge; I rejected with contempt the notion that one ought to believe something on the authority of other persons' opinions or customs.

"Fortunately, my understanding of rationality was Leibniz's." The dusty notebooks from 1936 later discovered in an attic's collection, short, essay-type commentaries on Leibniz's *Monadology* chiefly, enabled LaRouche during his late forties to judge the philosophical standpoint of himself from the vicinity of his fourteenth birthday. "The most interesting thing, bearing on my later approach to scientific work," he has said of the content of those notebooks, "was my rejection of axioms and postulates. I recall my state of disbelief toward Euclidean geometry from that high-school period; I did not believe that the deductive

method of deriving theorems from axioms and postulates actually proved anything. My reaction against classroom geometry on that account I recall vividly in a general way; what I hated about public school and university later, was the knowledge that I could win high grades by accurately regurgitating taught material in which I either simply did not believe, or which I was rationally convinced was downright wrong. It was a better education than our schools and universities generally offer today, but it was bad education in its own right. For the same reason, I revelled in an integral calculus course, whereas I rejected a differential calculus program built around the absurd, but institutionalized axiomatic assumptions of Cauchy.

"Most of what I accomplished in my intellectual development had no social affirmation during adolescence except the social affirmation of personalities whose thinking I met only through their written output. It was useful, to be obliged to rely on my own judgment to that degree, but what I accomplished by 1952 and later, in terms of the educational content of my intellectual development, would have been completed a decade or so earlier, had I had access to the kind of educational grounding through adolescence modeled on the programs of Groote, the Oratorians, or Humboldt.

"As I watched the moral failures of most of my generation during the late 1940s and 1950s, I could trace the source of such failures of citizenship to the habits of social behavior I had seen in the adolescents of my school years; without a grounding in classical education beginning with early adolescence, these youth were deprived of the means to resolve rationally the moral problems of conflict between family and peer-group values. For this, the evil educational philosophy of John Dewey is much to be blamed. If we wish a better nation in the future, we must ensure that by producing better-qualified citizens; we must scrap existing school pro-

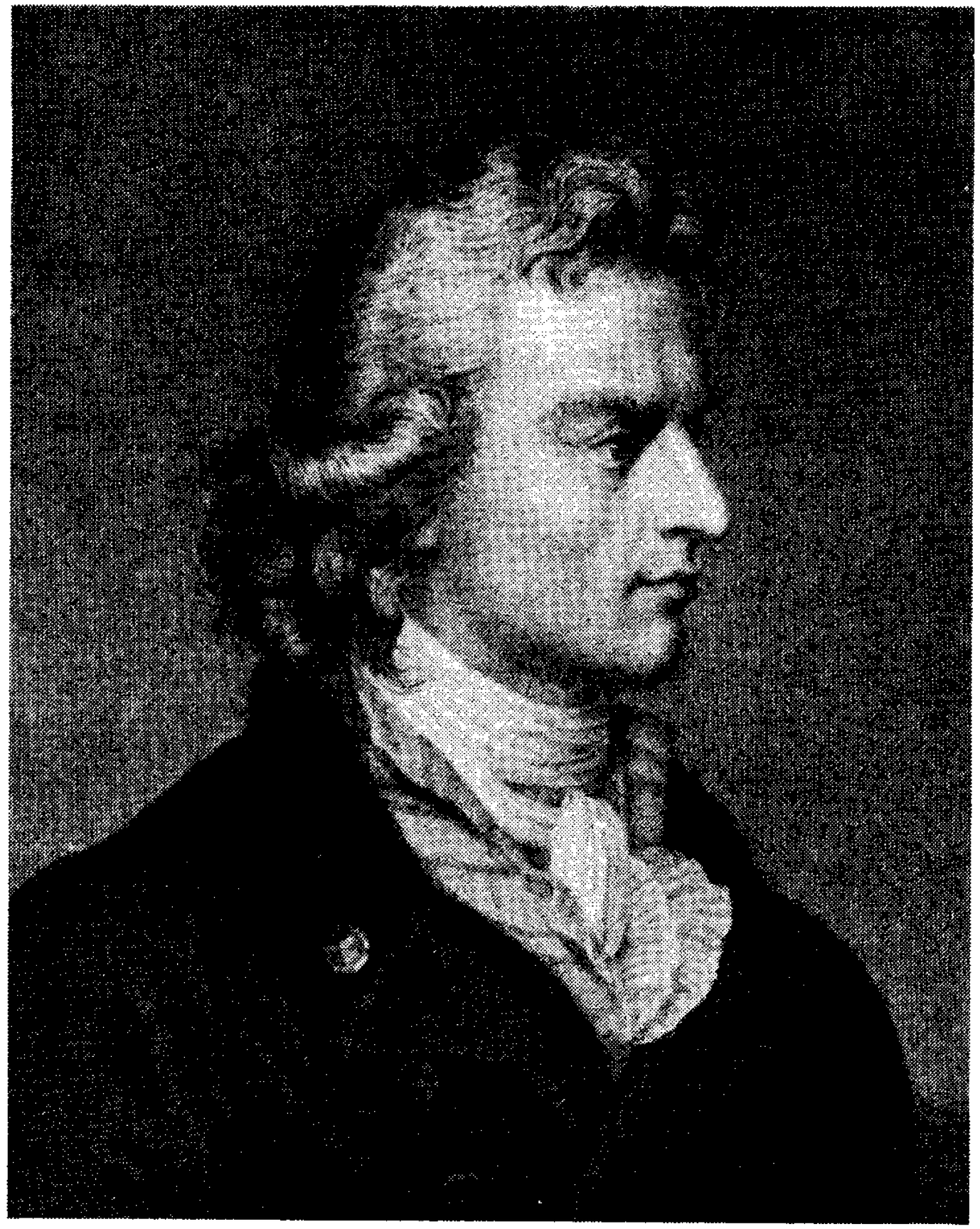
grams and build a new one, centered in classical education."

Solon Versus Lycurgus[17]

Friedrich Schiller compactly summarized the essence of more than 2,000 years of European history, in defining the entire sweep of that history as a struggle for supremacy between two opposing philosophies of government. The first of these, he associated with the real-life figure and work of Solon of Athens; the second, he identified with the mythical Lycurgus of Sparta. Schiller, since his youthful, pro-American drama, *Cabale und Liebe*, the intellectual leader of the pro-Franklin faction in Germany, treated the differences between Solon's and Sparta's philosophies of government from the same philosophical standpoint as the majority among the founders of our own constitutional republic. This was the standpoint of reference of classical Greek history and classical Greek literary sources. LaRouche concurs with Schiller in this view of the philosophy of government; this, for him, is the deeper, broader basis and origin for the philosophy of government represented by the American Whigs.

We summarize these views of a prospective future President of the United States, and describe the way he assesses the strategic significance of the U.S.-Soviet conflict from this same standpoint.

We are at liberty to include matters of historical fact which have been developed over recent years and decades in collaboration with his associates. Over the past seventeen years, since the three-part project he presented as field-exercises to a score of his students back during Autumn 1966, this association has developed the essential features of the graduate division of a university, a collaborating community of scientists and



Friedrich Schiller: *The poet, dramatist, and historian, whose influence made possible the destruction of Napoleon Bonaparte.*

scholars emulating Leibniz's specifications for an Academy. Over the past decade, in addition to LaRouche's immediate associates, those activities which approximate the life of a Leibnizian Academy have attracted the collaboration of scientists and scholars from many parts of the world. As LaRouche himself is integral to this continuing process, the elaborated form of his views today incorporates the results of a process of integration of discoveries and other important features of the scientific and scholarly work of others.

His wife's work on the subject of Cardinal Nicholas of Cusa and Schiller's Weimar Classic circles exemplifies the kinds of collaborative influences involved in shaping his views into their elaborated form of today. We, the editors of *EIR*, are not exceeding our mandate if we include reference to the contributions to LaRouche's knowledge through his associates, in the following summary, or in the concluding summary of LaRouche's work bearing on matters of physical science.

As Plato and other classical sources emphasize, the republicanism of Solon and the Ionian city-state republics was not an original discovery of Greece. Solon was educated in Egypt by the priests of Ammon. The priests of Ammon, representing the Golden Age of Egypt, had reacted to the internal destruction of Egypt by the cults of Isis-Osiris-Horus, using the same kind of colonial policy Plato outlined in his writings later. One of these projects was the reestablishment of the city of Athens (circa 1250 A.D.), and the establishment of Israel under the leadership of the Hebrew high priest of Ammon, Moses, an operation conducted within the same decade as the refounding of Athens.

After the crises associated with the devastating volcanic explosion of Thera and the invasions of the Mediterranean following this re-founding of Athens, the Greeks descended into illiteracy, excepting the Greek

colonies of Cyrenaica, the single Greek language of the earlier period breaking up through degeneration into local dialects. During the period of the eighth and seventh centuries B.C., Ammon sponsored the development of two maritime powers in the Mediterranean, in opposition to Phoenician power. In the western Mediterranean, Ammon supported both the rise of the Etruscan civilization and Greek colonies in southern Italy and Sicily. In the eastern Mediterranean, backed from Egypt, the Ionian city-state republics defeated the Phoenicians, and dominated the region until the Phoenician-Chaldean priests controlling the Achaemenid Empire launched the Persian conquest of Asia Minor. This intervention by Ammon sponsored the resurrection of Greek literacy and culture, for which the Ionian city-state republics and Athens were the centers in Greece itself. It is through this role of the priests of Ammon that Europe secured the basis in knowledge on which republicanism was built.

The force opposing Ammon's influence and allies in the Mediterranean and Middle East was centered in a network of priests whose religious cults were an outgrowth of the same priest-cults associated, Biblically, with Ur of the Chaldees and the cities of Sodom and Gomorrah. These cults persist to the present day, and have been the center of the opposition to republicanism over the intervening millennia to the present time. These cults, and their associated philosophy and institutions of government are as follows.

The central figure of all among these Phoenician-Chaldean cults is the figure identified in the Apocalypse of St. John as "The Whore of Babylon." She is otherwise known by various dialectal names including Isis, Ishtar, Shakti, Cybele, and "Great Mother." St. John's use of the appellation "Whore," is not metaphor or hyperbole. It refers to a practice which continues into modern practices of witchcraft cults. The high pries-

tess of Isis and her fellow-priestesses were quite literally whores, who followed the performance of cult-rituals with a general sexual orgy among themselves and the assembled worshippers. There are either one or two male figures associated with this Isis-"Whore of Babylon"-figure in the various local forms of the Chaldean cult. The first is typified by the Egyptian eunuch-homosexual figure of Osiris, or Baal, the Phrygian Dionysos-Satan, and the Harrapan eunuch-phallus deity, Siva. The second, optional, male figure is Horus-Apollo-Lucifer.

The way in which ancient and modern versions of pseudo-Christianity were constructed on the basis of these "Whore of Babylon"-worshipping cults is illustrated by the case of the Protestant theologian Ludwig Feuerbach's *The Essence of Christianity*, a cult-form of Protestant theology introduced to Britain by George Eliot's translation of Feuerbach's book. Feuerbach, who would be rightly classified as a theosophist, or forerunner of anthroposophistry, demanded the rejection of the Christian Trinity, and its replacement by a "trinity" of the Holy Family of Joseph, Mary, and Jesus. However, in elaborating the properties he associates with these three Biblical figures, only the Biblical names remain. Feuerbach uses the name of "Joseph" for Osiris, "Mary" for Isis, and "Christ" for Horus. A not-uncommon version of pseudo-Christian Mariolatry is based on a similar effort to substitute the content of the worship of Isis for the name of Mary, just as pseudo-Christian Christology is based most frequently on a poorly disguised revival of pagan Arianism.

The gentle euphemism used by corrupt priests, to describe using Biblical names for fostering of specific pagan cults, is *syncretism*, a widespread practice of the Jesuit order in Ibero-America currently. The traditional name for all of the varieties of pseudo-Christian cults based on worship of the "Whore of Babylon" is

Gnosticism (i.e., the principle of Gnosis). The introduction of the same Phoenician-Chaldean cult-forms to produce a pseudo-Judaism is called *Kabbalism*. Kabbalism and Gnosticism are functionally identical, except that the first is disguised as pseudo-Judaism, the latter as pseudo-Christianity.

This may appear to some only a digression into matters of religion. It is no digression, as we shall indicate here soon enough. It is the use of religious cults, and similar cults in secular disguises, to control the beliefs and political behavior of majorities of populations, which is crucial for understanding not only the persistence of the Lycurgan model of Sparta (e.g., Nazism), but such specific problems as the nature of the strategic threat from the Soviet Union today.

Our subject here is not Judaism or Christianity. Our subject here is a definition of "religion" corresponding to the doctrine of William James's *Varieties of Religious Experience*, in which all religions are described as useful fakeries, and Judaism and Christianity are put on the same footing with pagan cults in this respect. The folly implicitly addressed in that way is the disgusting practice of assuming that anyone who has any form of "religious belief" is in a state of kinship with Judaism or Christianity, that it is "religion" defined as James defines religion, which is "good." LaRouche argues that pagan beliefs such as those of the Nazi cultist Alfred Rosenberg and the Isis-Osiris-Horus cult, are explicitly evil, and ought to be seen in the same way one judges a religious cult dedicated to cannibalism, ritual murder, and so forth.

The first form of Gnosticism was that combatted jointly by St. Peter and Philo of Alexandria shortly before St. Peter's murder by the Emperor Nero. This was the pseudo-Christian cult transported from the Middle East to Rome by one Simon Magus ("Simon the Magician"). Magi-Magician is a commonly appear-

ing alternate name for the Chaldean priesthood, alternate to Chaldean, Phoenician, or Mobed. The Arianism created by the Emperor Constantine, as described in Eusebius' history, Manicheanism, Donatism, and the monophysite doctrines generally, as treated by St. Augustine, are other examples of this Gnosticism. So is the doctrine of one Sufi-cult-linked, pseudo-Christian cult, which asserts that Christ was not actually crucified, but married and went off to live with Mary Magdalene, by whom he had at least one child (the Osiris-Isis-Horus "trinity" again). Recent, and dangerous, is the Temple Mount cult, which proposes to compel God to create the Battle of Armageddon and deliver the Second Coming of Christ, by the magical ritual of constructing a new Solomon's temple on the site of the old Templar order's stable in Jerusalem. Such schemes to "control God's will by magical rituals," are typical practices of the Chaldean Magicians from ancient times.

The ancient and more recent versions of such cults were more than obscene forms of religions. The priest caste associated with the names Chaldean, Phoenician, Mobed, and Magi were elements of the ancient equivalent of modern rentier-financier families.

These combined forces of the priest caste and families controlled most of the governments of the Middle East from the inside, from Ur onwards. The Babylonian, Assyrian, and Persian Empires are exemplary cases. During the time of Moses and the classical Greek period, Tyre was a controlling center of these forces, until Alexander the Great and Ammon combined forces to destroy Tyre, prior to destroying the Persian Empire as a whole. The priests manufactured repertoires of cults and false histories for various tribal groups, and used their influence over these tribal groups to create combinations by which governments, nations,

and empires were destroyed and replaced at their direction.

In the rentier-financier side of these Chaldeans, Phoenicians, and so forth, the family interest was institutionalized in a form continued to the present day by the *fondi* of Venice. The wealth associated with a family was pooled under central management. The effect was that the heirs of the family enjoyed income from the common estate, and the use of family assets assigned to them for their use during their lifetimes, but those heirs did not own their shares of the common estate. The arrangement was like a modern "remainder trust" under New York real-estate practice, a "remainder trust" in perpetuity. The legal personality of the family was the perpetuity of the common estate as a unit, a legal personality and executive power embodied chiefly in the management of the common estate.

These *fondi*, to use the Venetian name for such institutions, formed financial syndicates, much like Venetian-type insurance-company cartels of modern times, or the Lombard form of banking institutions. The financial power of these syndicates was used to gain income in three principal forms: (1) the oriental form of usury, in which the debtor surrendered possession to the financial creditor until the compounded principal and interest were repaid; (2) tax-farming, through which financial syndicates paid the government of a state a lump sum, in return for the right to assess and collect taxes for a designated period of time; (3) profits of price-speculation obtained through controlling monopolies over trade in specific classes of commodities.

For obvious reasons, such practices are sometimes named "merchant capitalism," as opposed to industrial capitalism.

These routine sources of income were supplemented periodically by financing of wars, such that the financial syndicates were granted right to designated parts of the loot seized by the conquerors. Over the ages, the advantages of financing both sides in such wars was not overlooked, a practice continued at the present moment in arms traffic into Central America. Under the Phoenicians based at Tyre, pure and simple piracy was a common variation on this same practice. In such ways, in modern times, through outrightly gangster practices, some of the most respected family names of Europe secured their original wealth and aristocratic titles. The slave trade was an important source of income to these same families.

According to the myths made popular in classrooms, the traffic in African slaves was begun by the Portuguese and continued by the British East India Company and that Company's partners among leading New England merchant families. The fact of such participation in the slave trade is true, but the dating of the beginning is off by millennia. The maritime traffic in captured slaves was begun by the Phoenicians of Tyre, continued under the Roman Empire, and was a principal source of revenue for the most respected merchant families of Byzantium, who organized the so-called Arab slave trade. This was a principal source of income to the financier families of Venice and Genoa into the nineteenth century. When the Genoese branch of the Levant Company took control of Portugal and Spain during the fifteenth and sixteenth centuries, the Levant Company's trafficking in African slaves became known as Portuguese.

It is impossible to understand the chief internal problems of large regions of black Africa today without knowing that the long history of Mediterranean-based trade in slaves is the principal feature of the internal history of black Africa from centuries before the Portuguese slave traffic. The dominant "industry" within entire regions of black Africa was the participation of some parts of the African population in gathering slaves from other sections. The tribal organization within Africa today is largely a product of those centuries of shaping the internal history of the region under the combined direct impact, and chain-reaction effects of the slave trade. Such monstrous crimes against humanity are the characteristic expression of the work of those who worship The Whore of Babylon.

The pre-1653 history of Mexico and Peru affords a concentrated illustration of the same characteristic behavior of the same Phoenician-Venetian model of *fondi*, of "families."

From the accession of Charles of Burgundy-Hapsburg to the throne of Spain, following the death of Ferdinand, the Genoese and Venetian families backing his rise to become Holy Roman Emperor took over Spain totally. Spanish behavior in the New World was already largely evil. The Genoese, Columbus, was no discoverer of new worlds; he had rather accurate maps of his trans-Atlantic crossing and destinations. Columbus was a scoundrel, victimized for failing to produce sufficient loot to satisfy the Genoese bankers who had financed the expedition. Once the Genoese bankers were in full control of Spain, aided by the Venetian control over the office of the Grand Inquisitor to deal with those who made annoying objections to the immorality of the arrangement, the looting of the American population proceeded. During a period of approximately a half-century, the populations of Mexico and Peru were reduced from levels of over twenty million persons each, to levels below two millions each, simply by applying the same principles of slave labor used by the Nazis against the concentration-camp populations.

These examples, the slave trade and Hapsburg gen-

Charles V: *The Hapsburg controlled by Venice, whose coronation unleashed a new dark age.*

ocide in Spanish America, are typical of the practices, and effects, of Chaldean, Phoenician, Byzantine, Venetian practices over millennia. The case of Sparta is a significant point of reference in the whole sweep of this history.

In classical Greece, there were chiefly two internal centers of Phoenician influence. The first was the state of Thebes, ruled by a homosexual cult—the Theban phalanx was based on sexual relationships among men. Thebes was self-identified as a Phoenician colony, founded by the perhaps mythical Cadmus. Not far distant was the second, more potent Phoenician institution of mainland Greece, the temple of the Cult of Apollo (Lucifer-Horus) at Delphi. This Cult at Delphi orchestrated every evil, every treason suffered by Greece during the long span of the Persian wars, and the Peloponnesian War. Among its productions was the experimental state of Sparta, complete with a concocted history, and the myth of Sparta's founding by Lycurgus. The ruling class of Sparta, too, was based on a dominant role of male homosexuality. It was one of the most hideous forms of society ever concocted, one which the Nazis much admired. It is these Phoen-

ician colonies within Greece, most emphatically Thebes and Sparta, which are the basis in record for the myth that Greek culture was based on the institution of slavery.

These opposing views on religion, finance, sodomy, and slavery, of republicans against Phoenicians, are exemplified by the highlights of classical Greek history. The republican, heroic conception of the individual human being in Homer, against the sickening Phoenician (Olympian) cult and "malthusian" dogmas of Hesiod. The republican constitution of Solon against the fascist constitution of Lycurgan Sparta. The tragedies of Aeschylus against the cult doctrines and degraded conceptions of the human individual in Hesiod and the dionysian dramas. The republican Socrates against the "leftist" so-called democratic faction of Athens which condemned Socrates to death. The republican Plato and his Academy of Athens, against the Cult of Delphi and that Cult's agents, the sophists, the rhetoricians, and Aristotle. The republican Alexander the Great, Academy at Athens, and Ammon, against the Macedonian faction of Philip, Delphi, Tyre, and the Persian Empire.

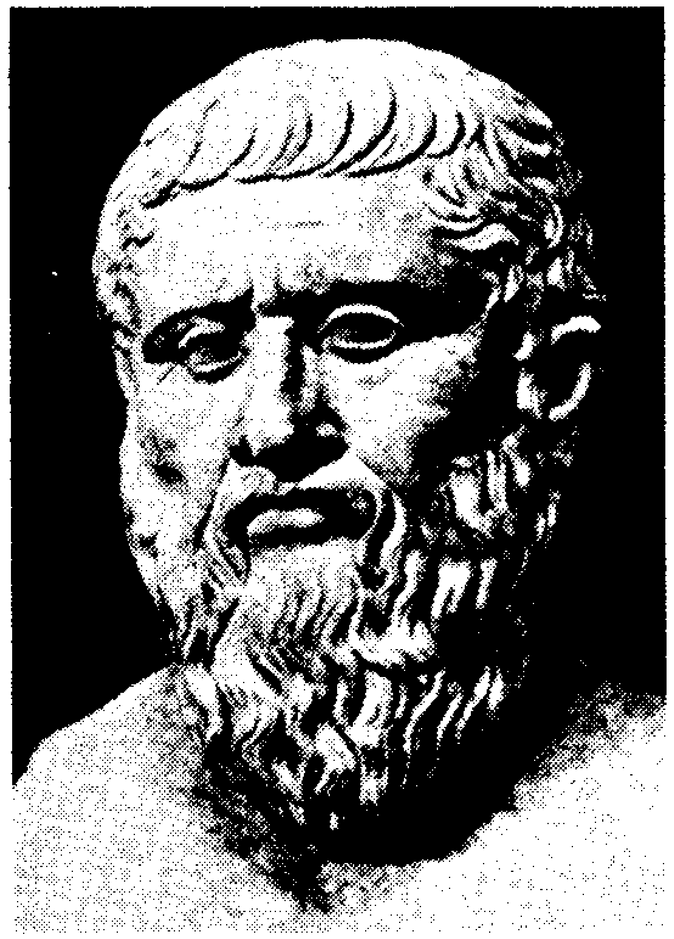
The issues of the fourth century B.C., the century of Plato, Aristotle, and Alexander the Great, are centered around a Phoenician project known from the presently surviving documents from that period as "The Western Division of the Persian Empire."[18] The characteristic features of all Mediterranean and European history to the present day have been shaped, whether directly or only indirectly, by the issues and consequences of this project and its temporary defeat by Alexander the Great.

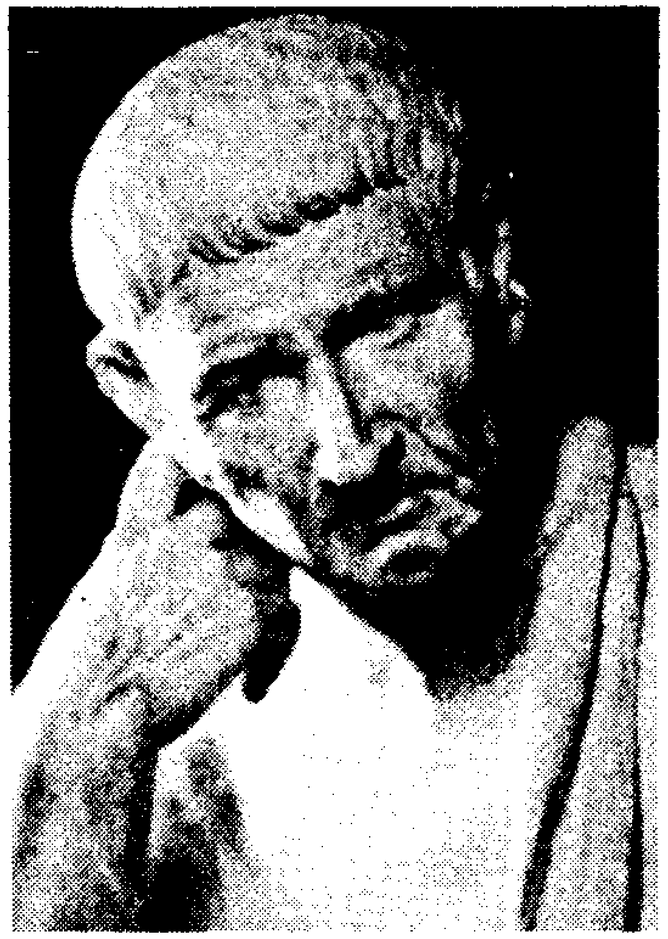
For more than two centuries, the Phoenicians had repeatedly failed in their efforts to bring about the Persian conquest of mainland Greece. The Babylonian military system was no match for Greek military forces

on land, as the march of the 10,000 Greeks through the heart of the Achaemenid Empire had demonstrated. The Phoenicians were no match for the Greeks in naval combat; the naval warfare of Athens had been the decisive force in defeating the Persian forces. So, the Phoenicians tried new bait, where earlier use of bribing and assault had failed. King Philip of Macedon was made partner to a new conspiracy, featuring the role of the Cult at Delphi. In the surviving documents, King Philip was promised hereditary rulership over a Western Division of the Persian Empire, to consist of the entire Mediterranean littoral, including Egypt, west of the Euphrates River, on condition that he do certain preliminary chores.

First, he must subjugate the states of mainland Greece, one by one. He would be assisted by the Cult at Delphi, and the cult's network of political agents, called the Peripatetics, inside Greece, and by Thebes. At Athens, the Delphi agents were called generically the sophists. During this period, the principal institution of Delphi's operations inside Athens was the School of Rhetoric of Aristotle's teacher, Isocrates. Surviving "check-stubs" show that Demosthenes was on the payroll of the King Philip of Macedon he denounced in his famous addresses known as the Philippics; in short, he was an agent provocateur, working to provoke Athens into the war with Philip which Philip very much desired. Aristotle, shortly after Plato's death, was forced to flee Athens once it was discovered that he, too, was a spy for Philip.

Second, once Philip had completed the subjugation of mainland Greece, he was to lead an army down through Asia Minor, to fight a prearranged battle with Achaemenid forces, to be fought in what is today a region of Turkey near Syria. The battle was not to be fought to a conclusion. A truce would be arranged. Out





Plato *and* **Aristotle:** *Their irreconcilable philosophies have divided European civilization ever since.*

of the truce, the Persian Emperor would "adopt" Philip, and grant him co-emperorship, as ruler of the newly defined Western Division of the Persian Empire.

The surviving documentation of this plot includes reference to certain specifications for the internal organization of the new Western Division of the Persian Empire. Philip must agree to impose upon the internal political and social organization of his empire a set of arrangements which the documents name as the "Persian Model," and which they refer to in other locations as the "Oligarchical Model." The oligarchical model, rule by an oligarchy, features control of the new empire from within by rentier-financier "families" on the Phoenician model, much like the Venetian oligarchy of *fondi*. In other respects, as well, it is to be the Phoenician-Chaldean system of political, economic, social, and religious order.

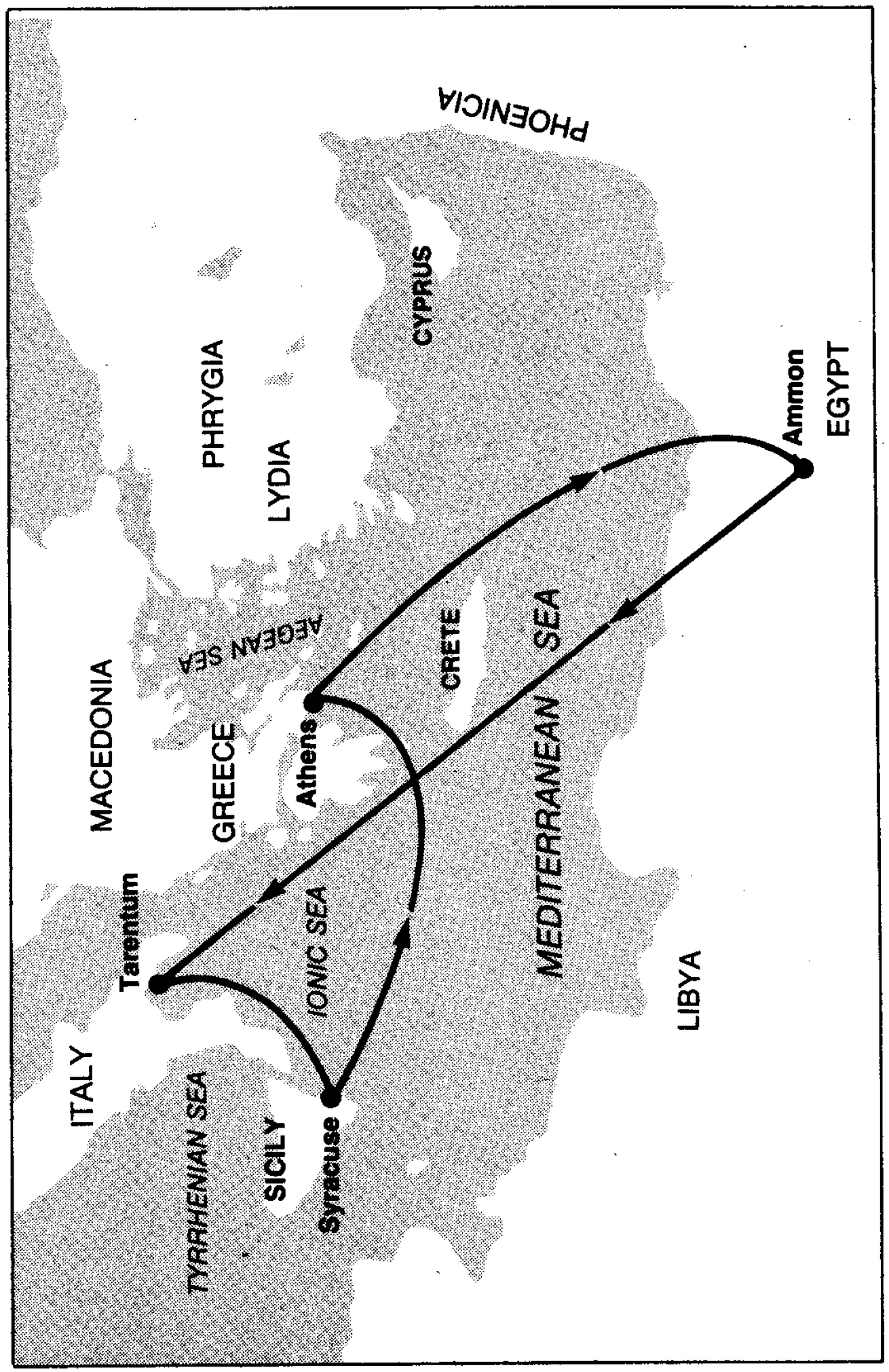
On the basis of that documentation, we define the

historic adversary of republicanism as *oligarchism*. We subsume the case of Lycurgan Sparta under the more general case of oligarchism.

At the moment King Philip had completed his subjugation of mainland Greece, and his troops were already encamped in Asia Minor, waiting for him to lead them to the second phase of the project, King Philip was assassinated. The assassin was a Macedonian officer who had been gang-raped by a group of officers of Philip's immediately personal circle. Philip had refused to do justice; the assassination is described as being an outcome of that particular matter of injustice. If that is in fact all that was behind the killing, that killing is one of the most improbable coincidences in recorded history. It unleashed the virtual civil war in Macedon through which Alexander the Great seized power.

There was a temple, which was a branch of the temple of Ammon, in Greece, with which the mother of Alexander the Great was associated. It was the temple of Ammon which enabled Alexander later to conquer and destroy Tyre. It was the same temple of Ammon in Cyrenaica, which organized the revolt of Egypt against the Persian rule at the same time Alexander was conquering Tyre. It was the same temple to which Alexander went to arrange the final phase of his conquest of the Persian Empire. Another set of coincidences? Moreover, this temple was allied closely with Plato's Academy at Athens. Although Plato himself was then deceased, it was his collaborators of the Academy who assisted Alexander in seizing power in Macedon, directed his military and political operations during the entire campaign.

In Asia Minor, Alexander restored the constitutions of the Ionian city-state republics he liberated, securing Ionian seamen and their ships as new forces for his cause. In the same phase of his campaign, Alexander

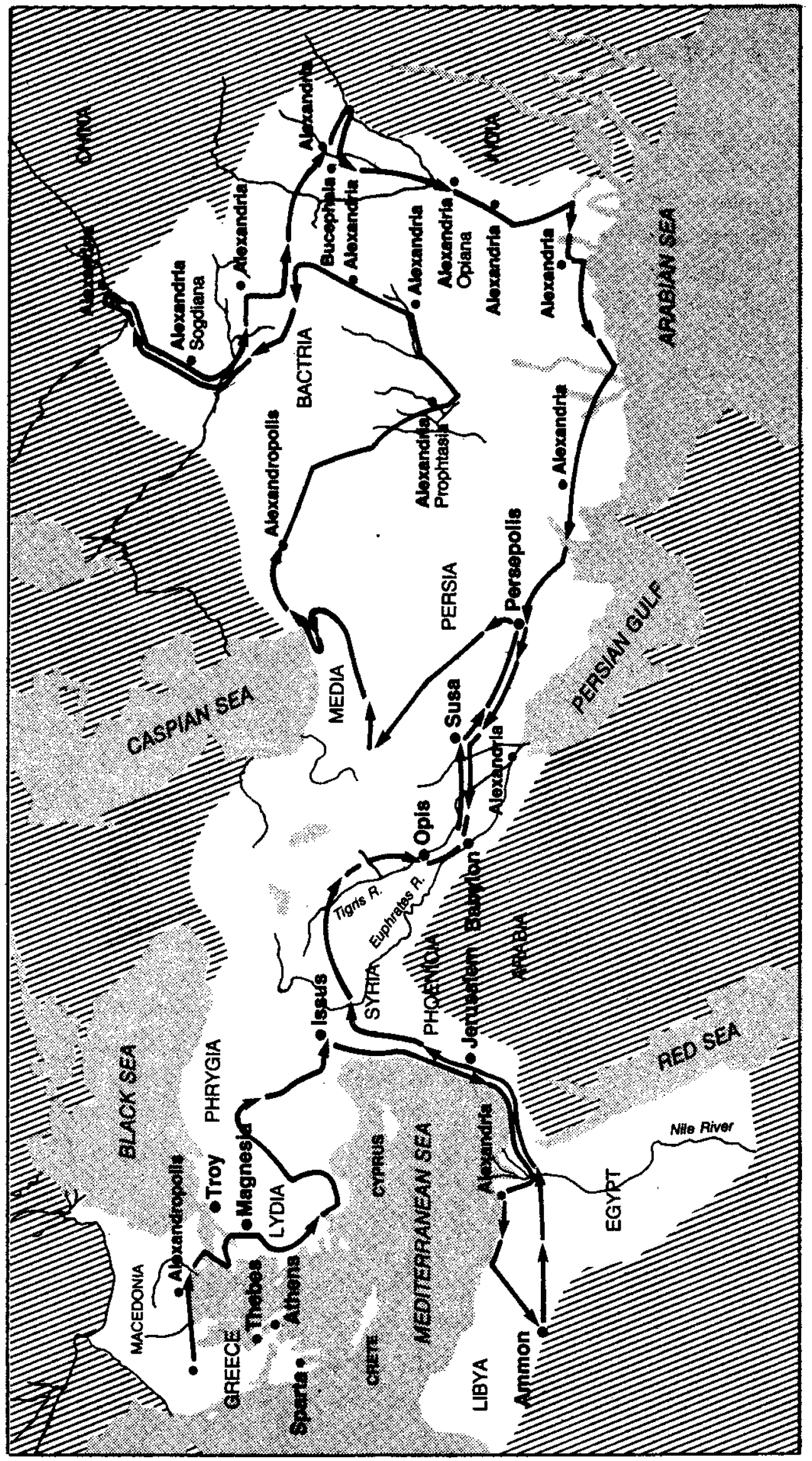


The world of Plato's alliance with the Cyrenaic temple of Ammon. Line shows Plato's travels.

established a system of central currency and banking much resembling that later established under President George Washington. He went to the prearranged battle, but rejected the profferred Western Division of the Persian Empire, and fought the battle to a victorious conclusion. He destroyed the center of evil, Tyre, as Thebes was destroyed in Greece. He continued to destroy the Persian Empire itself, establishing a vast new order of new cities and projects for developing world trade, whose further intended features are stipulated in a document called "the testament of Alexander."

His enemy, Aristotle, attempted to stop this, from a safe distance, by organizing the assassination of Alexander by poisoning. One of the plots was detected. Aristotle's nephew was condemned to death for his leading part in the attempt. The second plot succeeded; the names of the two homosexual boys, and the Macedonian general (lover of one of the boys) directly involved in the poisoning, are known from surviving documentation. There is a document which purports to prove that Alexander was not poisoned, but died of an infection. This document places the place of Alexander's death in a temple which was first founded approximately a decade later; this and other internal features of the document prove it a hoax. Aristotle fled Greece to the protection of Ptolemy ahead of an arresting party; what proof the Greeks then had of Aristotle's direct involvement in the second assassination attempt, we do not know at the present time, and may never discover. We do know that Aristotle's specialty was poisoning by methods including botanicals.

The issue of Aristotle is admittedly a sensitive one, since the commentaries on some parts of Aristotle's work by Thomas Aquinas, and the popularity of Aristotle with the earlier Dominicans as well as the fanatical use of Aristotle by the Jesuits to the present



The campaigns of Alexander the Great.

day. There has been some outcry against LaRouche over this issue of Aristotle, especially from representatives of the Jesuit order in Italy, Germany, France, Belgium, and Spain, as well as the United States itself. How clear is the evidence against Aristotle, and what do we make of the toleration of aspects of Aristotle's work within sections of the Roman Catholic Confession as putative counterevidence against LaRouche's view of the matter?

First, as to Aristotle's political history. That he was an agent of the Cult at Delphi, a Macedonian agent of King Philip, his implication in one of the poisoning attempts, there is no disputing. These are simple matters of conclusively documented historical fact. This poses the question whether Aristotle's despicable personal conduct in political matters of his time invalidates his work as a philosopher. It ought to be sufficient to concentrate on the content of two of Aristotle's writings, his *Politics* and his *Nicomachean Ethics*. These writings portray one of the most evil minds which ever lived. To see any prescience of Christian theology or morality in these writings is proof of some grave mental impairment of the person who advocates such a view. Can we, nonetheless, overlook those important writings, and find merit in other writings of Aristotle's? According to the great fifteenth-century canon of the Roman Catholic Confession, Cardinal Nicholas of Cusa, we cannot. The Aristotle of the *Politics* and the *Nicomachean Ethics* is a priest of The Whore of Babylon, and provably so on those grounds alone, if no record of his life's activities otherwise existed.

Aristotle was unknown within the Roman Catholic Confession until the middle of the thirteenth century, except through the commentaries on Arabic commentaries on Aristotle circulating chiefly as the translations of Averroes. Curiously, the Inquisition which began, during 1230–1233 A.D., as precisely an effort

to eradicate Averroeism in Western Europe, became—through Albertus Magnus, chiefly—a movement to propagate Aristotle's influence.

From the beginning, as illustrated most emphatically by the opening verses of the Gospel of St. John, and by St. Paul's ministry, Christian theology had been Neoplatonic, referenced to chiefly the *Timaeus* dialogue of Plato. On this point, the Christian Apostles and their immediate successors were in agreement with the author of the Jewish renaissance of that period, Philo of Alexandria—the Philo whose work gave Judaism the cultural equipment needed to survive throughout the diaspora's many hazards. This standpoint, Judeo-Christian Neoplatonism, as distinct from the Platonic schools of the period, is also central to the work of St. Augustine, the great convert of St. Jerome whose work motivated the rise of Western Christianity. The Neoplatonic tradition of St. Augustine was the central feature of the work of Dante Alighieri and his successors, the foundation of the fifteenth-century Golden Renaissance. The destruction of the Western Church and Papacy accomplished by the hundred years from the rise of Aristotle's influence, was reversed through a factional struggle within what was known as the Conciliar Movement, in which the young Nicholas of Cusa, author of the great *Concordantia Catholica*, led in restoring the Papacy, and in a continuing effort to cleanse the Church of the destructive forces unleashed during the thirteenth and fourteenth centuries.

The Neoplatonic renaissance of the Roman Catholic Confession during the fifteenth century was the target for attempted destruction unleashed by Venice and Genoa after the death of Cesare Borgia, and the use of Spanish infantry to crush the forces of the Renaissance within Italy itself.

First, Venice sponsored the cause of Martin Luther

to begin a process of schism. Venice orchestrated the circumstances of the 1525–1526 Peasant War in Germany, and that butchery of the helpless, defeated forces demanded by Luther. Venice deployed its client, Charles V, to crush and sack the city of Rome, and to impose Venice's will on the Papacy by force. Venice detained Ignatius Loyola in Venice, and obliged him to assume leadership of an order created by the *fondi* of Venice, the Jesuits, later imposing recognition of that order upon the Papacy. Genoa used a former fellow student of Loyola's, John Calvin, to create a schismatic cult order in Geneva, and purchased the conscience of England's Henry VIII, to create the schismatic Church of England. In large part, Venice and Genoa directed both sides in the religious wars associated with the Counter Reformation, developing the Jesuits as Venice's intelligence-arm against every institution established by the Golden Renaissance.

The Papacy won the immediate battle against Venice in 1653 A.D., through a personal agent of the Pope's, Mazarin, sent to France to become the successor to Cardinal Richelieu, and, later, for a time banned the Jesuit order—until the Congress of Vienna forced the Vatican to restore the Jesuits to full standing. As to the Church's toleration of the Jesuit order's existence to the present day, LaRouche prefers not to meddle in the matter internal to the sovereignty of a religious denomination. He opposes the Jesuit order for what it is and what it does, especially the evil it is doing in Central America. What the Pope chooses to do about the matter is an internal affair of the Church. LaRouche merely observes that Church's longstanding policy of seeking to avoid schisms, and to avoid any actions which might rashly provoke schisms. Nonetheless, the facts concerning Aristotle and Aristotelianism are indisputably clear; if the Church defends

Cardinal Mazarin: *The Pope sent him to France to organize the defeat of the Hapsburgs and Venice.*

Aristotle, then the Church is unquestionably in serious error on that point.

Although the wave of assassinations of Alexander's friends and family members, all done by Aristotle's political accomplices, aborted the great republican project begun by Alexander, it was not possible for the authors of the Western Division plot to revive that project until the middle of the first century B.C., approximately 250 years later. The destruction of the institutions of the Phoenician plot, while not complete, was so extensive, that more than two centuries of rebuilding oligarchical forces was needed before the project could be revived as the Roman Empire under Augustus.

There was nothing good in the so-called republic or empire of Rome. From the earliest indications, as Livius notes the point, the republic of Rome was under the control of the Cult of Apollo. St. Augustine's examination of morality under the republic is of enduring worth for those interested in beginning their own scholarly approach to this matter. In operations very much

like those the same cult orchestrated inside Greece, the tiny city of Rome defeated first the opposing urban center of the small Latin population of Italy, and then manipulated the much larger states of the Etruscans and Italian-speaking peoples into chopping one another up to the ultimate advantage of Rome. Finally, the Greek states of southern Italy and Sicily were subjugated.

Rome trembled when a dissident faction of Carthage, led by Hannibal's father, developed a powerful base in Spain. Had Hannibal had siege tactics, he would have conquered Rome. The Roman victories over Syracuse and in the concluding Punic War, repaid the patience of the Cult of Apollo (whose headquarters had moved to Ptolemaic Egypt). The conquest of Greece, of Gaul, and the securing of the Rhine as a boundary, established the preconditions for the creation of the Roman Empire. The Phoenician cult's leaders in Egypt (now functioning under the slight, Ptolemaic modifications of the Isis-Osiris-Horus cult as a "mystery religion"), negotiated first with Julius Caesar, then with Mark Antony, and finally, successfully, with Augustus. The domains under the rule of Rome were subjected to a new set of institutions, all modeled on the "Persian Model," including an immoral doctrine of law coinciding in all features with Aristotle's *Nichomachean Ethics*. All effective resistance to the new world order had been crushed; Rome would die in the West by destroying itself from within, not by the hands of revolt or outside forces. It died internally as Sparta's power had ebbed away, through effects of homosexuality spreading among the ruling families and the lowering of Rome's potential relative population density through the implications of the institution of slavery.

The only counterforces were the pockets of the republican tradition, especially among the Greeks, and

in the rise of Christianity. Without Christianity, European civilization later would have been impossible.

In a few moments, when we turn to the bearing of all this on the present-day strategic conflict with the Soviet Union, the importance of what we have already reported from this part of history, and what we are about to add immediately, will show an additional kind of significance, in addition to the argument being developed up to this point. It is the history of Byzantium which accounts most directly for the evils suffered in the United States and Western Europe today, and which accounts directly for the gravest features of the Soviet problem.

When the Emperor Constantine moved the capital of the Empire to the more populous, Greek-speaking east, the penetration of Christianity among that part of the Empire's population was so great that he chose to attempt cooptation as a tactic replacing the traditional practice of brutish repression. It proved a shrewd tactic. By "legalizing" Christianity, he was able to establish and influence an episcopate from above, including appointment of his choices to the position of Bishop, such as the significant case of Arius, the father of Arian Gnosticism. The general direction of efforts was to tame Christianity into becoming part of the Roman Pantheon, imposing upon Christianity, top-down, the characteristic features of the Phoenician cults, especially the Roman Empire's official "mystery religion," the Ptolemaic version of the cult of Isis-Osiris-Horus—to the extent of having Christian priests adopt the dress of the priests of Isis. By about 520 A.D., the Christians appeared to have lost the battle of resistance begun with the nominal victory against Arius in the adoption of the Nicene Creed, at least to the point that the Eastern Rite's episcopacy was now almost totally Gnostic.

The Emperor Constantine: *He tried to destroy Christianity from above, by legalizing it.*

The fight between Greek Christians and the Gnostic hierarchy of the Byzantine Church did not end with Justinian. There were political eruptions at the beginning of the present millennium and the successful Paleologue insurrection later. For centuries of Byzantium after Constantine, the Emperor and, increasingly, the Byzantine Church's hierarchy represented the worship of The Whore of Babylon thinly veiled behind Biblical verbiage.

The resistance to Gnosticism within Byzantium centered in what we would describe today as Greek nationalism. The fight between the Emperors and Gnostic episcopacy, on the one side, and the Christians, on the other, was defined by repeated efforts to outlaw the teaching of classical Greek, and to forbid subjects of Byzantium to be designated as "Greeks." Classical Greek meant, in practice, the study of Plato's dialogues; it was in the use of expressions of the classical Greek language associated with the writings of Plato, that the popular strength of Apostolic Christianity lay. It was not as paradoxical as it might appear, that from an early stage, the efforts of the Gnostic episcopacy to suppress classical Greek were accompanied by insistence on making Aristotle the official philosopher of the Byzantine Church's hierarchy.

Although the formalized break between the Roman Catholic Confession and the Byzantine Church occurred at the beginning of the millennium now drawing to a close, the substantive break had been established much earlier with the writings and influence of St. Augustine. It is mythological to believe the gossip that the break was occasioned by the mere insistence of the Western Church on the use of the term "Filioque" in the Latin liturgy. Was the Byzantine hierarchy sincere in giving delphic lip-service to the Nicene Creed's insistence on the *consubstantiality* of God and the Logos? Did they really accept the authority of the Gospel

of St. John? They did not; the issue of the "Filioque" was that this formal issue of liturgy put to the test all the other substantive questions, questions which separated Christianity from Gnosticism—exactly as St. Augustine had demonstrated these points exhaustively.

From the standpoint of this Special Report, the issue here is not the issue of which faction, the Byzantines or the Augustinians, were the letter-perfect, true heirs of the Apostles on technical points of doctrine. From the vantage point of statecraft, as distinct from the-

St. Augustine: *The work of St. Jerome's great convert saved Christianity in the West.*

ology as such, Apostolic Christianity, as the Gospel of St. John and the ministry of St. Paul exemplify it, radiate a conception of the universe and of the human individual in the universe which accords fully with the republican view. Like Jews in the footsteps of Philo, all Christians in the footsteps of St. John and St. Paul are republicans; the range of forms of republicanism this may represent is admittedly large—from monarchies to presidential republics—but the line of separation between all such varieties of republicanism and oligarchism is sharply defined. The Gnostic proceeds from an irrationalist conception of the human individual, to the degree that oligarchical forms of society are those which Gnostics find instinctively consistent with their religious ideas.

The division between Judaism and Christianity, on the one side, and Kabbalism and Gnosticism on the opposing side, does not begin with the New Testament Gospels, but already in the Book of Genesis: in the admonition that mankind must exist by labor, and in this practice must be fruitful and multiply, and exert increasing dominion over all other aspects of nature. The attempt by Gnostics in the hierarchy of the Church of England, and other bodies, to replace the Bible with a Gnostic Bible, in which man is instructed to live in harmony with beasts, plants, and rocks, as moral equals, illustrates the point. This is a Gnostic's "malthusian" dogma to which the evil Hesiod would enthusiastically subscribe. All the essential, irreconcilable differences between Christianity and the Byzantine hierarchy are implicit in this matter of the Book of Genesis. All of the principles of republicanism also flow, by implication, from the same admonition.

The degree to which society succeeds or fails in satisfying that admonition, is measurable as *potential relative population density*. How many individuals can be sustained per average square kilometer, by means

of the labor supplied by members of the society inhabiting that territory?

In the simplest form of society treated in the literature, a primitive hunting-and-gathering society, between ten and fifteen square kilometers are required to sustain the life of an average member of that society. It is a very miserable form of society. Life-expectancies are below twenty years of age; it is a society whose activities are dominated by children below adolescence, children dominated in turn by brutish mothers and foster-mothers, the prototype of "Great Mother" or Isis. It is a bestial form of society, not much above that of baboons. The human inhabitants of our planet could never have exceeded ten millions or so individuals. Through technological progress, by the eighteenth century, the population potential had reached toward one billion individuals, a hundred times the level of primitive society. Now, there exist an estimated four-and-a-half billions persons. With full use of both existing levels of technology plus those available during this century through directed-beam and related technologies, the potential population would become tens of billions of individuals, with a material standard of living equal to or better on the average than that of the United States during the early 1970s.

That indicates what is signified by fulfilling the admonition of the Book of Genesis.

These few, but crucial, experimental facts concerning human existence are sufficient to prove that human nature is different than that of the beasts in a fundamental way. No beast could willfully increase its potential relative population density by three orders of magnitude. Mankind, alone, is able to develop and transmit to succeeding generations improved knowledge concerning the lawful composition of universal creation. Insofar as man proves such changes in his knowledge, by demonstrating that such changes increase the potential relative population density of the human species as a whole, man has proven in a unique way that such changes in knowledge correspond to improved mastery of the lawful composition of universal creation.

Such scientific and technological progress is not merely optional. Without continued such progress, a society must either collapse into ruins, or be rescued through its conquest by a form of society which sustains such forms of progress. Dennis Meadows and Jay Forrester, the authors of the malthusian Club of Rome's *Limits to Growth*, were chiefly hoaxsters in their conduct of that study. They falsified the extent of natural resources known to be available greatly, thus presenting an image of early ecological collapse which was frightening, and false. Their model excluded, by definition, all technological progress; an astonishing assumption in light of the recent five hundred years of human practice. Yet, amid all such frauds employed in concocting their hoax, there was one kernel of truth. At any time any society begins to practice zero technological growth in its labor, that society will deplete the most plentiful and richest forms of natural resources, to the point that it brings an ecological collapse upon itself—as the Babylonian form of tax-farming, in imposing such a policy in effect, repeatedly caused the collapse of society in Mesopotamia.

The depletion of natural resources is expressed, in the most concentrated fashion, by a rise in the percentage of the total labor of a society needed to supply essential raw materials. This rise reduces the percentage of total labor available for other phases of production, and so lowers the average output of total production per capita. This means that the number of mouths nourished by the labor of the average member of the labor force drops: the potential relative population density drops. As this potential drops below the

level of existing population, the Four Horsemen of the Apocalypse enter.

Technological progress overcomes this danger in two ways. First, it increases the productivity of labor, to the point that the cost of producing necessary raw materials does not rise as measured in quantity of labor required. Second, technological revolutions redefine the spectrum of natural resources, breaking all limits to natural resources associated with a lower level of technology.

The essential feature of scientific progress is not isolated discoveries. The essential feature is the development of methods of discovery, methods which are provably effective in guiding mankind to a series of successive, successful discoveries. Just as isolated discoveries in scientific work are produced by testing of specific experimental hypotheses, the method of discovery is an hypothesis about the kinds of experimental hypotheses associated with an entire range of successive scientific discoveries. The hypothesis associated with a method of discovery is therefore called an *higher hypothesis*. This higher hypothesis, the method of discovery, does not remain constant with mankind; it, too, is improved by scientific progress. This improvement of the higher hypothesis, LaRouche has shown in various published locations, is itself the subject of an hypothesis, an hypothesis which focuses on the question: What directions of development of science lead predictably to an improvement in scientific method, to perfection of the higher hypothesis. Although LaRouche has devoted considerable attention to making this *hypothesis of the higher hypothesis* understood by scientists of today, and others, it was not his original conception. The *hypothesis of the higher hypothesis* was already a central feature of the dialogues of Plato.

This notion of the hypothesis of the higher hypothesis was the central feature of Plato's notion of the

Logos, the same Logos which the King James Version of the Bible translates as "Word" in the opening verses of the Gospel of St. John. Man's perfection of his knowledge of the hypothesis of the higher hypothesis represents, in Plato and Judeo-Christian Neoplatonism, man's process of perfecting his knowledge of the *Logos*, the efficient Will of the God whom Plato names the Composer, in his *Timaeus*. It is the unity of God, as the universal being of Creation, with that lawful process of action, the Logos which is His Will, which is the principle of Consubstantiality, as this occurs in Plato's *Timaeus* and in the opening verses of the Gospel of St. John.

The connection between this feature of the Gospel of St. John and the cited admonition from the Book of Genesis should be apparent. By directing the perfection of his labor according to this admonition, mankind forces himself to discover and to perfect knowledge of the hypothesis of the higher hypothesis. From this standpoint, that quality which absolutely distinguishes human nature as above that of all beasts, is a *divine* potentiality.

The crucial point of distinction of Christianity, as also stressed in the Gospel of St. John at the outset, is that formal knowledge of the Logos is not sufficient. Man's will must be bound to the Logos by a great act of love; hence, St. John states the necessity of Christ's birth and Crucifixion, as he writes in the King James Version: "For God so loved the world that he gave his only-begotten Son. . ." This act of love distinguishes the "Old Adam," the man of obedience to duty, from the "New Adam," the man governed by this act of love: a love expressed toward the Logos, such that the Logos itself, as willful, lawful action, flows from perfected man as from God, as from Christ.

This view is implicit to a large degree in Philo's theology. The point to be underlined concerning the

"Filioque" issue, LaRouche insisted in his published writing on this subject, is that for professed Christians, the rejection of the "Filioque" principle expressed by the Gospel of St. John, in particular, is not only a rejection of Christ, but a view of Christ which rejects the entirety of Christianity, and also the principles of Judaism of Philo. Such rejection is an open license for degrading the profession of nominal Christianity into some Gnostic cult-form.

From the standpoint of statecraft, ignoring theology as such, this same treatment of the scientific evidence supporting the admonition of Genesis, signifies that we require a form of society which is committed to realization of scientific and technological progress. The purpose of this progress is not merely improvement of the material conditions of mortal existence. The purpose, LaRouche stresses, is to produce the circumstances necessary for *fostering the development of the divine potentiality within each individual member of society*. It must be a society premised on the corresponding sacredness of each and every human life, upon the development of the divine potentialities of each individual to the fullest possible, and upon affording each such individual opportunities to express those potentialities in some way which advances the general condition of mankind in this regard.

That standpoint in statecraft is republicanism, insists LaRouche.

In the West, St. Augustine's program was mediated chiefly through the Irish monks, leading into the establishment of the first significant form of republican government, by Alcuin and Charlemagne. Taking into account the human flaws to which even the best forms of government are subject from time to time, the governments of Charlemagne, of the Salier and Hohenstaufen emperors, into 1250 A.D., represent with certain interruptions, a general progress in the human

condition in Western Europe. These developments and directions in the West are to be contrasted with the characteristics of society under the influence of the Byzantine order, of the Gnosticism rampant in the hierarchy of the Byzantine Rite. Christianity produced a superior quality of human being, morally, a superior individuality which, in all its setbacks by adversity and its own human limitations, produced the foundations of the highest form of civilization yet to appear. Compare this with the history of Byzantium and the Levant generally.

The greatest single source of reversals in the West was efforts to destroy Charlemagne's design from Byzantium. From the time of Charlemagne himself, pagan tribal forces, either outrightly heathen or Gnostic Arians, tribes under the direction of missionaries from Byzantium, were deployed against Charlemagne's order. A case in point is a collection of Saxon tribes who refused to convert to Christianity, and fled into the region of Denmark known as Jutland, where they acquired the reputation of being "Normans." These Saxon tribes launched an attack on the north of France, and became established in Normandy. Under direction of Byzantine forces operating partly through Venice and the Cluniac Order, they conquered England in 1066 A.D., setting England's economic and cultural development backwards to a degree approximating a descent into a cultural dark age. The Norman Conquest was conducted with many of the features of a formal crusade, by forces associated with the monstrously corrupt Cluniac order and what became known as the Welf (Guelph) faction centered around Mathilde of Tuscany.

The rise of the Guelph faction during the eleventh century, like the rise of its successor, the Black Guelph faction of the late fourteenth century, was a development closely associated with the growing power of

Byzantium's principal "Trojan horse" in the West, Venice. From the point of revolts against the old Byzantine order, during the eleventh century, the Aristotelian-Gnostic forces of Byzantium concentrated their leadership increasingly in the Byzantine colony of Venice and in the autonomous territory of the monastery at Mount Athos, the latter the world-center of Gnosticism to the present date. In Italy, Venice was allied with a not-insignificant power around the city of Rome, a Roman circle composed of a mixture of old Roman patrician and imperial families, and of Levantine rentier-financier interests which had already been prominently associated with that city's political life during the reign of the Emperor Nero.

Charlemagne had already detected such corruption around the Church in Italy during the period of his own coronation in Rome. By the eleventh century, these forces had greatly increased their power. It was these forces, allied to the Aristotelian-Gnostic faction of Byzantium, which directed the Norman Conquest, and which, during the same period, murdered three Popes in rapid succession, in the course of their efforts to seize control of the Papacy.

Taking into account some minor changes in the composition of the forces as a whole, it was the same Venice-centered faction which seized leading positions of power in Europe over the period beginning with the death of the Emperor Frederick II in 1250 A.D. This was the faction which used its power to impose the legitimation of Aristotle upon the Western Church. It was the same faction, through instruments of Lombard bankers such as the houses of Bardi and Peruzzi, whose usurious tax-farming and related Phoenician practices collapsed the economic and social conditions of Europe, into the accelerating depopulation culminating in the Black Death epidemics. Between the ritual assassination of the heir of Frederick II and the close of the

Black Death epidemics, half the parishes of Europe ceased to exist. Although about one-third of the population living at the beginning of the Black Death was killed by the disease, the population levels of Europe over the entire period dropped by more than one-half.

Between the time of Mathilde of Tuscany and the death of Frederick II, a significant portion of the families associated with the Welf faction had been civilized, to the point that during the second half of the thirteenth century, the nominal Welf forces split into two opposing forces. The oligarchical faction took the name of "Black Guelph." The opposing faction, associated with a leading part by Dante Alighieri, was designated the "White Guelph." The Black Guelph, the Venice-allied oligarchical forces associated with Lombard banking-houses such as the Bardi and Peruzzi, won, and became known to the present day as "the black nobility." By this period, the Byzantine colonies of Venice and Genoa had been unified in general policy through intermarriages among the leading rentier-financier aristocratic families of the two cities. Both were Black Guelph centers, to the present day.

These Black Guelph forces regained power during the course of the fifteenth century, recovering from

The **Emperor Frederick II:** *His death cleared the way for unleashing a Dark Age.*

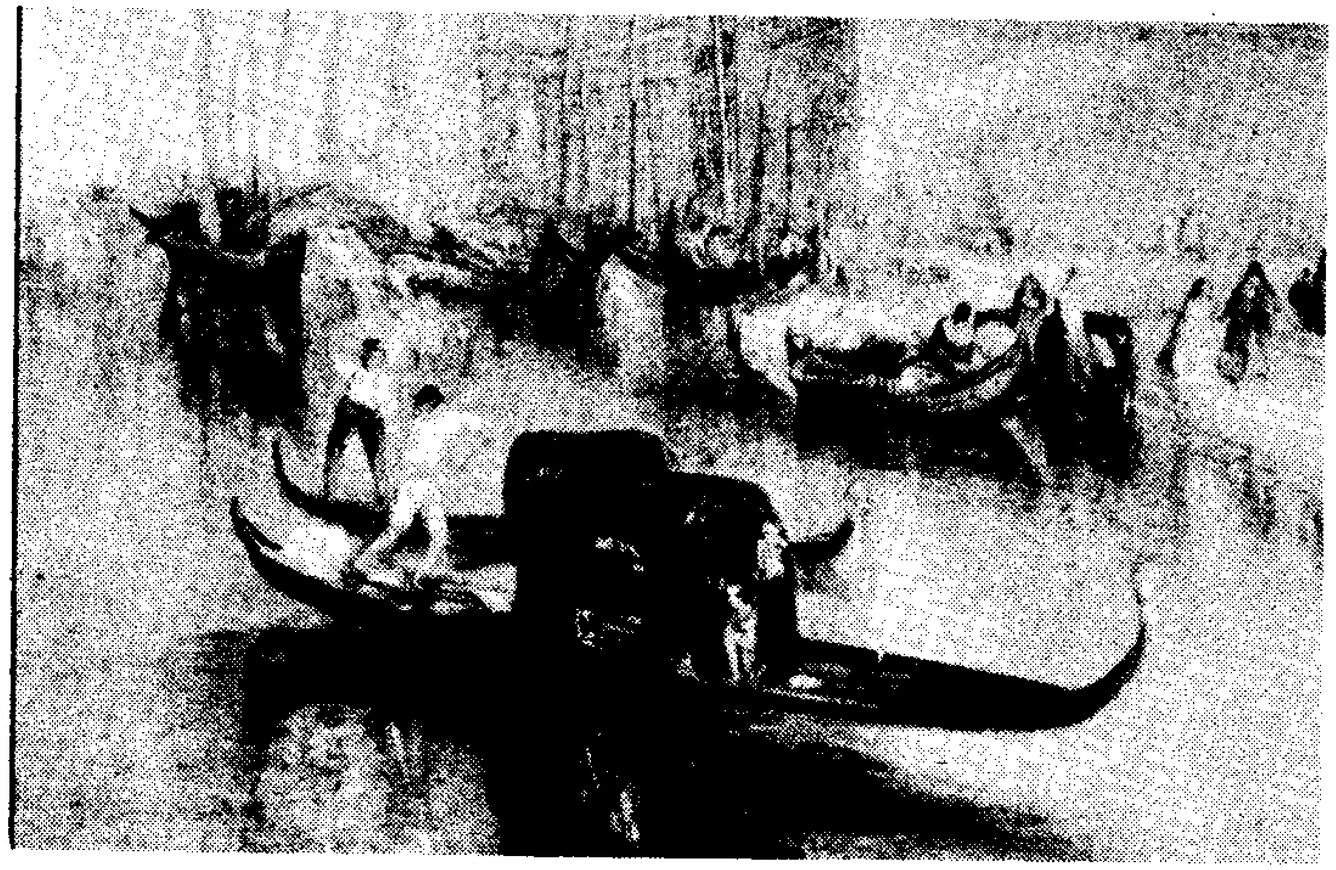
their bankruptcy during the fourteenth century. The most important of the operations by means of which they consolidated that power were two: the Fall of Constantinople in 1453 A.D. and the accelerating takeover of Spain and of Ferdinand's wife, Isabella, consolidating the latter with the accession of Charles at the death of Ferdinand. The Fall of Constantinople bears significantly on the background to the Soviet strategic problem of today, so we identify the essential features of the operation at this point for later reference.

The Paleologue rulers of Constantinople were enemies of the Aristotle-Gnostic faction in Greece, who had dispatched their leading statesman, George Gemisthos (Plethon) to Italy, to collaborate with Cosimo di Medici. It was Plethon who brought the works of Plato to Western Europe, together with numerous other valuable documents which contributed a key part in the elaboration of the Golden Renaissance. To strike a counterblow against the rise of the Neoplatonic republican faction in Western Europe, Venice struck at the most vulnerable flank, Constantinople. Venice, the Athos-coordinated hierarchy of the church in Greece, the Roman rentier-financier colony, and Genoa, collaborated with Muhammed the Conqueror to effect the Ottoman conquest of Constantinople. The Roman element supplied the Ottomans with designs for siege-cannon and gunners to man those cannon. The Greek church issued a ban against support for Constantinople from among Greeks. Genoa supplied Constantinople with the 4,000 mercenaries who opened the gates of the city by night to admit the Ottoman troops.

In return, the Ottoman Emperor granted Venice large chunks of conquered Greece, and gave the Venetians control over the Ottoman intelligence service, the dragomans. The Patriarch of the Byzantine Rite was rewarded for his treachery, by being given administration of all non-Islamic populations within the entirety of the Ottoman Empire. How this affected the later history of the Balkans, and the history of Russia to the present day, we shall consider in due course here.

One other feature of this history, the connection of the Black Guelph faction to the issues and adversaries of the American Revolution, requires summary account at this point.

During the early fourteenth century, Genoa had used its agent Robert Bruce and his complement of Templars to conquer Scotland, establishing the ruling oligarchy and financier interests of Scotland as a Genoese colony, or the equivalent, down to the present day. The Genoese had consolidated their control over Burgundy during the late fifteenth century, developing the financial center of Geneva as a leading Genoese partner in financial and political matters. They had



Venice: *Together with its accomplice, the monastery at Mount Athos, the center of evil for nearly a thousand years.*

established a powerful added foothold in England, by financing the purchase of former church-estates from Henry VIII during the so-called English Reformation. In a bloody coup d'etat conducted over the period 1589–1603, they had placed James I on the throne of England. During the same period, they took over the financier interests of the Netherlands, partly by way of Geneva, and had made the House of Orange their political agent. Although significant republicanism persisted as an organized force in the Netherlands until the crushing of de Witt later in the century, the republican forces of that country had lost power with the fall of Oldenbarnevelde in about 1607. These developments set the stage for the process leading into the American Revolution.

When James I ascended the throne in 1603, he acceded to the demands of his foreign financial backers, by awarding them a tax-farming monopoly over the public debt and public revenues of England, and appointed their agent, Francis Bacon, his Chancellor of the Exchequer. The looted economy of England collapsed; the repressive measures accompanying these developments, gravely worsened under Charles I, prompted the Commonwealth (republican) faction's colonization in North America, and the organization of resistance leading into the Civil War and Charles's beheading. Oliver Cromwell, connected to the English branch of the Genoese Pallavicini family on his father's side, failed to deal with the most crucial aspects of England's financial problems. Treasonous behavior by the Presbyterians brought Charles II to the throne in 1660, and after that the grip of the Genoese, Swiss, and Dutch financial oligarchs on Britain increased greatly. During the recurring wars between Britain and France into 1763, the British had not dared to conduct a concerted attack on the charters of local self-government or economies of the North American colonies, despite

the fact that the forces which had established the most important of these colonies had been the Commonwealth Party faction, and that the political temper and much of the leadership of the colonials was predominantly in the political spirit of John Milton.

The only way in which the colonials could hope to resist the British campaign launched in 1763 was to ally with the republican forces throughout Europe, to gain technical and other support, and to develop the capability to hit Britain from the European flank. By the logic of the situation, combined with his own extraordinary abilities, what Dr. Franklin assembled for his trans-Atlantic conspiracy was the entirety of the republican faction of Europe, the entire benefit of what survived from as distant as the lifetimes of St. Augustine and Charlemagne. What he acquired as enemies to himself and the American cause, was the entirety of the oligarchical forces of Europe, chiefly the British and Swiss oligarchical forces. All of the outcome of the more than 2,000 years of history we have summarized here, was concentrated into the form of Franklin's allies and adversaries, including Franklin's efforts, from Paris, on behalf of creating an in-

King James I. *With his accession in 1603, England was turned over to foreign moneylenders.*

dependent republic of Greece based on the resurrection of the classical Greek language of Plato.

When Friedrich Schiller defined the issue as being the opposing traditions of Athens' Solon and Lycurgan Sparta, Schiller, the leading historian of that period, merely expressed more precisely what leading authors of the U.S. Constitution had also said. The entirety of that long sweep of preceding history was expressed in a concentrated form by the trans-Atlantic conspiracy which created our constitutional republic.

This is the root of LaRouche's philosophy of government, not only as this bears on our administration of our domestic order, but as the principled definition of what are our vital foreign-policy interests. When we foster the power of a Lycurgan form of state, we nurture an enemy of the vital interests of the United States; when we foster the prosperity and security of republics, we serve our vital interests by strengthening the cause of republicanism in the world in general.

The Roots of The Third Rome

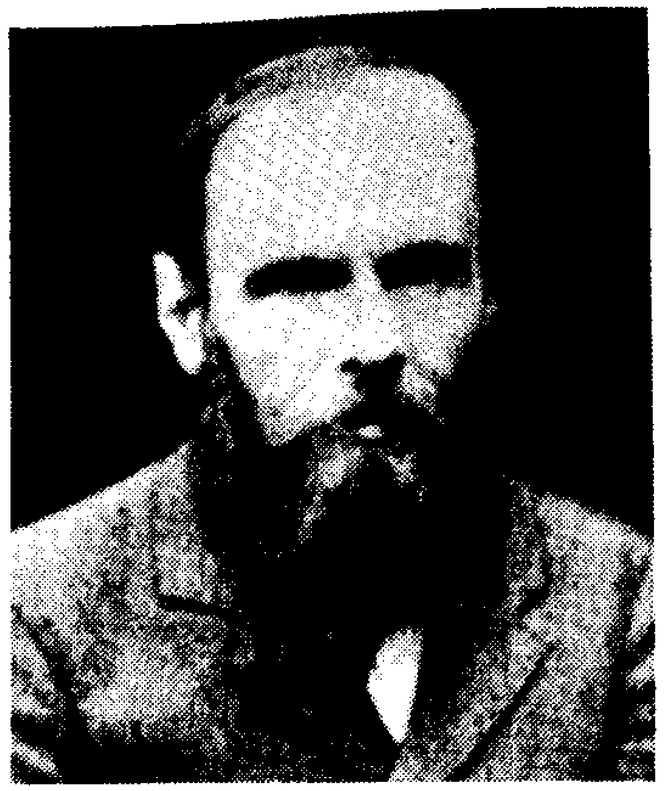
Recently, a conference on the subject of the "Third Rome" was convened at Rome. During the proceedings, one scholar dated the sixteenth-century spread of that "Third Rome" doctrine to Russia to 1520, when this prophecy had been first brought to Russia, by a missionary from the Gnostic cult-center at Mount Athos. The form of religious belief among Russians which provided fertile ground for spread of such a cult-belief had been embedded in the Russian Church many centuries earlier.[19]

Long before 1520 A.D., the forms of Christianity spread among the south Slavs had included prominently a form of Gnostic doctrine modeled on the "Great

Mother" cult-variant on the Ishtar-Isis prototype. "Great Mother" was, in point of emphasis, an "earth-goddess" cult, a religious cult based on "blood and soil"—"Our Land, Our Race." It was in this form that the cult of "Mother Russia" developed. The doctrine that "Mother Russia" would rule the world as a Russian revival of the Byzantine Empire—"The Third and Last Roman Empire," was superimposed upon the preestablished "Mother Russia" belief.

The "Third Rome" prophecy was well established belief during the course of the sixteenth century. It was revived as a force by the Venetian agent Prince Potemkin toward the close of the eighteenth century, feeding the upsurge of the Plan-Slavist movement, intersecting the theosophical rantings of such figures as Tolstoy, Dostoevsky, and the dissident Bolshevik faction around Bogdanov, and such Bolshevik figures as Lunacharsky, Krasin, and Bukharin, and intersecting a Finnish cult-form promoted by the influential Communist International figure Kuusinen. Since Stalin made a pact with the Russian Church during the course of the last World War, the cult's penetration into influential circles has been increasing.

Since Czar Peter I's collaboration with Gottfried Leibniz, there have been principally two broad political-social tendencies in Russia. Peter, together with his immediate successors, followed Leibniz's program for transforming Russia, to the degree that during the eighteenth century, the output of Russia's mines and industries produced greater output than the industry of Britain. At the beginning of the nineteenth century, according to leading British spokesmen including Charles Babbage, the level of science practiced at Leibniz's Academy at Petrograd was beyond the comprehension of British scientists. The opposition to these "Westernizing tendencies" was concentrated in a faction of the Russian Church, a nasty collection of cults



Clockwise from top left, **Tolstoy, Dostoevsky, Lunacharsky, Krasin** *and* **Bukharin:** *Their cult-connections are still the real strategic threat from Moscow.*

categorically called the Raskol'niki (Old Believers). The hard core of these cults discreetly fled the reach of Russian authority during the time of their great enemy, Czar Peter I, but returned later, to assume powerful positions in Moscow and other centers, and to exert important influence on the Russian Social-Democratic, Bolshevik, and Narodnik (Populist) parties. This current is the kernel of the social tendency on which the growing influence of the "Third Rome" doctrine today is premised.[20]

In popular jargon, and unfortunately also among some elements of our political-intelligence community, there is an obsession with the modern American habit of demanding that reality and ideas come in popularly advertised brand-name packages, with contents explained in the same simplistic terms as a typical "Madison Avenue" advertising slogan. For them, "Russia is a Communist State, right?" "It is Marxist, atheistic Communism we are fighting, right?" "The main thing is to beat the Communists, right?" "So, let's get with it, boy!" Confronted with evidence that leading circles of our ever-loving British ("oldest and closest") ally are in bed with the Soviet KGB in joint operations against the United States, some of our good old boys around Washington make the obvious gestures of hostility and disgust: "You must be nuts!"

Consider a few hard facts, well known to *EIR* and various official intelligence services, but stubbornly brushed aside by some relevant circles in Washington, D.C. Throughout the portion of the Arab world called the Middle East, running through Iran, into Pakistan, there is virtually nothing definable as a foreign intelligence service's agent or asset which is not card-indexed and controlled by the British Secret Intelligence Service, in conjunction with Arabist intelligence networks operating out of Switzerland and Venice-Trieste. Within the overall control of the region by British in-

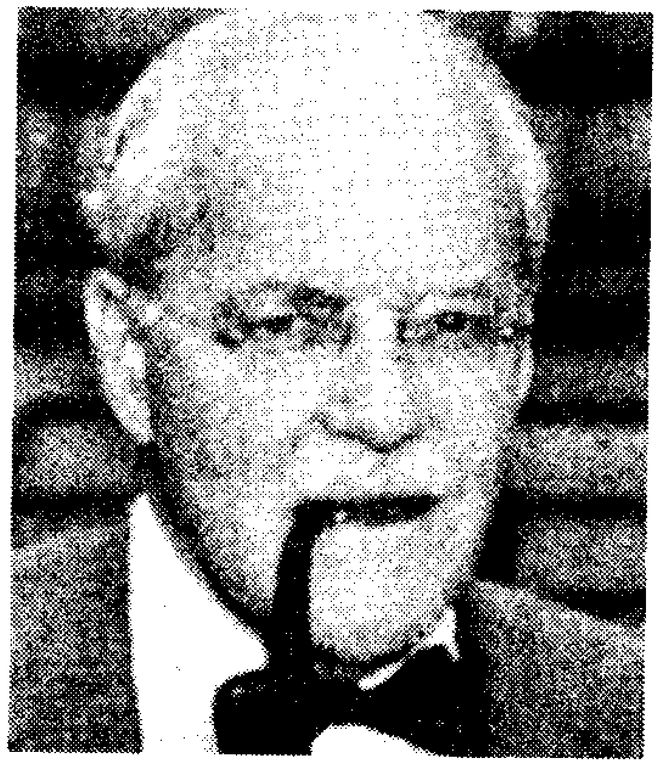
telligence, apart from Britain's Swiss and Venetian partners, the only important and quasi-independent intelligence capability is Israel's. In this region, the Mossad can be very nastily dangerous in specific operations on the ground during the short-term. Otherwise, any other foreign intelligence services operating in the region do so only to the degree that the British intelligence service makes loan of some of its own assets.

Typically, the Communist Party of Iraq is jointly run by British SIS and the Soviet KGB, as are the Communist parties of *all* Arab nations. The Tudeh Party of Iran was always primarily an asset of the British India Office section of SIS. Many among the supposed Soviet KGB assets of the Middle East are parts of networks which were formerly nominally assets of the Second Division of Admiral Canaris's Nazi *Abwehr*, a Division absorbed into the Nazi RSHA Amt VI office under Walter Schellenberg prior to July 20, 1944, and taken over almost intact by both British SIS and the Dulles faction of OSS and the State Department during the 1943–1945 period. This Nazi international, coordinated from Switzerland by old Swiss Nazis such as Lausanne, Switzerland's banker Francois Genoud, runs the organizations of international terrorism in all parts of the world today. The British, the Soviet KGB, and the Mossad, each cooperates with this Nazi international in running terrorist operations and much of the international illegal drug traffic which is inseparable from both the infrastructure of international terrorism and the international black market in weaponry. Through this channel, the Israeli Mossad controls the presumably Arab-controlled Abu Nidal organization of international terrorism, for example. Many socialists and other nominal "leftists" are covert operations of the Nazi international, as the scandals concerning old Nazis in the leadership of the West

German Green ("environmentalist") Party merely illustrate. A Soviet KGB agent in France will often prove to be a socialist controlled by the Nazi international, which is cooperating in this matter with the KGB.[21]

The sort of person who insists that his facts should come in popularly advertised brand-labeled packages, should not expose himself to the mental anguish he will suffer in confronting even the simple day-to-day truths of routine counterintelligence work. On this level, the world is very complicated; in this realm, there are few allies, and almost no one operates openly under the brand-label of the one, two, or three interests he ultimately serves.

It becomes worse. According to all of the best-informed intelligence operatives working the Levant, the Soviet KGB connections into the region are run through nominally Christian churches, including the Antiochian Church and elements of the Eastern Rite



Winston Churchill *(left) and* **Allen Dulles:** *the Nazis they protected at the close of World War II run international terrorism today.*

of Greece. These channels intersect a Russian Orthodox center outside Moscow, identified by these intelligence operatives as one of the most important KGB coordinating centers. There are several well-worn British trails directly intersecting these Soviet networks operationally. The career of the late Herbert Waddams is exemplary. Waddams, whose activities intersect the careers of former SIS executive and present KGB General Harold "Kim" Philby, was an official of the Anglican Church, in which he served as confessor to the Royal Private Household and as director of the foreign-intelligence section of the Anglican Church. In addition to developing important, continuing links into those sections of the Russian Church identified by experts as key KGB channels, Waddams was closely connected to those specific institutions of the Greek Orthodox and Antiochian churches identified as KGB channels, and was instrumental in at least one case in securing the appointment of an important KGB operative to a high position in one of those churches: a figure who has been among the most dedicated adversaries of LaRouche, incidentally.[22]

Recently, in addition to the public attacks on President Ronald Reagan by Henry A. Kissinger's business-partner, Lord Peter Carrington, and the published declarations of London RIIA official David Watt, leading executives of British intelligence have qualified Carrington's collaboration with the Soviet KGB as reflecting a "complementarity of interests" between London and Moscow in their common effort to destroy President Reagan. Yet, Lord Carrington is no Soviet agent; indeed, he argues that his collaboration with Moscow in the effort to destroy President Reagan is all part of a very, very clever game, which will conclude with the dissolution of the "Soviet Empire."[23]

Lord Carrington is not as insane as the everyday American citizen would assume him to be once con-

Henry Kissinger's business-partner, Lord **Peter Carrington:** *"complementarity of interests" moves him to plot with Moscow against President Ronald Reagan.*

fronted with Carrington's arguments. Up to a point, Carrington knows very well what he is doing.

He and his associates among the British, Swiss, and Venetian intelligence consortium have many fingers into the East Bloc, all the way into Alma Ata. Through channels in Copenhagen, Stockholm, Vienna, Lugano, Lichtenstein, Venice-Trieste, Athens, Beirut, Damascus, and Yemen, among others, and by way of aging Fitzroy Maclean's regular circuit through Paris, Belgrade and Moscow, British SIS and its Anglican-Church auxiliaries, have the ability to orchestrate insurrections in most of the nations of Eastern Europe, the Ukraine, and so forth at any point they, and their assets, are persuaded that the time is ripe and the operation appropriate in design.

They assume, not without supporting evidence, that the same sort of "integrist" varieties of ethnic separatism and theocratic fanaticisms now proliferating outside the Soviet Bloc also strongly infect various strata within the Bloc. They presume, from evidence in hand, that under the proper conditions they can set off a chain-reaction of integrist upsurges which can

tear the Soviet Empire apart from the inside. They do not use the term, "Soviet Empire," simply as a way of attempting to offend Soviet officials with such language. To them, the Soviet Union and its dependencies constitute nothing more or less than a new form of the old Czarist Empire, something with resemblance to the old Austro-Hungarian and Ottoman empires: a federation of peoples speaking different languages, with strong loyalties to what are regarded by them as distinct nationality-cultures, and so forth and so on. In large part, the use of the term "Soviet Empire" has a rather exact and appropriate significance. They presume to tear this Empire apart in much the fashion the Ottoman, Austro-Hungarian empires disintegrated, and the Czarist Empire partially disintegrated in 1917.

To foster such disintegrating effects of "integrist" ferment, Carrington and his sort believe that they must orchestrate the kind of psychological-political environment within and around the Soviet Empire which will foster such integrist tendencies. They know, as the London Tavistock Institute, Britain's psychological-warfare division, has studied the matter rather exhaustively, that the psychological-political climate favorable to "integrist" insurgencies is a depressing climate of what is called "cultural pessimism." This condition requires elimination of the contrary factor of *technological optimism*. To promote this, it is urgent that the Soviet Union not be mobilized into a high-technology boom of any sort, particularly the sort of such boom prompted by an arms race.

For example, through the submission to the demands of the mid-1960s Tavistock Rapaport Report by Johnson and his successors, the factor of technological optimism was more or less nullified in the United States, and also most of Western Europe, over the course of the 1970s. This has brought the West to the brink of

economic and financial collapses, and has fostered within most of the populations a growing cultural pessimism spawning insurgencies of mass irrational behavior, in such forms as spreading religious cults and secular cults essentially identical with religious cults. The West is ready for the chopper. Similar effects, less acute, have been developed within the Soviet Union itself, and to a greater degree in Eastern Europe.

The point of the policy of Carrington et al., is to hold what remains of the West together a while longer, retaining an approximate strategic parity with growing Soviet power in the form of Nuclear Deterrence. The point is, to give the deepening of cultural pessimism within the Soviet Empire a bit more time to sink in, up to the point the ferment is ripe to be detonated from Jolly Old London. Once the East fragments, let go the string holding the West together. Let it all fall apart, world-wide. There's the end of the nation-state institution, and an end to the kinds of institutions which foster technological progress. The desired result, a world empire run chiefly by joint Anglo-Swiss-Venetian interests, a collection of petty mini-states chopped out of former nation-states, all gathered together under the institutions of "world federalism": that sort of a new Persian Empire.

The miscalculation in Carrington's game is that the Soviets are well aware of it, and have shown every crucial sort of indication that they plan to use Carrington's own efforts to bring about a different sort of "world-federalist" empire, an empire based on Moscow, Kiev, Sofia, and Belgrade, a new Byzantine Empire, the Third and Final Rome.

Despite indicated divergence in ultimate goals, this does define a limited but quite sincere complementarity of Anglo-Soviet interests in common efforts to orchestrate the downfall of President Reagan. The point is, that if the President's March 23, 1983 declaration

of a new U.S. strategic doctrine signifies a commitment to a crash program for developing a strategic ABM defense-system, then both the U.S.A. and the Soviet Union shall be on their way into a plunge into the greatest burst of technological advances—and climates of technological optimism—seen yet.

General Secretary Yuri Andropov abhors such an idea. It would mean a spectacular economic recovery in the U.S.A., and, therefore, a U.S.A. of the 1990s of much greater relative strength and durability than during the 1960s. Lord Carrington and company abhor such an idea: an outburst of technological optimism on the U.S. side spoils their dreams of a malthusian's world-federalist utopia for at least a century or so to come. Also, pushing the Soviets into the same track would destroy the factor of technological pessimism there.

Both London and Moscow blame Lyndon H. LaRouche, Jr., in part at least, for this worrying problem. True, it was the Reagan Administration which produced the new strategic doctrine, and the President's temperament which ensured its adoption. Yet, if LaRouche had not posed the questions involved, with his new strategic doctrine first proposed in February 1982, would the influential circles of the Administration ever have thought of developing and presenting such a new strategic doctrine for the President's consideration during this particular period?

True, LaRouche's proposals centered upon the technical feasibility and economic side-effects of developing a strategic ABM defense-system based on directed-beam principles. True, the aspect of LaRouche's proposal which has received the most general attention, and discussion in leading circles internationally, is the fact that that proposal contains a new military-strategic doctrine replacing Nuclear Deterrence. What was overlooked by most readers of the written form of this

proposal, and in other published writings where the purpose of the new doctrine has been explained, is that there is something much more important than a new military-strategic doctrine involved in his design.

In the address LaRouche delivered to a New York City conference at the close of 1982, he outlined the reasons he believed that President Reagan's announcement of such a new strategic doctrine before the end of the first quarter 1983 would probably determine the course of human history as a whole for the next fifty to one hundred years. If the President announced such a new strategic doctrine and followed through on its prompt implementation, mankind as a whole would probably survive successfully the deepening depression, the impending financial collapse, and the threatened general nuclear war of the period ahead. If the President did not make such a decision in time, every other approach taken to solving any of the major problems of the world would be foredoomed to failure.[24]

He identified a fundamental principle of history as the basis for basing the possible survival of civilization on the bare possibility of one particular decision to be made by the President within a specified time-frame. He identified that principle as the principle of *punctum saliens* as defined by Friedrich Schiller. In the course of real history, as in well-composed dramatic tragedy, the development proceeds to a point at which a monstrous tragedy is about to become unstoppable. At such a point, there is, in classical tragedy, one specific kind of action which can be taken, which, if taken at precisely that time, can change the course of history as a whole, so as to avert the tragedy. If that decision is not taken at that time, there will be nothing anyone can do—in classical tragedy on the stage, or in real history, to prevent the catastrophe from developing.

What defined this strategic doctrine's promulgation as a *punctum saliens* for the current period of history,

was essentially that it was a decision which corresponded to an unavoidable military-strategic imperative, and which also must produce the side-effect of unleashing the forces of technological optimism. That approach to this specific problem expresses in a concentrated way Lyndon H. LaRouche, Jr.'s philosophy of government.

An Economist *as* Science-Administrator

His work in economic science obliged Lyndon H. LaRouche, Jr. to assemble and coordinate the efforts of an array of mathematicians, physicists and other specialists, and to direct the collaborative efforts of these teams according to the specifications of his own discoveries in applying Riemannian physics to the problem of devising mathematical functions which correlate advances in technology with increases in rates of economic growth. The best illustration of the impact of LaRouche's own work on matters of mathematical physics as such, is the example provided by an ongoing project coordinated, chiefly, by Dr. Jonathan Tennenbaum. This illustration is selected because it shows the fundamental features of LaRouche's approach to fundamental questions of mathematical physics in their most direct connection to his work as an economist.

As we indicated earlier, from about his fourteenth year, under the strong influence of readings in Leibniz, LaRouche adopted a viewpoint of emphatic rejection of the use of axioms and postulates in formal reasoning.

For example, he rejected during that period the proposition that "two points determine a straight line," insisting that "a point is determined by the intersection of two lines." Under the indicated influence of Leibniz's writings, chiefly, he adopted and developed the view, that the universe as a whole must be defined in terms of some single, comprehensive principle, such that the elaboration of that principle determines the existence, characteristics, and interaction of the parts.

Over the early 1940s, his pursuit of that same standpoint led him to the persuasion that those principles which distinguish living processes from non-living are reflections of the single principle of the universe as a whole. In other words, he rejected the commonplace, mechanistic assumption, that living processes must be explained from the standpoint of such systems as Newtonian physics. The continuing germ of his views of the 1940s was, obviously enough, Leibniz's writings in, especially, the *Monadology* and the Leibniz-Clarke correspondence. He adopted Leibniz's argument, that Newton's physics proved itself to be false to reality, because Newton's physics required the assumption that the universe was like a giant clockwork mechanism whose mainspring was running down.

It was his fascination with this question of fundamental principle, during 1946–1947, which preconditioned his twofold reaction to Norbert Wiener's *Cybernetics*.[25] Wiener et al. had performed the stimulating work of posing the idea of *negentropy* in a fresh way; Wiener's work was also stimulating because of its embedded, central absurdity, that it purported to adduce an anti-entropic principle of the universe by proceeding from axiomatic assumptions of Newton's clockwork-physics: the statistical theory of heat. LaRouche's determination to refute Wiener's obvious fallacy on Wiener's own choice of ground, led him rather directly to a critical study of Nicholas Rashevsky's

work on mathematical biophysics. The critical study of Rashevsky, the need to correct the reductionist fallacies in Rashevsky's method, led by various pathways into an intensive study of Georg Cantor's notion of transfinite orderings, and, by that route, to a new appreciation of Riemann's core argument as summarized in the 1854 *On The Hypotheses Which Underlie Geometry*, by 1952.

It is the commonplace, wrong view of scientific work, that errors in mathematical physics must be either a mistake in calculations, or the application of a sound calculation to the wrong sort of experimental evidence. The internal history of progress of science rejects that commonplace view. Naturally, errors in calculations, and inappropriate applications of good calculations, must be corrected. Such kinds of corrections, necessary in their own way, have not produced any of the scientific discoveries properly classed as "fundamental."

All merely mathematical calculations are based on certain rules governing the elaboration of an original set of assumptions called axioms or postulates. In the case of any factional "school" of mathematical practice in general, these underlying assumptions represent very sweeping assumptions about the way in which our universe is organized. Therefore, any mathematics, no matter how abstractly "pure mathematics" in appearance, is based entirely on physical (ontological) assumptions. If those underlying assumptions are not in accord with the most general principles of the physical universe as a whole, then the entirety of the mathematical structure is false. In "applied mathematics," we assume that a certain experimental physical phase-space has certain special ontological characteristics, as a restricted case of the more general ontological principles our mathematics implicitly assumes to characterize the physical universe as a whole. If the general mathematics employed can be assumed to be sound

description of the universe in general, and if our calculations are perfect in terms of the rules of that kind of mathematics, we are often correct in assuming that the failure of such a mathematical formulation to describe accurately some kind of experimental phenomena reveals an error in the local ontological assumptions we have chosen in constructing those formulations.

To know and to apply such features of mathematical practice is a necessary and useful thing. However, such practices do not account for a single fundamental breakthrough in scientific knowledge. Fundamental breakthroughs have always occurred as the benefit of a correct choice of iconoclastic attack against certain of the most widely accepted axiomatic assumptions of mathematical work. Fundamental discoveries are not situated in better manipulation of highly complicated mathematical structures; all fundamental discoveries are elementary, and mathematically "simple." They spring from successful demonstration of the need to change the axiomatic basis of mathematical work; such changes are illustrated by the case in which we rid geometry of the false assumption that two points determine a straight line, and proceed instead from the point of reference, that the existence of a point is created by the intersection of two lines.

For this reason, one of the most efficient ways to cripple the scientific production of an entire generation of professionally trained physicists and related categories of scientific workers, is to continue the modern classroom-practice of emphasis upon textbooks. In every leading case of the most fruitful discoverers, the education of that scientist was founded upon an early and continuing practice of reworking thoroughly the primary literary sources of influential scientists and other leading influences on scientists, all the way back to classical Greek writers. By mastering, in this way, knowledge of the process by which today's underlying

assumptions of mathematics (for example) came to be embedded in current practice, a properly educated thinker is able to pinpoint exactly the source of the underlying error in contemporary scientific work.

Without further preliminaries, we now turn directly to LaRouche's view of the leading features of the internal history of modern science.

The entirety of the current of modern European science culminating in the mathematical physics of Riemann et al., was set into motion by the work on fundamental principles of mathematical physics accomplished by Cardinal Nicholas of Cusa during the middle of the fifteenth century. The continuation of Cusa's scientific work was resumed, beginning approximately 1480, in the collaboration between Luca Pacioli and Leonardo da Vinci at Milan. On this basis, Leonardo revolutionized projective geometry, established fully the fundamental principles of modern hydrodynamics, including acoustics, and successfully defined in a preliminary but comprehensive way the principles of the theory of functions as this applies to general principles of machine design.

Starting from the vantage point established earlier by Pacioli and Leonardo, Johannes Kepler reformulated the solar hypothesis earlier stipulated by Cusa. Kepler's proof of this corrected hypothesis established modern mathematical physics. Kepler was helped in this undertaking by the work of another beneficiary of the Cusa-Pacioli-Leonardo circles, the great English scientist, William Gilbert (*De Magnete*). The solution to Kepler's specifications for a differential calculus was completed by Gottfried Leibniz in a paper he submitted to a Paris publisher in 1676, eleven years before Newton's *Principia*.[26] Leibniz's success was made possible by another beneficiary of the influence of Cusa, Pacioli, and Leonardo, Gaspard Desargues, and Desargues' students, notably Pierre Fermat and Blaise Pascal.

Leonardo da Vinci: *He organized the foundations of modern science.*

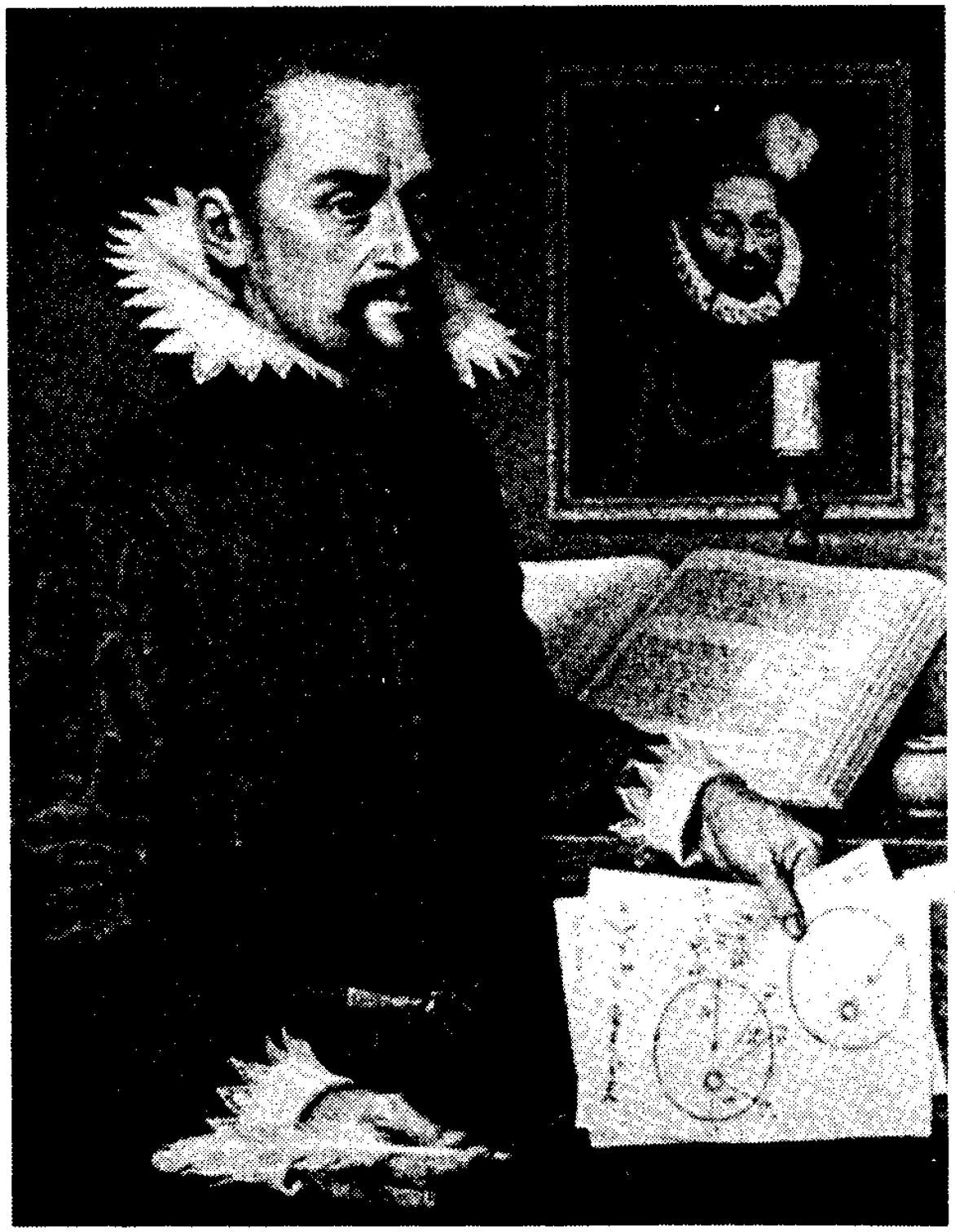
Cardinal **Nicholas of Cusa:** *His discoveries founded modern European science.*

Every principal advance in science during the eighteenth century, including the work of Leonhard Euler, and of the Carnot-Monge Ecole Polytechnique's development of the theory of functions, was based directly (chiefly) on the foundations provided by Leibniz. After 1815, chiefly through the 1815–1823 collaboration between Lazare Carnot and Alexander von Humboldt, the line of scientific development of the Ecole was transferred (chiefly) into Prussia, where it intersected the work of Karl Gauss and the Webers at Göttingen University. Gauss's entire work was based chiefly on his protracted efforts to solve Kepler's specifications for the development of a theory of elliptical functions, an area in which the Ecole Polytechnique's Legendre also made fundamental contributions. Through the work done in Germany to fuse these two currents, Carnot-Monge and Gauss, the fundamental discoveries of Riemann et al. developed in Germany and Italy during the 1850s and early 1860s.

Since then, much important discovery in physics has occurred, but there has been no general advance beyond the work of Riemann, Karl Weierstrass, and the 1871–1883 work of Georg Cantor, respecting the fundamentals of the mathematics of physics.

After the 1860s and 1870s, it was the great merit of the work of Göttingen University's Professor Felix Klein to recognize that some intellectual catastrophe had befallen science during the late 1850s and 1860s, and that it was of the utmost urgency to rediscover the deeper principles of discovery underlying the accomplishments of Karl Gauss and Gauss's immediate collaborators and successors. It was to this effort by Klein, and his radiated influence among leading collaborators into the 1920s, that we are chiefly indebted for as much of science as has been preserved to the present time. LaRouche's view, since the 1950s, has been that the most important, in the sense of durable,

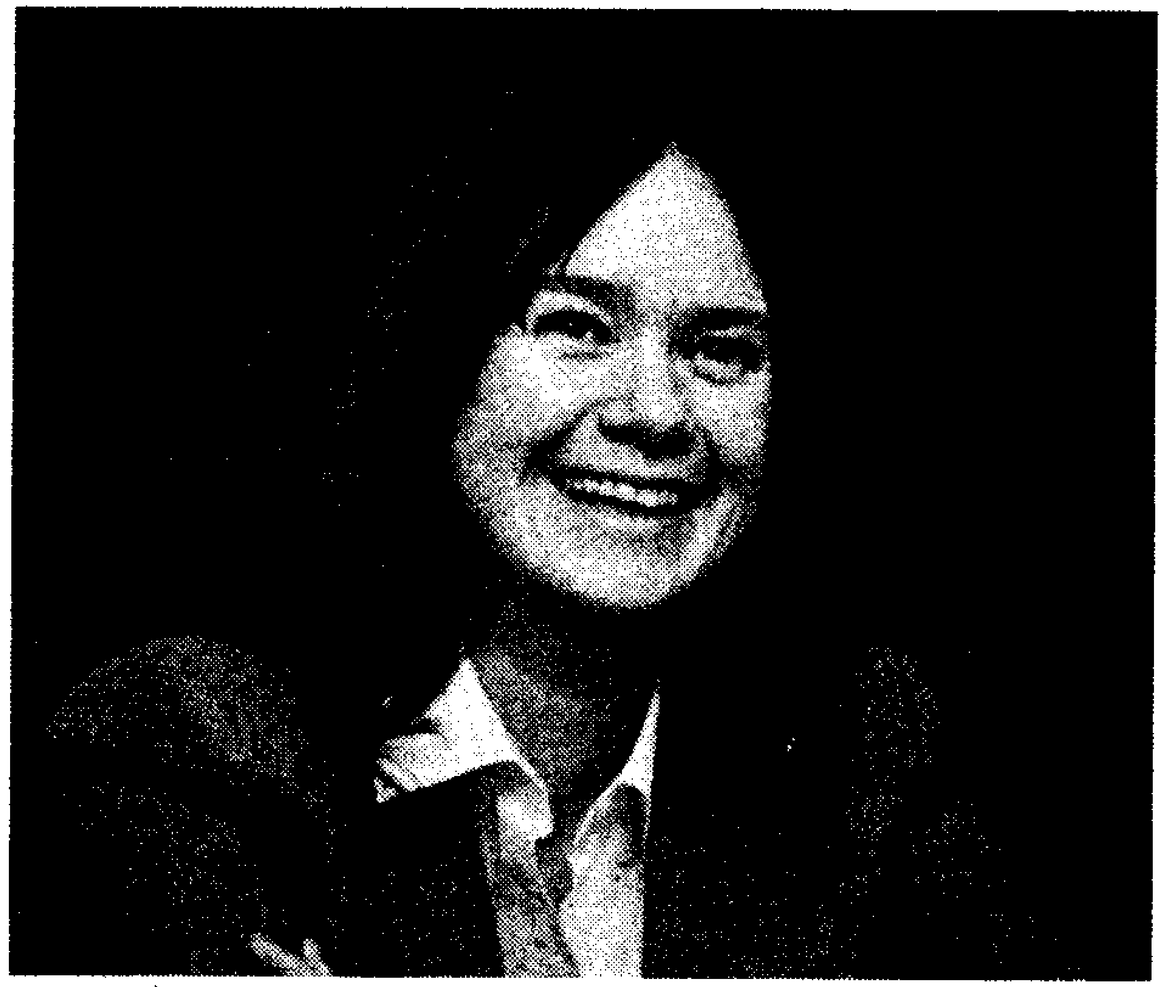
work to be accomplished in developing improved science policy for the United States (in particular), is to revive the indicated concern of Klein, and to attack afresh the question: What crucial distinctions account for the superiority of leading currents of European science in respect to fertility of fundamental discovery,



Johannes Kepler, *the founder of mathematical physics! He improved, and proved Cusa's solar hypothesis.*

relative to the situation prevailing since approximately the 1870s?[27]

This is no nebulously defined proposition. Over the past quarter-century, he has driven himself and his collaborators to dig out, digest, and correlate those primary sources in the scientific literature which bear more or less directly on the principled methodological features of his application of Riemannian physics to economic science. The most important breakthrough to this purpose emerged during 1977 and 1978, as a by-product of his wife's researches in Cusa and his influence on eighteenth-century German thought. It was locating Cusa's rediscovery of a fundamental principle of geometry, which provided the "Rosetta Stone" needed. Professor Klein would be greatly pleased by



Helga Zepp-LaRouche: *Her research into Cusa produced the key.*

the result to which this has already led in the ongoing work of Dr. Tennenbaum. We look at the summary of the internal history of science we have just identified, above, in a fresh way.

From the vantage point of the crucial internal features of the work of Cusa, Leonardo, Kepler, Leibniz, and Riemann, et al., the evidence is conclusive, that this entire current of modern European science is traced explicitly from Plato's *Timaeus*. We summarize the most relevant aspects of that dialogue.

The central feature of Plato's *Timaeus* is the attempt to define rigorously the most fundamental features of the lawful ordering of the universe from the point of reference of two geometrical facts.

During that period, a collaborator of Plato's working at the Cyrenaic temple of Ammon, had discovered that only five distinct kinds of regular polyhedral solids could be constructed in visible (e.g., Euclidean) space; Plato's treatment of this subject in the *Timaeus* has caused these to be called the *Five Platonic Solids*, or, simply, the *Platonic Solids*. Plato argued from this evidence, that the universe as we see it is not quite the universe as it actually exists. The images of the

Professor **Felix Klein:** *The professor would be pleased.*

real universe, as they are communicated to our senses, are deformed images. Reality, in order to become apparent to our sense-perception, is distorted in such a way as to fit within the possibilities defined by the geometrical principles of visible space. The fact that the Platonic Solids demonstrated such a limiting principle of geometry to be universal throughout visible space, forced this conclusion.

The question posed by this initial argument is, how can we discover what those principles of distortion are? Plato employed a second principle of geometry, that the circle is the only self-evident form of geometrical existence possible in visible (Euclidean) space. Unfortunately, the proof of that principle was lost, probably about the time the Euclidean geometry was rewritten in Egypt about the second century B.C., the source of what is called Euclid's *Elements*. The principle remained lost until Cusa rediscovered it, in the course of reworking Archimedes' writings on the quadrature of the circle. For lack of knowledge of this principle, until Cusa, the way in which Plato employed that principle in the *Timaeus* appeared rather arbitrary to readers. Those doubts about the importance of this principle of the circle contributed to suspicion about the conclusions Plato drew from the application of that principle to the case of the Platonic Solids.

Basing himself on this principle of the circle, Plato inscribed each of the regular polygons associated with the Platonic Solids into a circle. The reader of the *Timaeus* who did not know the basis for the principle of the circle was unavoidably mystified: How and why did this inscribing of regular polygons in circles necessarily have any bearing on discovering the principles of boundedness of visible space in general?

Plato then treated the circumference of the circles in which the regular polygons were inscribed as analogous to the vibrating strings of musical instruments.

What relative frequencies corresponded to the way in which the points of the regular polygons divided the circumference of the circle. This was the same procedure later employed by Kepler to discover the mathematical basis for predetermining the necessary orbits of the bodies of the solar system. The harmonic ratios so determined by these regular polygons corresponded to the diatonic values for the fifth, third, minor-third, and so forth, and their major and minor complementary intervals in the twelve-tone musical scale.

He concluded from this approach, as he elaborated it more extensively, that the characteristic distribution of events in visible (bounded) space, was determined by the same harmonic principles we know today as underlying the twelve-tone octave-scale of music. Although the fraudulent English-language translations of the *Timaeus*, from Benjamin Jowett on, conceal this crucial feature of that dialogue, in the Greek, Plato causes Socrates to name God the "Composer," and also causes Socrates to propose, near the beginning of the dialogue, that those assembled dedicate their attention to the question of by what principles the Composer had composed the universe[28]

The *Timaeus* takes the same view of the universe as St. Paul's observation that "we see things as in a mirror darkly," the argument Plato also makes in describing the images of visible space as like the shadows cast upon the wall of a dark cave. The problematic feature of Plato's argument (and St. Paul's) on this point, is that a rational comprehension of the fuller meaning of this was not available in any available written source until Riemann's 1854 habilitation dissertation, *On The Hypotheses Which Underlie Geometry*. In Riemannian physics, the real, unseen universe is a *continuous manifold*. The images of processes in that real world, the continuous manifold, are "projected" as visible events of sense-perception into a distorted,

spherical mirror, such that we see the continuous manifold projected onto that "mirror" in the form of apparently discrete objects moving about in empty, Euclidean space. This "mirror," called the *discrete manifold*, is a subsumed feature of the continuous manifold, and exists as if it were a mirror everywhere embedded within the subsuming continuous manifold.

The simplest analogy, best used to introduce such notions of projection to students, is to imagine certain kinds of three-dimensional, moving geometrical figures projected onto two dimensions. The projection of the intersection of two spirals on respective cones, as the cones rotate with respect to one another at different rates, is the simplest demonstration of the notion of generation of projected images of points moving about in two-dimensional space, by a continuous function in three-dimensional space.

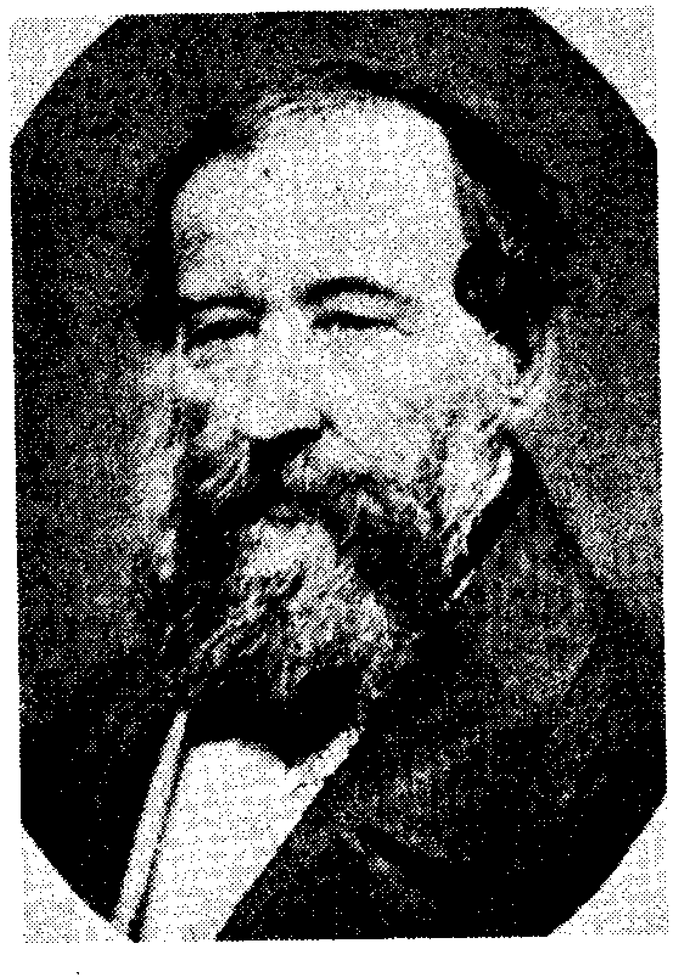
It is useful to leap ahead momentarily. Riemann's work directly poses the question embedded in the *Timaeus*: Given the fact that experimental observations depend upon phenomena as they are presented to us in images of the discrete manifold, how is it then possible to conduct experiments which provide us assured knowledge of the lawful ordering of events in the unseen, continuous manifold? How can we know what we cannot see, hear, feel or smell? How can we use the fact, first reported in available literary sources by Plato, that it is possible to discover the principles of distortion, to go a step further, to arrive at provable knowledge of the undistorted form of what is not accessible to our sense-perception. The central feature of Riemannian mathematics as Riemannian physics, is that Riemann stated and proved experimentally how this seemingly impossible task could be accomplished.

LaRouche's essential contribution to scientific method in general has been to return to the starting-point of Leibniz's founding of economic science, to establish a

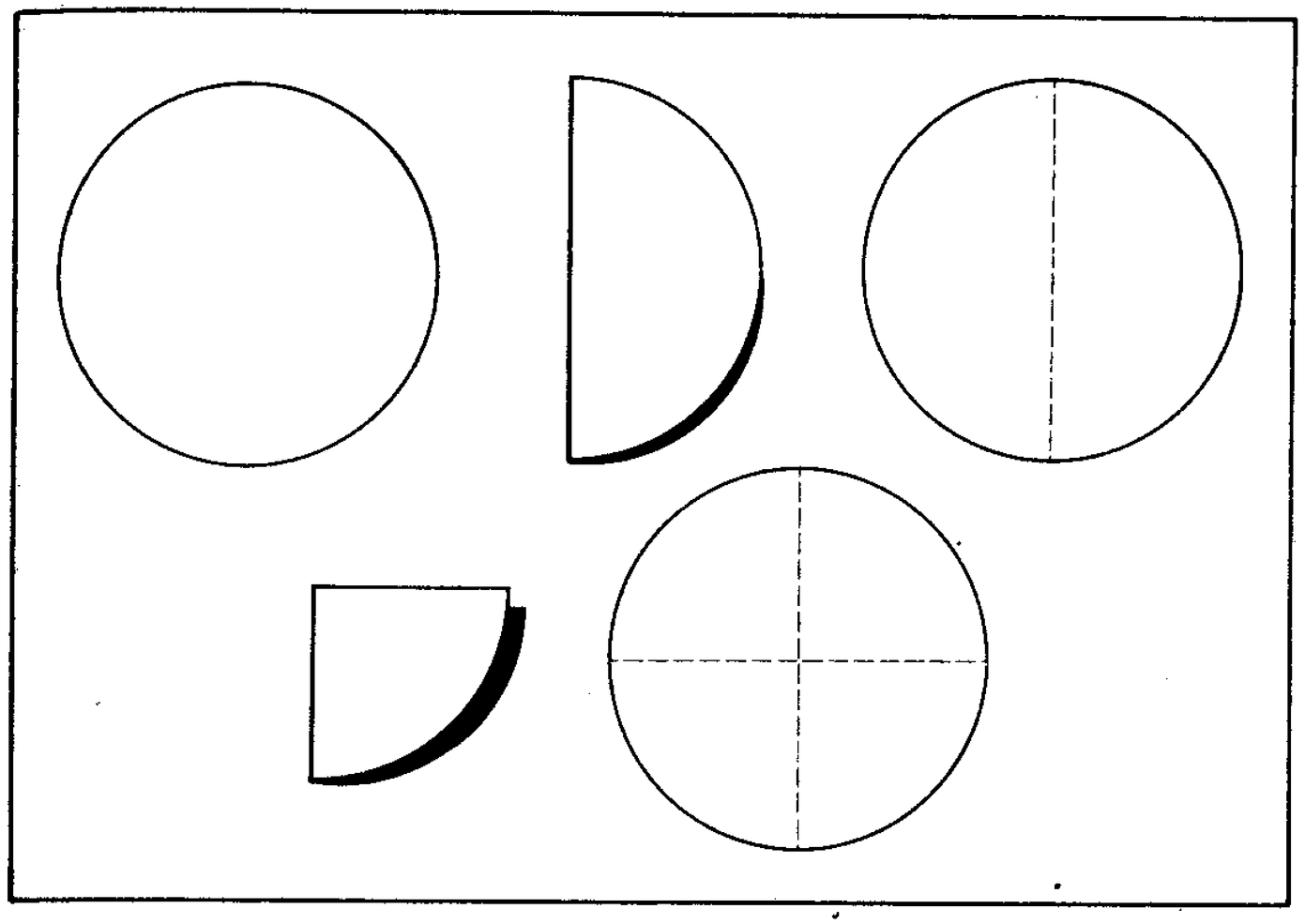
more general proof than Riemann's method otherwise supplies, for the fundamental principle of Riemannian physics. That is the point toward which we are proceeding from the point of reference of the *Timaeus*.

Cusa discovered that the source of fallacies associated with the quadrature of the circle were, implicitly, the attempt to arrive at a definition of the circle from the starting-point of assuming that points and straight lines were self-evident forms of geometrical existences. The circle is the only self-evident geometrical existence. The definition of a straight line is the *singularity* (the diameter-line) defined by folding a circle against itself; the point is the second singularity (the point at the center of the circle) defined by folding the half-circle against itself. It is not necessary to elaborate here the elementary theorem of topology which proves this. It is sufficient for our purposes here to point to the elaboration of what is called *synthetic geometry* by Professor Jacob Steiner, Riemann's geometry teacher during the course of the nineteenth century.

Before continuing, there is one point of objection from readers which ought to be anticipated here. Many



Professor **Jacob Steiner:** *He perfected a revolution begun by Cusa, and helped mold Bernhard Riemann.*



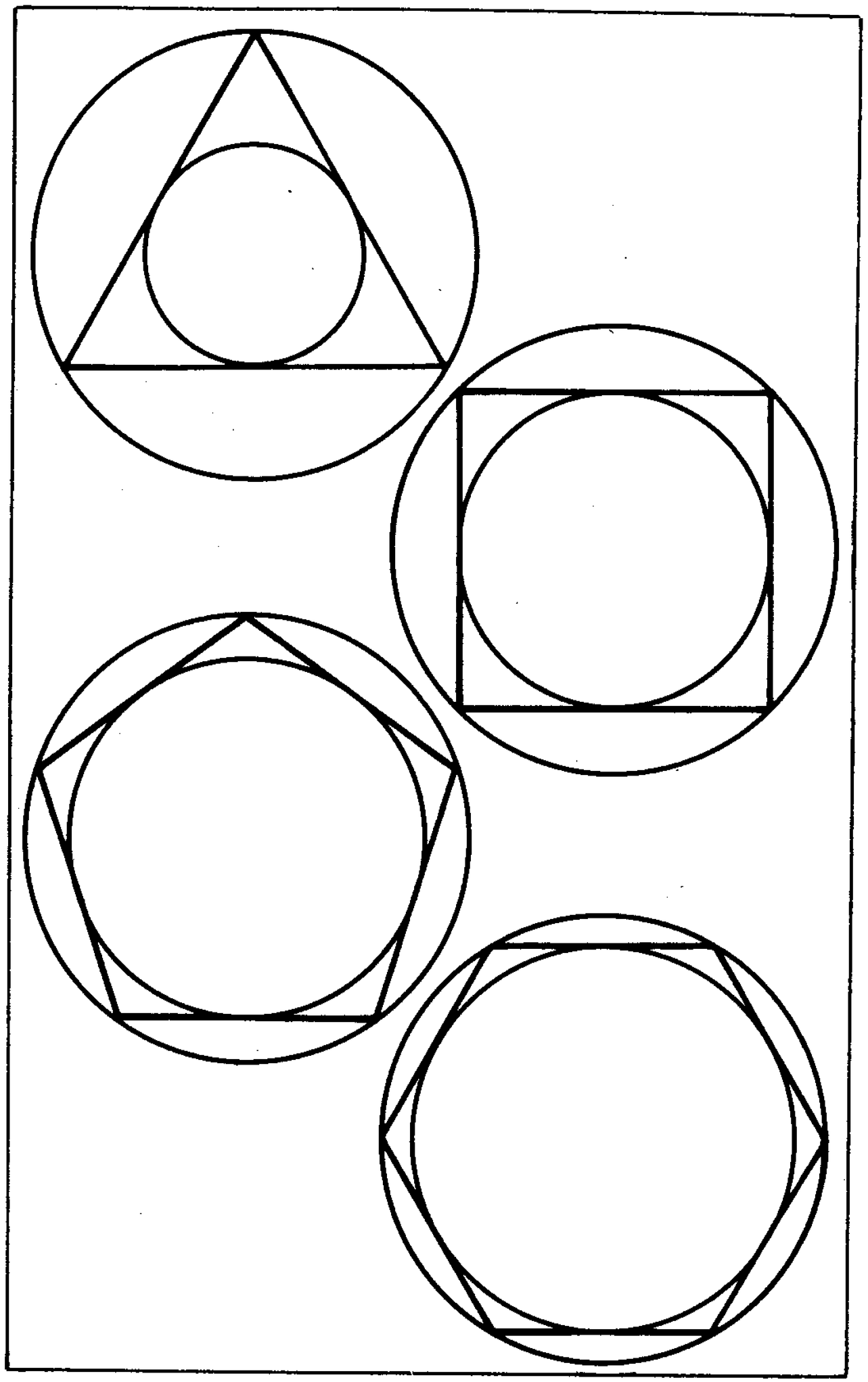
Only the circle is self-evident. It defines the line and the point. With only the three together, all geometry must be developed solely by rigorous methods of construction.

readers assume that circles are constructed by compasses, requiring a point and a line (radius) to be chosen *before* the circle can be caused to appear. The fallacy of objections consistent with that view is the fallacy of mistaking the way students may *reproduce* circles and the way in which that which is *reproduced* by aid of a student's compass came into existence in the universe long before the first human individual. How can a circle be defined by means other than use of a compass, or geometrically equivalent operations? The indicated theorem of topology provides a definition of the circle which does not depend upon the existence of compasses; when that theorem is compared with Leibniz's *principle of least-action*, the student is led to a physical sense of the *circular action*.

Let the rotation of the circle, as indicated by its circumference, be the amount of action occurring. Let the area of the circle be the amount of work accomplished. Then, using the indicated theorem of topology as a point of reference, compare the amount of work accomplished by any closed curve of the same circumference with that of this circle. The work accomplished can never exceed the work accomplished by the circular action which encloses the same area. That is only illustrative, but it does illustrate the point to be made at this point. This is a simplified illustration of what is meant by *the principle of least action*. We have referenced Cusa's work on the principle of the circle to the elaboration of that principle over a span of later work, but the root of the conception in the knowledge of Europeans later on was his rediscovery.

In *synthetic geometry*, we begin by throwing away all of the axioms and postulates of Euclid's *Elements*, and discarding all of the deductive theorems based on the foundation of such axioms and postulates. We begin only with the self-evident circle, and with the first and second of the geometrical "derivatives" of the circle, the singularities of the circle called the "straight line" and the "point." With nothing but the circle plus the "straight line" and the "point" defined in no other way, we must arrive at every possible geometrical construction by no other method than rigorous construction. No assumptions may be introduced to geometrical constructions but the circle and its singularities, or constructions derived from only such a starting point. All geometrical constructions are proven by a principle of *closure*. Closure is demonstrated by simultaneously inscribing the constructed figure within a circle or sphere, and by inscribing a circle or sphere within the constructed figure.

We throw away all of the axioms and postulates of Euclid's *Elements*, and permit no additions or substi-



All constructions must be proved by closure, demonstrated by simultaneously inscribing the constructed figure into a circle and by inscribing a circle within the constructed figure.

tutions for such axioms and postulates except the self-evidence of the circle and its subsumed singularities. This means, as a matter of emphasis, that we do not solve the fallacies of Euclidean geometry by creating a "non-Euclidean geometry" so defined by some change in postulate, such as change in the direct or implicit postulational assumption of "parallelism." Such alternate deductive geometries may be interesting, and may be stimulating exercises but we nonetheless reject all such non-Euclidean geometries, as well as Euclidean geometry, as false to reality on the same grounds we discard the axioms and postulates of Euclid's *Elements*.

We do not throw away Euclid's *Elements* entirely. These books were developed as a special kind of plagiarism of the geometry existing (inclusively) in the usage of Plato's Academy at Athens. Just as the hoaxster, Aristotle, attempted to explain away the content of Plato's *Timaeus* from the standpoing of his own deductive system, the followers of Peripatetics working in Egypt rewrote Greek (and Egyptian) geometry from earlier periods, by introducing Aristotelian forms of axioms and postulates, and attempting to show that nothing in geometry existed which could not be explained by deductive theorem-structures based on such axioms and postulates. Apart from those axioms, postulates and theorem-structures, the *Elements* does cover the ground of most of the knowledge of geometry known to the Egyptians and classical Greeks. In proper public-school curricula, we cover more or less the same ground by deriving everything entirely by the rigorous methods of synthetic geometry associated with the program of Jacob Steiner.

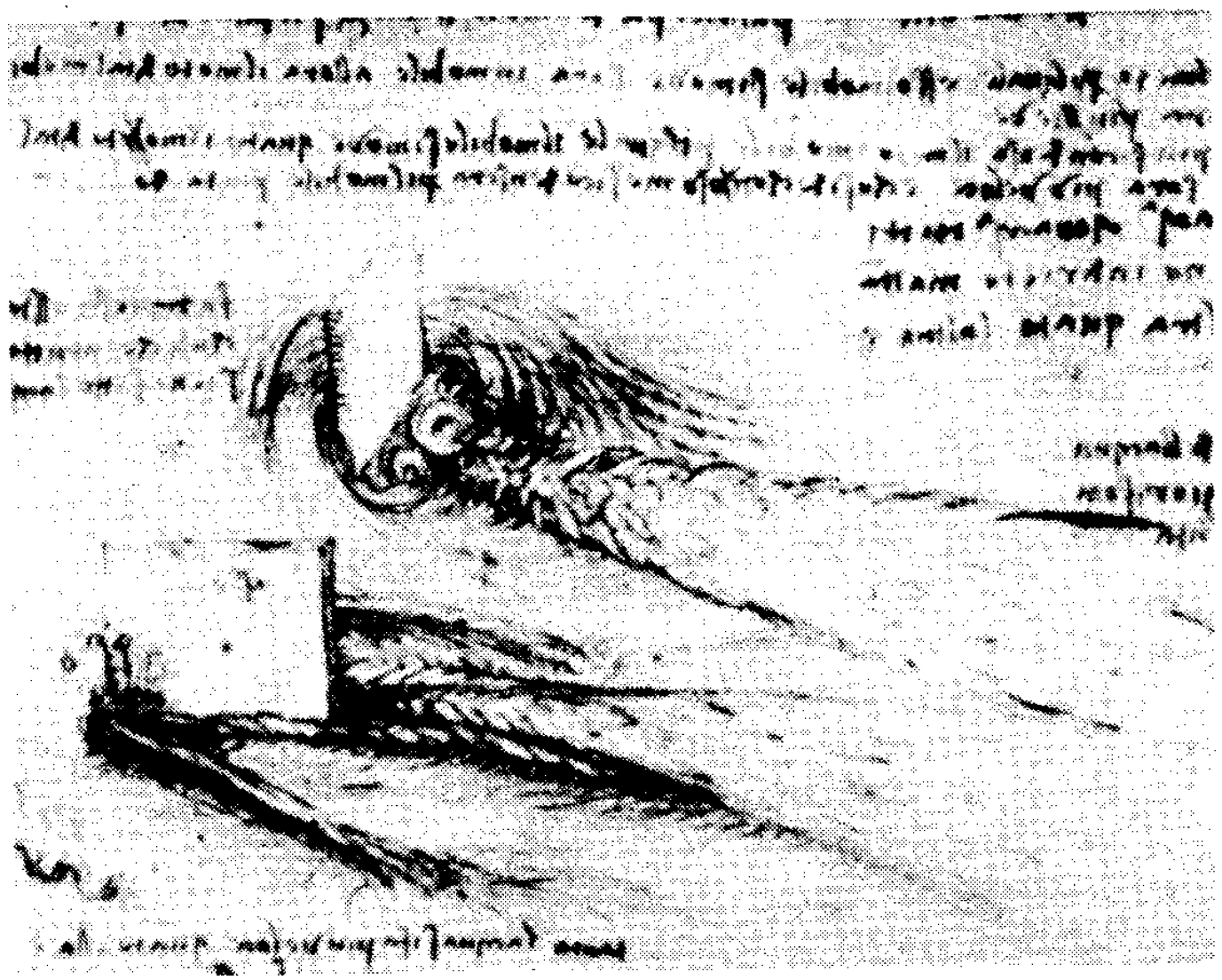
Starting from the point of Cusa's work, Luca Pacioli reconstructed a proof of the uniqueness of the Platonic Solids. All of his own and Leonardo da Vinci's fundamental work was referenced to this reconstruction

and Cusa's work. A few highlights from this work of Pacioli and Leonardo bear so directly on the work of LaRouche that we briefly identify them now.

The revolution in composition of painting accomplished by Leonardo and continued by Raphael and his school, centered around Leonardo's proof that paintings composed according to the simple, linear system of perspective, of Alberti, were false to reality, and that these anomalies could be avoided by painting images as reflected from a convex spherical mirror. With aid of this new method of projective geometry, Leonardo demonstrated that contrapuntal perspective, as in the Louvre's "Virgin of the Rocks," could produce compositions analogous to musical compositions in the power to effect rigorous communication of rigorously defined creative conceptions. This work, addressed inclusively to composition of paintings, established the basis for rigorous modern projective geometry in general.

Until some of Leonardo's manuscripts were released from their hiding places relatively recently, it was not possible to appreciate fully how profound and comprehensive was his work in founding the science of hydrodynamics. Using different streams of clear and colored water, Leonardo discovered and drew experimental designs of induced turbulence and so forth, discovering principles not rediscovered until the 1970s! Moreover, it is clear by comparing the words and so forth of some of these manuscripts with writings of later figures, such as Christiaan Huyghens during the late seventeenth century, that many of the discoveries of later scientists were based on at least accurate copies of the work of discovery accomplished by Leonardo.

Among the most significant of Leonardo's discoveries was his definition of the generation of "sonic booms" in air. This definition was based on Leonardo's insistence that sound waves in air were sine-wave-like



Leonardo da Vinci's drawings of the movement of water. Leonardo made discoveries in hydrodynamics not rediscovered by modern mathematics until the 1970s.

hydrodynamic waves, not successive layers of compression and rarefaction generated by percussive interaction among air molecules. Later, Leonardo was ridiculed on this point, even long after Riemann's 1859 paper, *On the Propagation of Plane Air Waves of Finite Amplitude* had been experimentally proven to the effect of proving that Leonardo had been correct and his critics in error. More recently, the development of lasers, and of related phenomena of so-called "relativistic particle-beams," has shown the accuracy and importance of Leonardo's insistence that all of the kinds of action we might term "energetic" have the elementary form of hydrodynamic action, as Riemann's cited 1859 paper implies.

The most important of the combined work of Pacioli

and Leonardo centered around the significance of the so-called Golden Section. This, in part directly and otherwise implicitly, bears directly on the central feature of LaRouche's work: the question, what single universal principle consistent with the principle of living processes, subsumes all of the lawful composition of the universe? This same principle is the centerpiece of Riemann's 1854 habilitation dissertation, *On The Hypotheses Which Underlie Geometry*, and is the permeating feature of Riemannian physics as a whole.

Pacioli, Leonardo, and their collaborators assembled many observations to the effect of indicating that the Golden Section, the proportion subsumed in the synthetic-geometric construction of the regular pentagon, is peculiar to living organisms. Kepler, in his paper on the determination of the snowflake, insisted flatly on this point. The morphology of growth of living processes expresses what is called a self-similar proportioning, such that the ratios of the successive phases are in a harmonic proportioning corresponding to the Golden Section. Leonardo's work on anatomy and kinematics of the human and animal bodies focused upon the implications of this, a study which influenced most significantly his designs of machines and weapons of warfare.

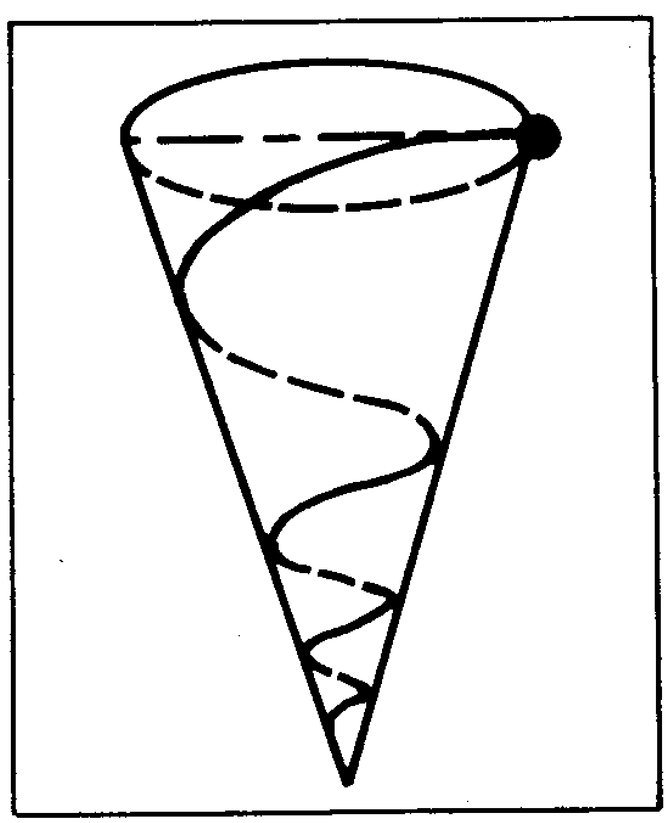
The earlier calculation of animal reproduction rates, the so-called Fibonacci Numbers series, is readily shown to converge on harmonic proportions equivalent to the Golden Section. A related development appears in the work of Karl Gauss, the so-called Gaussian arithmetic-geometric mean, the point of departure for Gauss's development of his treatment of elliptical functions. Dr. Tennenbaum, elaborating a fresh approach to the mathematics of quantum electrodynamics outlined by LaRouche, has uncovered the deeper implications of Gauss's discovery of the arithmetic-geometric mean, and has shown how a more powerful, more direct ap-

proach to a general mathematics of elliptical functions may be obtained by continuing along the same lines.

Merely identified at this point of our present chapter, the starting point of the experimental program in mathematical physics which LaRouche set into motion during 1981, is: *The most primitive, minimal form of a geometric statement of a negentropic function, is the image of a self-similar continuous curve on the outer surface of a transparent cone.* It has been through elaboration of that program, that Tennenbaum discovered a deeper physical (as well as formally mathematical) significance for Gauss's derivation of the arithmetic-geometric mean, and the importance of this derivation for a general theory of elliptical functions.[29]

The indicated connection between the harmonic characteristics of the Fibonacci series and the non-arithmetic, purely geometric Golden Section, and the implicit connection of this to Gauss's arithmetic-geometric mean, has thus an obvious bearing on the universal principle subsuming living processes. It is from this vantage point, including the influence of Pacioli's and Leonardo's stress on that point, which causes the same discovery to occupy a central position in the work of Kepler. This discovery is a recurring theme of fundamental advances in science after Kepler. The life work of Karl Gauss, which originates in Gauss's development of elliptical functions from the starting point of his own reworking of Kepler, is an example of this. The 1854 habilitation dissertation of Riemann places the same discovery at the foundation of all mathematical physics in a new way. This work of Riemann's requires, in the most direct and immediate way, a definition of *energy* directly contrary to the implications of the purely arbitrary assumption of a Law of Conservation of Energy, as LaRouche first recognized the implication of that 1854 dissertation during 1952. The elementary notion of a conical function, as indicated here, together with the notion of the negentropic significance of properly defined elliptic functions, is the point of reference for a correct interpretation of the 1854 dissertation.

The spiral on the cone is the primitive root of advanced mathematics.



We return now to the historical sequence of key developments. It is from the standpoint of reference we have identified up to this point, that the work of Kepler, Gilbert, Desargues, Fermat, and Pascal must be approached by the student; otherwise, the student will not, could not understand that work.

We indicated above, that Kepler's solar hypothesis is in leading features a replica of the solar hypothesis earlier presented by Cardinal Nicholas of Cusa; Kepler indicates his debt to Cusa in his *Harmonices Mundi* (Harmonies of the Universe). Kepler's solar hypothesis is otherwise directly derived from the content of Plato's *Timaeus*, as we indicated the leading features above. The significance of Kepler's solar hypothesis is, that by proving that the universe is harmonically ordered as Plato's work insists, one has obtained the kind of conclusive experimental evidence needed to prove essentially the entirety of Plato's argument in the *Timaeus* and related locations! The solar system as Kepler knew observations of it is not, of course, the entire

universe. However, as Gauss proved later, Kepler's work includes one most remarkable feature. Kepler specified that his work as a whole required the former existence of an exploded planet within the system, and gave the harmonic orbital values for this exploded planet. Gauss was the first to discover that the principal asteroids, which have otherwise very wild solar orbits, have the harmonic-orbital values specified by Kepler for the exploded planet.

Through the wide influence of the followers of Descartes and the tradition of the seventeenth-century London Royal Society, it became the conventional view of English-speaking scientific opinion, and of continental textbooks influenced by that opinion, that Galileo, Hooke, and Newton, had made a great advance over Kepler's work in discovering a law of gravity. Actually, despite Galileo's quasi-heroic position relative to the inquisition directed against him by his Jesuit patrons, researches into primary documents have shown that Galileo was in significant part a hoaxster, dedicated to discrediting the work of Kepler, and not exactly a strict servant of experimental truth in that endeavor. The London Royal Society, established by William Petty, the Jesuit grandfather of America's leading enemy, Lord Shelburne, was a formalization of a secret cult established under the direction of the Stuart family's advisor Robert Fludd earlier, the Fludd whose published attack on Kepler's work from a hermeticist-cult standpoint is readily to be found in well-stocked academic libraries. The work of the London Royal Society was putatively based on the doctrine of empiricism as earlier defined by Francis Bacon and Bacon's lover and secretary, Thomas Hobbes. Bacon's writings, interestingly, are written as a polemic against chiefly the scientist William Gilbert, of *De Magnete* fame. (Gilbert, incidentally, was the first to discover the existence of the electromagnetic plasma, through studying the effects of a magnet on the flame of a candle).

There is another, directly relevant side to the roles of both Galileo and Bacon against the leading currents of European science. The principal flaw in Kepler's theory of harmony is that it uses the diatonic music scale, not the well-tempered scale. The significance of this for physics, we shall indicate a few moments later; at this instant, it is the fact of the connection of both Galileo and Kepler to this problem which we are reporting. The reason for Kepler's error on this account, as Tennenbaum has indicated, is that Kepler's connection to Galileo was through one of his teachers, Galileo's father, the latter one of the leading persecutors of the work of Bishop Josef Zarlino, the most important influence on the current of musical polyphonic composition leading directly into the work of J.S. Bach; Zarlino's writings exerted a direct, and decisive influence on Beethoven during the last decade of his life, an influence which must be known to understand crucial features of Beethoven's composition during that period.

Among his other thuggeries of the period, Francis Bacon conducted an inquisition against England's greatest musician, John Bull, a leading exponent of Zarlino's work. Bacon drove Bull from England and caused all copies of Bull's compositions and writings accessible to be destroyed. Bull went into exile on the continent, into collaboration with the predecessors of J.S. Bach.

The deeper connection between the issues of Kepler's discoveries and of the well-tempered system has been brought to the surface by LaRouche's indicated program for mathematical physics. A review of the well-tempered system, historically and from the vantage point of LaRouche's program, helps cast signifi-

cant light on the related, deeper implications of Riemann's 1854 habilitation dissertation.

The modern well-tempered system is a domain whose extent is twenty-four combined minor and major keys, in which harmonic ordering is determined by intervals of the fifth, major and minor thirds, and the complementary intervals derived as coherent with these. Since musical composition is based on the principle of harmonic progression ordered by these intervals, as a composition passes through a number of the twenty-four keys, it is indispensable for music that the frequencies of the individual tones of the twelve-tone scale be exactly the same in any one scale as in each and all of the twenty-three other scales.

There are two views of this feature of music. One view argues from the standpoint of the musician who believes that music must be seen as an historical development of an art "for art's sake." To an adherent of such a view, the facts of the attacks on Zarlino by Galileo's father, and the thuggery of Francis Bacon against John Bull, like the British effort to destroy J.S. Bach and his influence during the last years of Bach's life, make William Galilei and Francis Bacon very despicable persons, but this issue is not seen as bearing upon the central features of mathematical physics. LaRouche has shown that the values of the well-tempered system are laws of the entire universe, existing before the first human individual.

This well-tempered system was introduced to Western Europe through writings on the well-tempered system by the tenth-century Persian scholar, al-Farabi, the putative discoverer of the octave scale. However, al-Farabi correctly reports that the well-tempered scale was already very ancient at the time he wrote. This has been proven for the contemporaries of Plato, who defended the well-tempered system against attacks upon it by Aristotle. A collection of bells has been discovered, dated to approximately 1,000 B.C., in China, which are well-tempered. LaRouche has emphasized that it is impossible for an individual singer to sing poetry to the accompaniment of a stringed instrument, in which the accompaniment is in the form of a simple canonical polyphony, without adopting a well-tempered scale: on the condition one maintains the harmonic progressions adopted by the Academy at Athens.

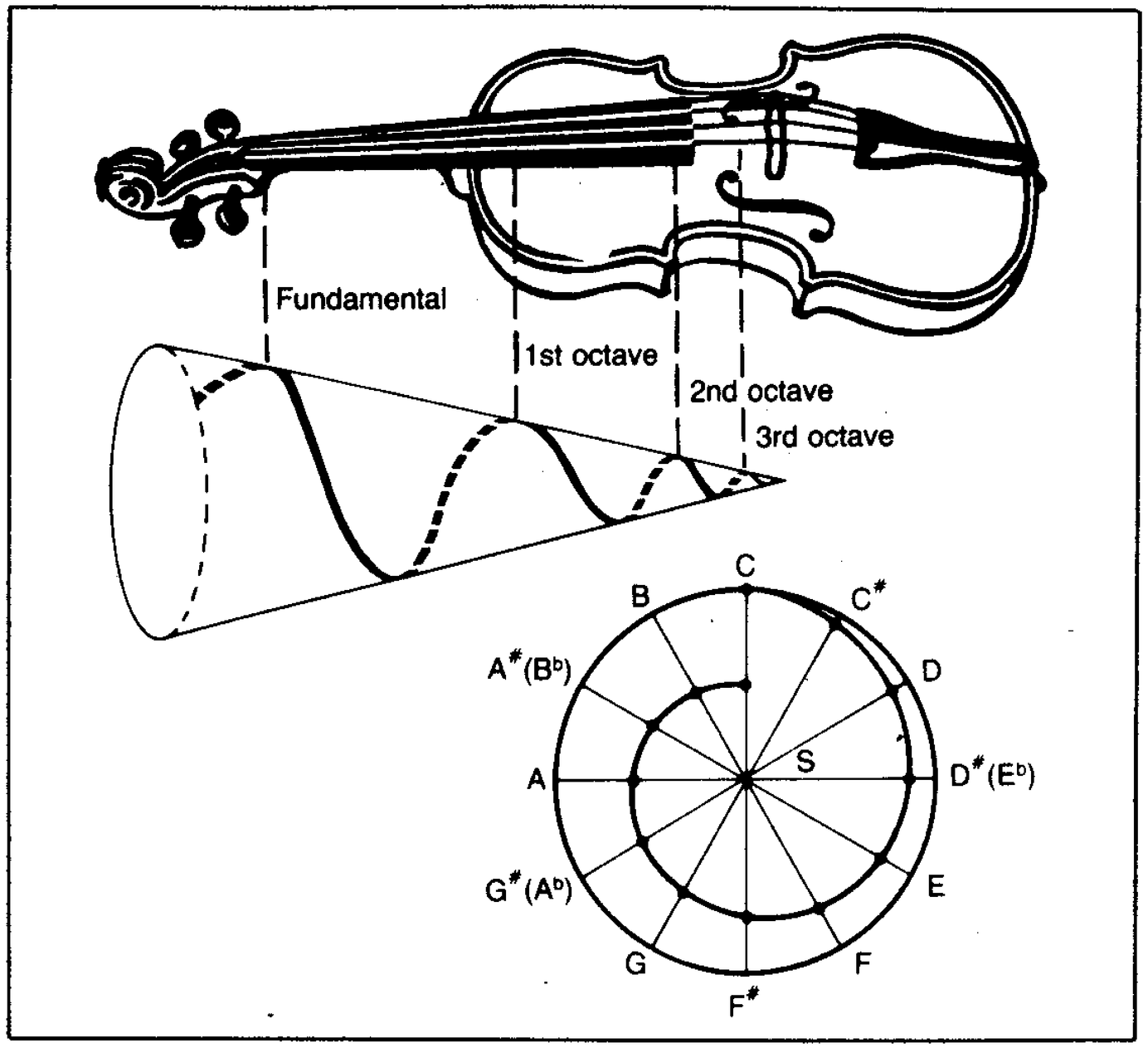
In canonical polyphony, there exist not only the sequences of tones internal to the progression of each voice of the polyphony. There are also significant sequences of tones, heard as additional voices, "across" the indicated polyphonic voices of specific singers or instruments. The late string quartets of Beethoven illustrate this most strongly; the performers must phrase voices which Beethoven writes into the composition across the instruments, such that each instrumentalist is phrasing his intonation not only to deliver the voice assigned entirely to his instrument at that point, but also to collaborate with the other instruments in delivering a voice which is performed as a sequence across the instruments. It is this feature of canonical polyphony, the cross-voice or polyphonic voices, which is the central feature of musical composition's developmental coherence, and hence the central principle of music as such. It is the ambiguity, the "tension" associated with this feature of polyphony which "energizes" the developmental process, and affords great music its proper quality of "excitement."

During 1981, LaRouche proposed to Tennenbaum the following construction. Construct a self-similar spiral on a cone. The projection of the 3-space spiral onto the 2-space circular base of the cone is a corrected Archimedean spiral. Since the characteristic of such a spiral is the Golden Section, the harmonic proportioning derived in construction of the regular pentagon,

what we have projected is topologically equivalent in that way to a regular pentagon. Therefore, this is the characteristic of the projection from 3-space into 2-space in this case. So, we must divide the circular base of the cone accordingly, into twelve equal circular sectors. Now, we observe the intersection of the radii defining those twelve circular sectors with the arm of the spiral. Treating the arm of the spiral as a vibrating chord, the relative values for the lengths of the chord, as defined by the intersections, are the well-tempered values. The implication of this construction is that we have shown the twenty-four-key well-tempered domain, with its Platonic harmonic characteristics, to have been established as a law of the universe before the first musician existed.

This construction was done as a choice of first step toward the full elaboration of LaRouche's program for mathematical physics. Seen in that larger frame of reference, this indicated geometrical exercise points to a direct connection between Bacon's attack on the development of mathematical physics and his own and Galileo's father's attacks against music.

What Kepler proved by his solution to the determination of the solar orbits was chiefly: (1) That the universe is composed as Plato specified, and (2) that the ordering of events in visible space (the bounded universal space of the discrete manifold) is harmonically determined, as Plato specified. Kepler implicitly proved, the first of these two points, that the real universe is an unseen continuous manifold, and that the universe we see is a distorted reflection of the continuous manifold. What he failed to solve, as his toleration of harmonic values not those of the well-tempered domain merely illustrates, is the kind of notions of mathematical functions we must employ to account for the projection of action occurring in the continuous manifold as reflected images of the discrete



A fundamental proof for music began a new approach to key problems in mathematics. With stringed instruments we obtain successive octaves by successively halving the vibrating part of the string. The intervals between successive octaves on the string thus become progressively shorter. Subjectively, however, we hear all octaves as musical intervals of equal size. This illustrates that the sense of hearing functions according to a logarithmic principle. This becomes clear when we mark off the string lengths at vertical distances on a cone on which is drawn a "base 2" spiral, a spiral that with each winding around the cone moves up half the remaining distance toward the apex. In the well-tempered system, the octave is divided into 12 equal intervals. We construct the corresponding string lengths by dividing the circle at the base of the cone into 12 equal sections and then connect each of these cuts along the circumference with the apex of the cone. The height of the intersection with the spiral determines the position of well-tempered intervals along the string.

manifold. However, his approach to approximating elliptical functions was an authentic insight, as Gauss's work was to prove later, and his specifications for development of a differential calculus, as Leibniz completed those instructions later, were also consistent in principle with the required form of functions of a complex variable, a purely geometric approach to complex functions accounting for projections of the continuous manifold upon the visible domain. Hence, the determination of differential number-series by Blaise Pascal, from within the context of the work of Kepler, Desargues, and Fermat otherwise, was Leibniz's correct choice of starting point for completing Kepler's specifications for a differential calculus—whereas, Newton's effort to plagiarize Leibniz's development of the calculus from the standpoint of infinite series, was intrinsically absurd, as Newton's axiomatic treatment of the definition of the point most efficiently reflects the axiomatic absurdity at the root of Newton's design.

Although modern mathematical physics, in the sense of a comprehensive approach to mathematical physics, is based on the work of Kepler published during the onset of the seventeenth century, it has been the misfortune of public-school and university students in English-speaking nations, that no English translations of Kepler's three principal publications have been available to them, excepting a translation of merely one excerpted passage in the *Encyclopedia Britannica*. The description of Kepler's work, as this is available from English-language textbooks and related sources, is outright and sweeping falsehood—blatant falsehood—respecting every leading feature of Kepler's work. Since the crushing-out of the pre-World War I standards of German science education during the course of the 1920s, chiefly by representatives of the British and Vienna schools—and N. Bohr—the fraudulent history of development and issues of modern sci-

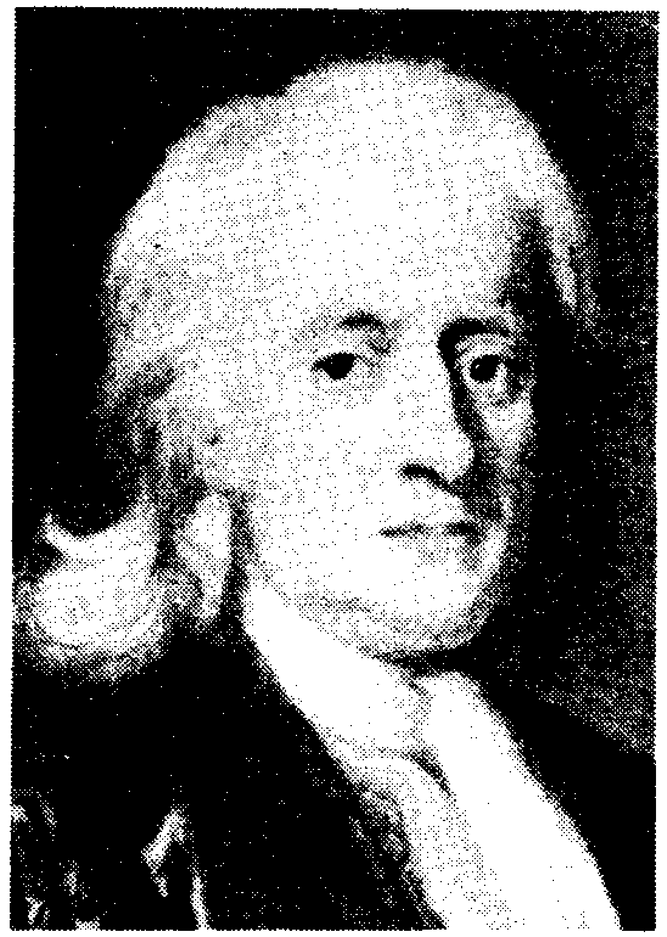
ence has become almost entirely hegemonic in public schools and universities generally. The problem began long before the 1920s.

The Neoplatonism of the Golden Renaissance, including the work and influence of Cusa, Leonardo, and the School of Raphael, was the principal target of the Inquisition during the period of the Counter Reformation (approximately 1525–1653). The leaders of this Inquisition were the Venetians, which is to emphasize the leading role of the Jesuits and not to ignore the role of the Calvinists. The Jesuits' creation of the Scottish Rite of speculative freemasonry around the pagan cult of Isis-Osiris-Horus, and other Phoenician cults added, was merely one important branch of this inquisitional program founded on behalf of Aristotle, or the tradition of Roman imperial law, and against the Augustinian principles of natural law and Neoplatonic science. The establishment of the Scottish Rite in Britain, by Elias Ashmole et al., under the supervision of William Petty, was an undertaking of Petty's London Royal Society, as was also the establishment of the delphic *Encyclopedia Britannica*. Both the Royal Society and the Scottish Rite cults were an outgrowth of the Jesuits' concoction of Rosicrucianism, Fludd's oriental (hermeticist) cult. Hence, later, the profound conflict between Grand Orient (free and accepted) freemasonry, as led by Franklin and his leading collaborators, and the Scottish Rite freemasonry (Nine Sisters, Paris; Grand Loge Suisse Alpina, Lausanne) of our own and Franklin's enemy, the Duke of Orléans.

In modern England, this hermetic cultism posing as science first appeared prominently during the late sixteenth century around Oxford and Cambridge universities. These universities, whose abominations had caused their privileges to be removed earlier during that century, regained their power during the 1589–1603 period, as part of the Genoese coup d'etat in which

Bacon played a leading, bloody-handed role, to secure the succession to their puppet, James of Scotland. Already, during this period, Oxford and Cambridge were notorious as centers of kabbalistic cults. There are no surviving papers showing any scientific work done by Isaac Newton relevant to the contents of his published writings. Indeed, what Newton and Boyle published was not actually worked out by them, but was plagiarized chiefly from the work of Hooke, or from the work on number-series done by earlier seventeenth-century English mathematicians. When the so-called Leibniz-Newton controversy erupted, it occurred to some thoughtful gentlemen that the argument might be better pursued by comparing and dating Newton's and Leibniz's respective working papers, to settle who had worked out precisely what, by what approach, at what point in time. Alas, Newton's friends replied, Newton's entire collection of working papers for that period had been destroyed by a most inopportune fire. However, they did do the best they could; they reconstructed papers which they presented as accurate replicas of the lost ones. Later, it appeared that the papers from Newton's celebrated laboratory had not been burned at all, but had survived quite nicely as the contents of a large chest. John Maynard Keynes, a fanatical admirer of Newton, was at first delighted to have the opportunity to be the first to explore this precious lode; after a brief survey of the contents, Keynes shut the chest, and wished nothing more to do with the matter. More recently, the indicated scholarly cataloguing of the contents of that chest was done. The working papers of Newton from the period he was reputed to be preparing his *Principia* deal almost entirely with experiments in "black magic" or kabbalistic cult materials!

In France, the Jesuits' leading seventeeth-century agent against science was René Descartes. B. Pascal's



Isaac Newton: *The fire that probably never happened avoided some embarrassing questions about the differential calculus.*

remarks on the problematic features of Descartes' work, and Leibniz's extensive examination of the same matter, are most noteworthy. Later, in the Ecole Polytechnique under Carnot and Monge, Newton was regarded with disinterested contempt, as a figure already exposed as a plagiarist and bungler; it was Descartes' influence which was rightly emphasized as dangerous to scientific work. In 1816, as the combined forces of the Scottish Rite and Jesuits attempted to eradicate Monge's program in geometry from the Ecole, the inquisition was begun by Laplace. The continuation of the destruction of French science was led by the Jesuit Augustin Cauchy, who was operating on precise instructions from his superior as to how to conduct this operation, Abbot Moigno of Rome. Cauchy's ruinous influence on the teaching of the differential calculus to the present day is illustrative.

The importance of Descartes is that it was he who succeeded relatively the most in insisting that the work of Plato, Archimedes, Cusa, Leonardo, the School of Raphael, Kepler, Desargues, Fermat, Pascal, must be brushed aside. The visible manifold, the discrete man-

ifold, he insisted, was the only real world for scientific investigation and intellectual reflections upon science. This Cartesian discrete manifold, objects moving in empty Euclidean space, was a more or less exact replica of Aristotle's doctrine of a "big bang" creation. It was this Cartesian schema which served as a starting point for the system associated with Newton, Boyle, et al.

"But," one hears objections, "most leading scientists today accept the 'big bang' doctrine!" As a matter of stated opinion, perhaps so. It is therefore interesting to examine what advocates of that view submit as proof. The alleged proof includes not a single reference to physical evidence directly supporting such a conclusion, but depends upon interpreting astronomical evidence according to mathematical assumptions which have been constructed entirely on the axiomatic assumption that the universe was created by a "big bang." Start with axioms which assume that the universe is a collection of self-evident particles flying about and bumping in empty space, and assume that this universe is a winding-down (directed by entropy) from some point at which the least entropy existed. Now construct a mathematics based entirely upon these axiomatic assumptions. Now interpret the initial state of reference for existing astronomical phenomena by tracing out an *imaginary* pre-history of the universe according to the indicated mathematics. Then cry out, "Eureka! I have proven, mathematically, that the universe was created by a 'big bang.' "

It is an utterly irrelevant argument, to assert that "accepted Newtonian physics" proves that the universe is entropically directed and created by a big bang. Kepler proved conclusively that the mathematics which leads to such a conclusion is axiomatically absurd. When the advocates of the "big bang" say that the "facts" prove their argument, they are resorting

to a subterfuge typical of Jesuits. They are insisting that the "facts" prove what is a result not of their so-called "facts," but of the method they use to interpret those facts, a method which the physical evidence has proven to be an absurd method.

The same sort of issue arose in British attacks on Riemann's 1859 *On the Propagation of Plane Air Waves of Finite Amplitude*. During the 1890s, Lord Rayleigh published an attack on Riemann, saying that "sonic booms" could not be generated in air, that Riemann's mathematics and physics were both absurd from the standpoint of the fundamentals of British mathematical physics. The generation of "sonic booms" proved conclusively that British mathematical physics was absurd. The design of an experiment was a test of which of two entire systems of mathematical physics were correct, as Rayleigh implicitly accepted those terms of the experiment in attacking Riemann. The success of Riemann's experimental design therefore proved that British mathematical physics rested upon axiomatic assumptions which were absurd. Kepler's empirical proof of his solar hypothesis, earlier, had similarly provided conclusive experimental proof that Plato was

Lord Rayleigh: *he staked the authority of Britain's mathematical physics against Riemann's experiment, and lost.*

right, that Aristotle was absurd, and had also proven implicitly that any mathematics based on a system of deduction from an initial set of axioms and postulates is absurd.

Any mathematical system which is consistent throughout, is reducible at each and every point of its construction to the initial assumptions on which the initial construction of the system is grounded. In formal logic, this is named "the hereditary principle." In all experiments, what we are testing implicitly is both the correctness of the ontological assumptions from which the elaboration of that entire system of mathematical physics began, and we are also testing the *adequacy* of those assumptions. An initial assumption might be correct, as far as it goes, but we discover that it must be restated in a slightly different way in the process of testing that initial assumption experimentally. As we indicated at the outset of this chapter, all fundamental advances in scientific knowledge occur as experimentally informed changes in the initial set of assumptions underlying existing mathematical physics as a whole.

We shall look at this point once again, in connection with some remarks on Riemann's 1854 habilitation dissertation. We shall note how Riemann employs this "hereditary principle" of mathematical physics to define what he calls "unique experiments," the approach to experimental work which enables us to probe the unseen continuous manifold with the same mathematical certainty usually thought limited to observation of the discrete manifold.

In any case, Newtonian physics—and Cartesian physics—simply does not "work" as it professes itself to be a comprehensive approach to scientific inquiry. The so-called "three-body" paradox is an hereditary feature of Newtonian approaches, not something which might be solved by a sufficiently clever fellow. On principle, it can no more be solved within the bounds of such a physics than the circle squared or angles trisected by means of ruler-and-compass constructions. Yet, Kepler's method encounters no such problem in defining the solar orbits. A related problem, yet to be explored experimentally to our full satisfaction, pertains to the fallacies of the statistical theory of gases.

The success of Riemann's cited 1859 paper proves that sound waves are not propagated as the statistical theory of gases implies. The experimental proof of the 1859 paper has demonstrated the argument of that paper, that the propagation of sound waves is primarily determined by a hydrodynamic ("sine-wave-like") continuous wave, just as Leonardo da Vinci described the generation of acoustical shock waves on this basis. The arguments of Rayleigh and others, that "sonic booms" were impossible, reduce to this point of underlying difference with Riemann.

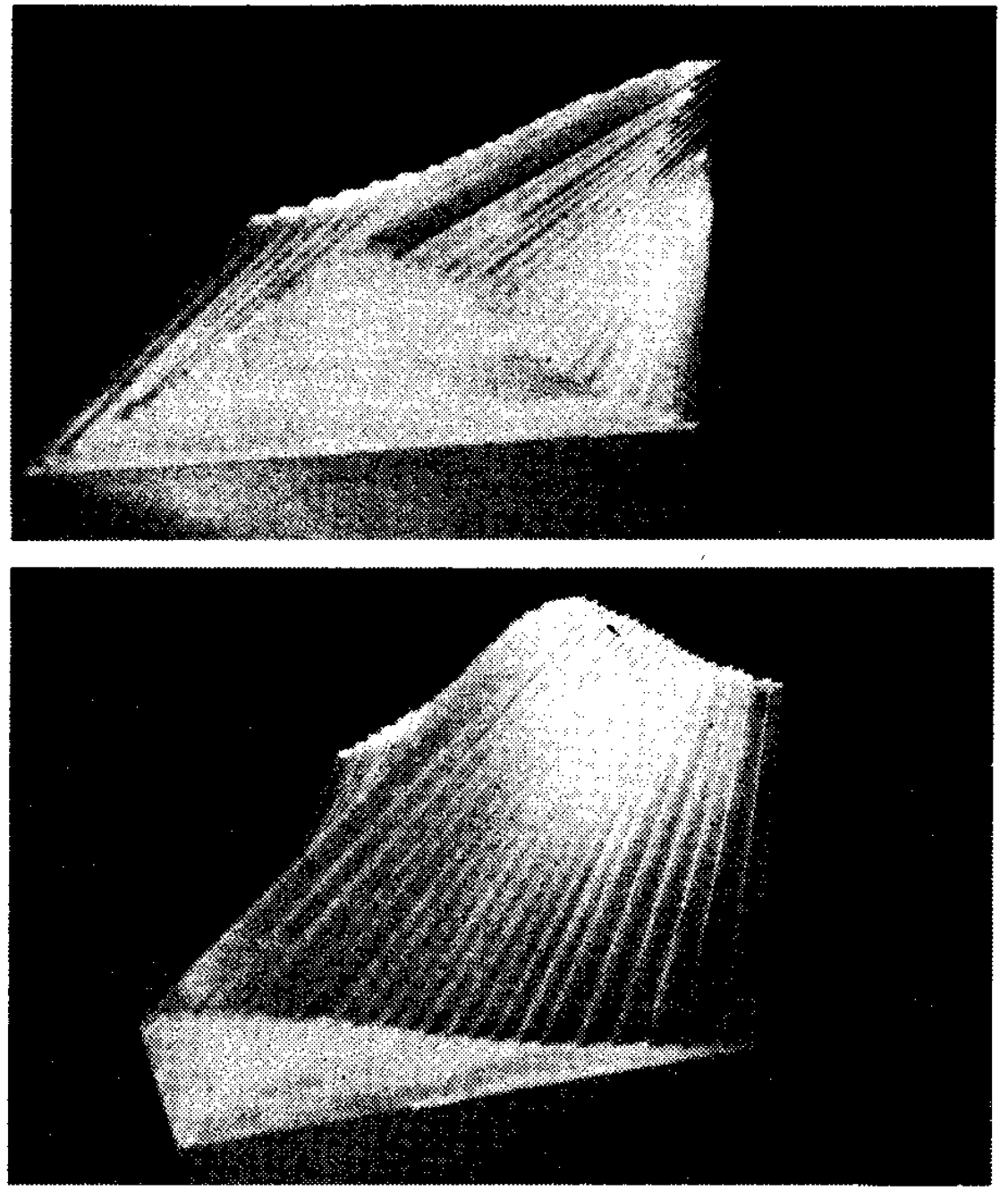
The British insisted that sound waves are the patterns of compression and rarefaction caused by percussive forms of mechanical interaction among air molecules. The evidence that such compression waves are produced by transmission of sound is unquestionable, but what does this evidence prove otherwise? Does it prove that one compression wave directly causes the succeeding compression wave by percussion? It does not. The compression wave's existence as an effect is indisputable, any schoolchild can demonstrate this repeatedly with aid of a tuning fork and similar apparatus. Is the *effect* so interpreted also the *cause?* Does the generation of an initial compression wave arrange the molecules such that percussive action by the molecules in that initial state of distribution of compression and rarefaction causes the next array of molecules to replicate the pattern?

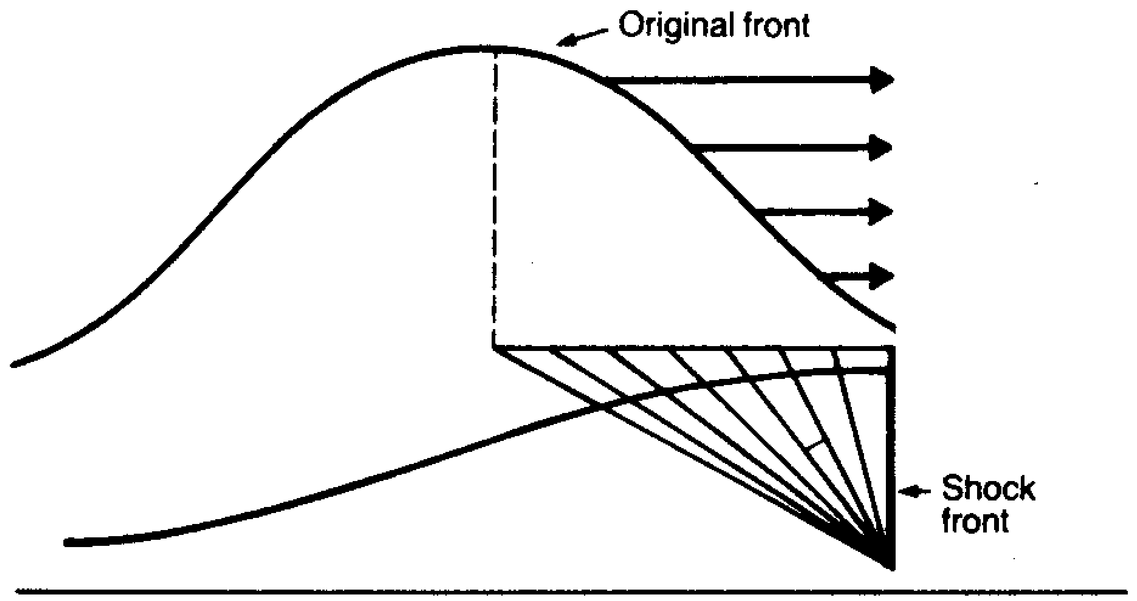
Riemann's paper requires that the effects be generated by electromagnetic waves, that the passage of

a sound wave through air is analogous to the movement of a surface wave over the surface of a body of water. The objection is raised, that this appearance occurs experimentally only as the speed of sound is approached, as the effect generating sound waves moves more rapidly than the average molecules do under existing atmospheric conditions. It is a clever objection, but it avoids the critical points of the evidence. The generation of the "sonic boom" under those indicated experimental conditions depends upon the assumption that the generating wave, which causes sound-wave and sonic-boom behavior alike, is hydrodynamic.

The further problem this poses, is the problem of dealing with the fact that the constituents of atoms are not "hard balls," but electromagnetic "wavicles," as Professor Erwin Schrödinger demonstrated for the electron, beginning from the point of reference of Riemann's cited 1859 paper. It happens that when the frequency of electromagnetic waves becomes very high, as the wave length approaches the diameter of an electron, under appropriate boundary conditions, such waves behave as particles, and also under appropriate conditions, atomic particles and nuclear particles behave as relativistic waves. This poses the associated question, what actually occurs when one molecule appears to bump another? We must look at this from the proper standpoint in quantum electrodynamics.

The associated formal and very practical problem, is that electrodynamics was developed, with significant contributions of the Carnot-Monge Ecole Polytechnique's work, by Gauss and the Webers from as early as the 1820s, and that the most accurate development was the uncompleted work of Weber and Riemann during the 1850s. The Riemann-Weber electrodynamics directly subsumes what is called retarded potential and has none of the devastating paradoxes (fallacies) of Maxwell's system. Unfortunately, the in-





A secret of the laser was discovered by Riemann in 1859. Shown, a plastic construction, and diagram, of Riemann's 1859 prediction of the way in which sonic booms could be generated. It helps understand lasers today.

fluence of such corrupted figures as Leopold Kronecker, Dedëkind, Helmholtz, and the influence of the Vienna school (Mach et al.) ruined progress along such lines of mathematical physics work in Germany after Riemann and Weierstrass. The British, featuring the work of Maxwell, took up the papers of Gauss, the Webers, and Riemann, and, as Maxwell stated his purpose quite plainly in writing his work, set out to plagiarize the leading results of Riemann-Weber electrodynamics, while repudiating the mathematical-physics methods by which these borrowed results had been produced. As the hideous attack on Max Planck by Ernst Mach et al. illustrates the status of the matter at the beginning of the present century, the influence of Helmholtz, Boltzmann, Maxwell, Rayleigh, et al. became such that the neo-Cartesian approach of Helmholtz, Maxwell, et al. dominated scientific work increasingly. As a result, important experimental work which threatens to upset the axiomatic assumptions of the Newtonian-Cartesian approach to elaboration of mathematical physics is predominantly ignored, or regarded as "pet projects" of strange fellows out of the mainstream of prevailing opinion.

The factional division within the ranks of science professionals, which erupted with Bacon's attacks against Gilbert and Fludd's and Galileo's assaults against Kepler, can be accurately summarized as a division defined by two sets of opposing assumptions concerning the fundamental assumptions of mathematical work. The main current of scientific progress, from Cusa and Leonardo, through Kepler, and so forth, into Riemann, bases its mathematics entirely upon geometry, and derives algebraic functions as descriptions of purely geometrical constructions. The opposing current, typified by the Jesuits and their influence, traces its mathematics from axiomatic assumptions of algebra, and employs geometry to describe algebraic constructions.

The former, Cusa through Riemann, is Neoplatonic. The latter is Aristotelian. The former derives its mathematics from the assumptions associated with the *Timaeus*. Bacon, Descartes, et al. are nothing but neo-Aristotelians. The increasing relative hegemony of the neo-Aristotelians during the period of more than a hundred years to date, is the source of the crisis in scientific work, the cause of the withering-away of the vitality of fundamental research in science.

Physics From The Standpoint of Economics

Thus far, we have described those leading historical issues of science which inform LaRouche's approach. Before we take up LaRouche's specific approach to matters of physics, we must shift the frame of reference of our discussion to economics. We shall identify those critical matters of economic science which shape LaRouche's practical interest, as an economist, in the varieties of methodological issues of physics we have indicated so far.

For reasons identified earlier in this Special Report, the successfully continued existence of society, and mankind generally, depends upon the continuation of those forms of technological progress which at least maintain, and, over the longer span, increase, the potential relative population density of society taken as a whole. It follows directly from this simple fact, that the value of society's economic activities to itself is to be measured in terms of the resulting increase of the potential relative population density of society as a whole. For the same reason, the only meaningful measurement of the economic value of the economic activities of individuals in society, is the implicit bearing of those individuals' activities upon changes in value of

the potential relative population density for the society as a whole.

That is the underlying assumption of the LaRouche-Riemann method.

This underlying assumption's elaboration proceeds by applying that assumption to the central features of Leibniz's founding of economic science.

The central point of initial reference in Leibniz's elaboration of economic science, was examination of the implications of the development of heat-powered machines "by which one man might do the work of a hundred." The first step of such inquiry was to compare the amount of work an average man's labor could accomplish with and without such a machine. The increase of the work accomplished by aid of use of the heat-powered machine is the root of the definition of *work* used by Leibniz for both economics and thermodynamics. The same approach, applied to different qualities of heat-powered machines, requires the notion of the relative power to do work, the rudimentary basis for the notion of *power*, as this appears in both Leibniz's economic science and his thermodynamics. The considerations developed immediately by examining such implications of the development and use of heat-powered machines obviously apply with equal force to use of the same notions of work and power for all aspects of the use and development of productive labor.

These preliminary notions require refinement. The next step toward the needed refinement is accomplished by noting that the amount of heat supplied to power a machine does not necessarily determine the amount of increased power to do work by the operative. In the simplest cases, the fact that two different kinds of machines, using the same amount of heat, may vary in their effects on the operative's power to do work, can be studied as a matter of the *organization* of the machines. This first approach to be employed in making

such comparisons is that elaborated by Leonardo da Vinci, and examined afresh by the Carnot-Monge Ecole Polytechnique. The proper form of statement of organization in reference to principles of geometry, especially rotational action, its geometrical derivates, and the synthetic constructions elaborated, presents us with general principles which have the most general applicability, far beyond the limited case of mechanical action.

This approach to principles of design (organization) of heat-powered machines, informs us of the approach we must adopt for studying the internal organization of different forms of labor of operatives, including the use of tools and simple machines without aid of heat power. We must reexamine the work of Leonardo and his successors on this matter, reexamining his from the vantage point of the heat-powered machines.

This must be generalized by discovering the principles of the heat-powered machine, including the principle of organization, in the form this appears in agriculture.

The notion of *organization*, so generalized, yields a unifying conception corresponding to Leibniz's definition of the term *technology*—or, in France, *polytechnique*.

The central principle of technology is the conversion of heat power into rotational action. This has direct bearing on the principles of synthetic geometry, and the related physical *principle of least-action*.

The central principle of mathematical physics is composed as follows. (1) That the circle of rotation is the only self-evident existence in geometry, and the only principle which is efficiently projected as a topological invariance from the continuous manifold to the discrete manifold. (2) That the corresponding principle of least-action is the only self-evident assumption of physics.

Limiting ourselves to some helpful illustrations at

this immediate point, the following obvious implications of rotation are noted. Converting heat power into rotational action permits us to change the direction of action. The rotation of a cone (or, the equivalent train of gears) permits us to increase the energy-flux density of action. The term, energy-flux density, measures the amount of action effected per square meter, or other cross-sectional area of a process. By concentrating the heat power supplied through a large cross-sectional area, such as a large piston, as work done on a small cross-sectional area, we increase the energy-flux density. The comparison of a blunt and sharp knife is an example of this. The principled illustration is the rotation of a cone, by means of which low-energy-flux density is changed in direction and is applied as relatively high-energy-flux density.

These considerations of Leibniz's economic science must be situated in such a way that they can be measured in terms of economic *value*, as the definition of value was given above. To accomplish this, we must correlate thermodynamics with that notion of value.

In textbook thermodynamics, the total quantity of usable heat passing through a process is divided into two principal components. The first component is the portion of the total heat-throughput which the process itself must consume to prevent itself from running down. This first component includes heat lost as waste, including friction. The most popular name for the heat-throughput represented by the first component is *energy of the system*. It is often desired that a process, such as an electrical generating plant, produce an output of usable energy. It is also desired in many such cases, that such an energy-generating process continue to function over a span of twenty to thirty years before running down. Even in such cases, part of the energy it generates as output must be indirectly converted into building a replacement plant, as good as or better

than the plant it replaces, after twenty to thirty years of the original plant's operation. After deducting this element of replacement cost from the output, we desire that there be a substantial amount of energy output for other uses. This second component of total heat-throughput is popularly identified as *free energy*.

An exact analogy exists in the case of society taken as a whole. To maintain society's fixed investments, flow of useful tangible goods, and labor force of operatives at at least a constant level of quality, we must devote a ration of the total tangible-goods output of society simply to maintaining the quality and quantity of the labor force of operatives, and to also maintain the quality and level of flow of fixed investment in productive capacities and flow of tangible-goods output. This ration of the total throughout of productive effort is functionally analogous to energy of the system. If the economy's production of tangible goods is operating above breakeven levels, there is significantly more produced than is required as energy of the system of the production cycle itself. Part of the amount in excess of such energy of the system of the production cycle is consumed by administration and services, or as waste. Whatever amount of tangible-goods output remains left over, after these deductions of combined energy of the system and "overhead expenses," is the net operating profit of the society as a whole, the equivalent of free energy.

Economies are "closed thermodynamic processes." The net operating profits of the society as a whole (the "free energy") are "reinvested" in expanding the scale of the society, and in raising the average levels of technology (and productivity) of production. We require that societies must operate above "thermodynamic" breakeven levels. We require that this happy condition be sustained, and improved upon, over the course of successive "reinvestment" cycles. Whether

this is truly the happy condition we require, is determined by comparing changes in the society's potential relative population density over the course of these successive cycles.

The units in which power to do work must be measured are units of increase of the potential relative population density. "Energy of the system" is equivalent to the zero decline in the potential relative population density. "Free energy" is equivalent to a margin of increase of the potential relative population density.

Nonetheless, although neither total hours of average labor, nor calories or kilowatt-hours, are used to measure value relationships in an economic process, it is an historical fact that increases in potential relative population density of entire societies correlate with increases in the amount of usable energy consumed per square kilometer, per capita for the entire population, and also per capita for transportation and tangible-goods-producing operatives. In the broadest terms of comparison, the energy-flux density of societies, per square kilometer and per capita, delimits the maximum level of potential relative population density of a culture.

The most immediate form of the difficulty of correlating rising energy-flux density and economic value directly is indicated by two examples. First, in the commonplace mode of generating industrial process-heat, we burn fossil fuel. In this transformation, the number of kilowatt-hours attributed to the fuel burned is significantly greater than the number of kilowatt-hours attributed to the process-heat produced. Second, we use such process-heat to drive electrical generating-stations; the number of kilowatt-hours of process-heat used are nominally greater than the number of kilowatt-hours of electrical current generated. Yet, we obtain more work using the industrial process-heat than we could obtain by not burning the fossil fuel. By

combustion at high temperatures (about 10,000 kilowatts per square meter, in energy-flux density) we gain far more power to accomplish work than by burning the fuel at lower temperatures. Additionally, most important, we are able to translate high-energy-flux-density process-heat into rotational action. Finally, most clearly in the case of electrical current's generation, we have transformed chaotically organized process-heat into highly organized, monochromatic electrical current.

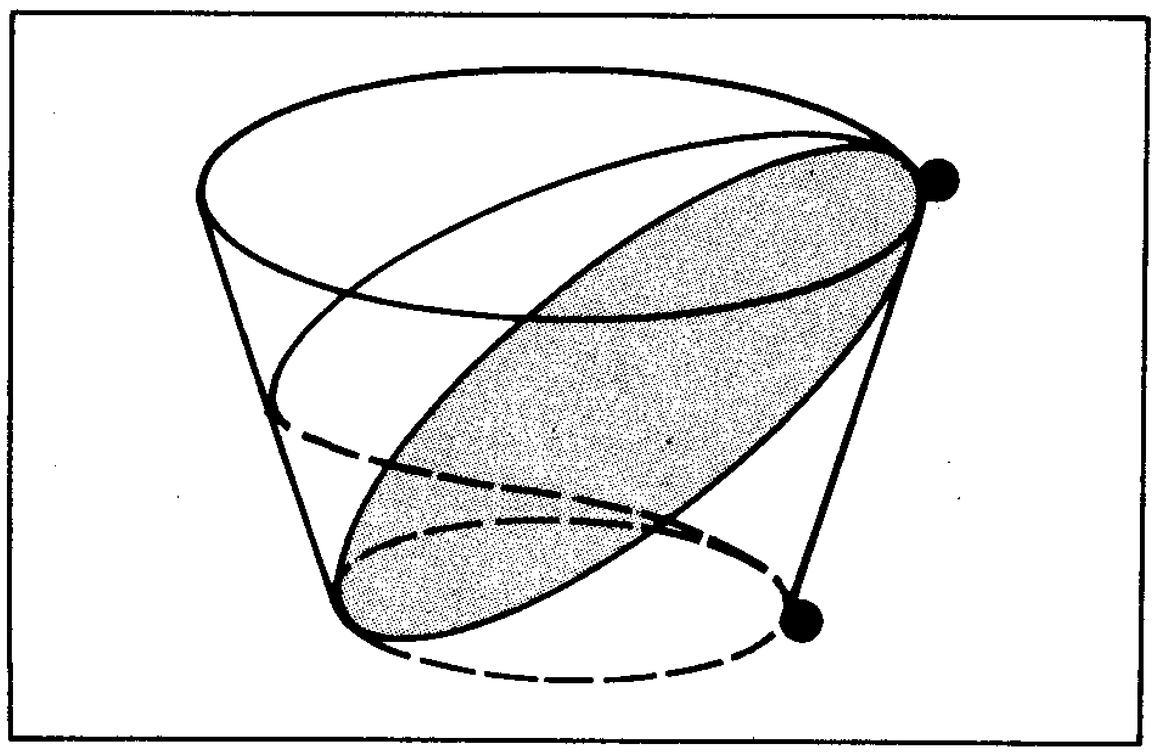
Refer to the construction identified earlier, used to show the determination of the 24-key well-tempered domain. Imagine that such a cone is transparent, and that the apex-angle of cone is very small; a strip of the cone, viewed sidewise, now resembles a cylinder, and the self-similar spiral on the surface of the cone resembles a sine wave from the side view. This is analogous in a meaningful, if merely illustrative way, to the general form of electromagnetic radiation (beams).

In the same cone used to project the values of the 24-key domain, place circles, parallel to the cone's circular base, at intervals defined by each 360° rotation of the self-similar spiral around the side of the cone. In this case, let the area of the circles correspond to the work accomplished in reaching that level, as in the earlier reference to the principle of least-action. The succession of such circles, corresponding to their determination by the spiral, describes increasing work accomplished. This process is represented by the obvious complex function for combined rotation and progression.

Now, construct an ellipse between two successive circles within the cone's interior, such that one extremity of the ellipse touches the first of two successive circles, and the other extremity touches a point of the second circle which is 180° rotation away from the projection of the point touched on the first circle. Now,

imagine a continuous rotation and growth of a circle moving from congruence with the first circle to congruence with the second, moving so according to the complex function corresponding to the self-similar spiral. Now, at each imaginary instant of the extension of that spiral, imagine an ellipse connecting the first circle to the moving-growing circle, in the same manner we defined the ellipse connecting the opposite points of the first and second circles. Then, define the complex function which defines the transformation of that moving, changing ellipse. (General discussion of this is provided by Tennenbaum in the location indicated). This identifies the primitive, minimal function specified by LaRouche, whose elaboration has been treated by Tennenbaum et al.

It is in reference to that "model," the most primitive approximation of a negentropic function's minimal precondition, that one must think about "energy," "energy-flux density," and so forth, as distinct from thinking of "energy" simply in terms of scalar mag-



Ellipse defined by circles generated at self-similar intervals by spiral action on a cone.

nitudes such as kilowatt-hours or calories. One must think of the organization of "energy."

Think, then, of an electromagnetic wave's interpretation as of a sine wave or sine-wave-like form, as bearing upon the 2-dimensional, side-view projection of a self-similar spiral in a cone which approximates a cylinder. The geometry which suffices to account for the physical properties of such a monochromatic beam depends upon a mathematical-geometrical schema for which the minimal, primitive precondition for negentropy is a model of reference. This includes the properties of the electromagnetic form of sound wave employed in Riemann's 1859 "shock-wave" paper cited. This generalizes the case of rotational action to include coherent electromagnetic beams, such as electrical alternating currents, for example. The comparison of the power to accomplish work with a laser, and the power to accomplish work by "non-lased" beams "carrying" even orders of magnitude more attributed energy, is also a relevant illustration.

For the ratio, E_f/E_s, in which E_f = free energy, and E_s = energy-of-the-system, define a mathematical function which expresses the change in value of the ratio over successive cycles of "reinvestment" of E_f in the process. If the value of the ratio is persistingly negative indefinitely, the system is running down; we describe the system as *entropic*, and absolutely so. If the value of the ratio, E_f/E_s, falls indefinitely, reaching negative values, over an indefinite period, the process is entropic. If the ratio does not necessarily become negative in value, we may view the system as *relatively* entropic. If the value of the ratio rises to above or at 0, and does not thereafter fall below 0, the system is "exhibiting negative entropy" (= *negentropy*).

To correlate the thermodynamics of the economic process with mathematical functions defined in respect

to economic value, we must bring two analogous kinds of functions together: the one a thermodynamic function; the other a function which expresses economic value as we have defined it.

Using the demographic divisions of the total labor force of LaRouche's analysis (not to be confused with Marx's different definitions of these demographic categories), the total labor force is divided among: (1) V = the portion of total output of tangible-goods production corresponding to the energy of the system of the combined operatives and their associated households employed in combined transportation and production of tangible-goods form of wealth; (2) C = the portion of total tangible-goods output corresponding to energy-of-the-system requirements for maintaining goods-producing capacity, basic economic infrastructure of goods production, plus the levels of in-progress intermediate-commodity inventories necessary for the continuity of goods production; (3) D = the portion of total tangible-goods output consumed by "overhead expense": including forms of administration and services functionally necessary as indirect costs of maintaining energy-of-the-system levels for C and V, also including institutionally essential administrative and service functions which have only a vague functional relationship to the productive process, including selling costs, and also all forms of economic waste, including costs of unemployment; (4) S = Gross Operating Profit of the productive process, after deducting $(V+C)$ from total tangible-goods output; (5) S' = Net Operating Profit, after deducting D from S.

This defines $S'/(C+V)$ as the best approximation of the required variable paralleling E_f/E_s. Since D includes a relatively large component which is not economically functionally determined, $S'/(C+V+D)$ is contraindicated. $(-S')$ and continuously declining values for $S'/(C+V)$ are entropic; constant and rising values for $S'/(C+V)$ are negentropic values in first-approximation. If such successively rising values are associated with rising values of C/V, and the per capita energy-flux density of V is rising in correlation with increases in per capita output per average operative, the negentropic implications of rising values for $S'/(C+V)$ are substantiated.

The economic function corresponds, apparently, to reinvestment of S' in the development of basic economic infrastructure and production of tangible-goods output, on the condition that the average level of technology of production and infrastructure is advancing. However, this assumption suggests that the conversion of S' into increments of $(C+V)$, with rising ratios of C/V, increases C to the degree that $S'/(C+V)$ must cumulatively tend to decline. The error causing such an apparently projectable tendency is that "reinvestment" does not take the form of expending C for replacement of plant, machinery, etc., exactly replacing existing plant, machinery, equipment, etc. C is the indicated energy-of-the-system cost for such categories, as this cost is defined by the levels of technology associated with a current tangible-goods output. What is "reinvested" is actually the amount of goods output corresponding to $(C+S')$. The ratio, S'/C is determined by the level of technology of the capital goods purchased. If the level were to stagnate, the declining value of $S'/(C+V)$ would appear at some forward point in the successive reinvestment cycles. If the level of technology represented by purchases of magnitudes $(C+S')$ is high, relative to the average of the previous cycle of production, the ratio S'/C increases correspondingly: a smaller portion of total capital-goods and related purchases—a smaller portion of the total magnitude of output, $C+S'$—meets the energy-of-the-system requirement associated functionally with the definition of C.

It is a necessary, brief digression from developing the main line of our argument here, to make this point clearly understood.

"Reinvestment" takes the form of injecting capital goods, etc., of the current level of technology of such investment purchases into an accumulated, previously invested stock of such partially depleted goods. The previously invested goods represent a level of technology which must usually be, on the average, lower than recent "reinvestment" purchases. For that reason, even if advances in technology of capital goods offered for reinvestment halt at some arbitrary point, continued reinvestment will probably raise the average level of technology in use over a number of succeeding reinvestment cycles. As the average level of technology in previously established use improves, through replacement capital goods of a quality below that at the point technological progress halted, new purchases of the best stocks from the halted upper level of technology will represent increasingly less improvement in the average level of technology, as the level of technology of net old stocks in current use converges upon the fixed level of technology of the new stocks available for reinvestment-purchases.

Not only will the rises in cost of energy of the system C lower the ratio $S'/(C+V)$, but there will be a rise in social costs of production, as a result of the effects of depletion caused by lack of technological advancement of production. So, not only will the ratio $S'/(C+V)$ decline on the first account indicated, but also depletion will define increasing rates of rise of social costs of average production.

It is in this general way that a halting of technological progress, even under conditions of relatively high rates of reinvestment of Net Operating Profit of society, defines a temporary interval of prosperity, followed by an accelerating downturn.

We restate the immediate point. The apparent ratios, $S'/(C+V)$, S'/C, and C/V, first appear as ratios measured in terms of the average level of technology associated with a total tangible-goods output. If the goods output corresponding to reinvestible $(C+S')$ is significantly higher in technology than the previous level of such output, the effect on total production of such reinvestment is the same as if S'/C were increased appreciably above the initially indicated value for that ratio. This sort of increase is the precondition for sustaining an economy in a condition corresponding to a long-term process of sustained increase in $(C+S')$. This condition of sustained technological progress is the precondition for true negentropy, for a mathematical functional value corresponding to sustained increases in potential relative population density.

Turning to the energy side of the process, it appears, historically, that there is almost a direct correlation between rises in energy-throughput per square kilometer and per capita. However, this result subsumes additional requirements: that the energy-flux density of energy sources used for production rises secularly, correlating in rough approximation with the rise in potential relative population density obtained. Such combined increases in average energy-throughput and energy-flux density of point-sources cannot be efficiently assimilated by the society except through advances in level of technology.

The broad significance of increasing the energy-throughput per square kilometer is obvious. By increasing the amount of energy per square kilometer, while raising the energy-flux density of the energy stocks supplies, we are increasing the "reducing power" of society's actions upon an average square kilometer of area. By increasing these magnitudes per capita, the "reducing power" of the average individual is increased.

Beyond that sort of general observation, the obvious ceases to be adequate. The problems coming to the fore in such illustrative cases as the generation of process-heat and electrical current, briefly reviewed above, are shown to be crucial. "Energy" and associated functions are correlated with increases in potential relative population density, but they correlate as they are subsumed by technological progress, as uses of energy required by and made practicable through advances in technology.

That completes an adequate outline of the relevant points taken from LaRouche's work of (principally) 1952–1959, in locating and refuting the central fallacy of Karl Marx's three-volume *Capital*. Before proceeding back to matters of physics from the vantage point just outlined above, the references to the British doctrine of political economy in earlier chapters of this Special Report are briefly resumed.[30]

No popularized belief could easily exceed the absurdity of assuming that Karl Marx-the-economist was the adversary of the political economy of the British East India Company's Adam Smith. Approximately ninety-nine percent of the contents of Marx's three-volume *Capital* is an exhaustive defense of the British "nineteenth-century model" of political economy from the standpoint of reference of David Ricardo. In the end, *Capital* was a "devout communist's" defense of that British "model." Marx's hatred against industrial capitalism, together with his admiration of technological progress, echoed the Cambridge-Edinburgh faction associated with the activities of Charles Babbage et al. during the second quarter of the nineteenth century, a current with which Marx's famous associate, Fredrick Engels, continued to be linked before and during his connections to Marx.

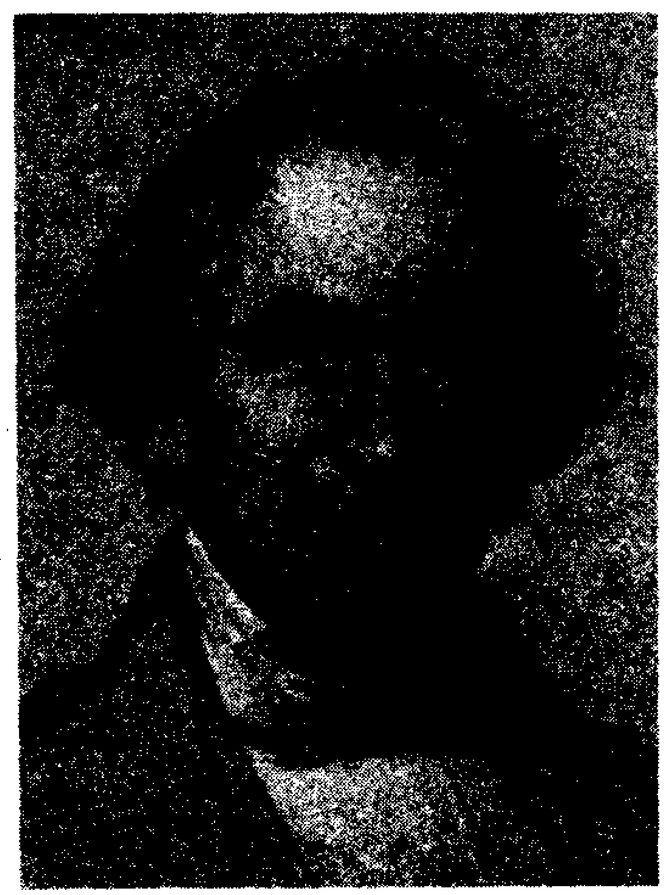
This report may at first appear to be outrageously contrary to generally adopted opinion. It is nonetheless

a simple matter of fact. When the contents of *Capital* are actually studied, and those contents are judged against the backdrop of both Marx's attacks against Henry C. Carey's 1851 *The Harmony of Interest* and the leading political-economic currents of opinion in Britain during the 1825–1865 period, the evidence is overwhelmingly conclusive. It is Marx's attacks on Henry C. Carey which put the entire matter into sharpest focus.

Carey insisted, especially in arguments elaborated in his *The Past, The Present, and The Future*, and his *Harmony of Interest*, that the unendurable flaw in the British economy was the subordination of the industrial-capitalist interest to what he identified as the "feudalistic" origins and continuing characteristics of British rentier-finance. Carey focused upon the British doctrine of "rent," as that doctrine appears in Smith, Malthus, and Ricardo, as the most concentrated expression of the mixed feudal-capitalist character of the British economy.[31]

Marx retorted vehemently: the British doctrine of rent was the foundation of capitalist economy. All of the essential failures integral to industrial-capitalist

Henry C. Carey *taught President Abraham Lincoln economics, and threw Karl Marx into an angry fit.*



society, he insisted, were caused chiefly through the capital accumulation accomplished by way of capitalist employers' profits. In *Capital* III, Marx defends the British "model" as a whole from the standpoint of a defense of the feudalist doctrine of "rent." The peculiar position of Marx and Engels within the setting of early-to-middle nineteenth century British political-economic opinion as a whole, was that Marx and Engels took the factional standpoint of Babbage et al. against the Oxford malthusians. Marx's three-volume *Capital* is a comprehensive defense of David Ricardo's doctrine from that specific factional vantage point of then-current elements of leading British opinion.

The exact figure is subject to dispute, but it is a fair estimate of the matter that Marx's anti-capitalist views occupy only a proverbial "one percent" of *Capital* in its entirety. Marx would have abhorred the radical malthusianism of a Bertrand Russell; his political views are not unfairly described as "communism plus Charles Babbage"; he desired a future communist society based on the same principles of political economy he elaborated in defending the British "model" against the American System and the Colbert-Leibniz "model" of Lazare Carnot et al., and against the "model" of Friedrich List's policies for Germany's industrial development. Otherwise, Marx's communistic defense of Adam Smith and David Ricardo, even in its communist features, is much closer to the political world-outlook of the Cambridge Apostles, then and now, than the American man-in-the-street would even begin to believe.

This view of Karl Marx we have just presented is visibly shared among leading British circles of economists today, most emphatically King's College, Cambridge. British economic theory today starts with the monetarist ("utilitarian") outlook of Mill, Jevons, Marshall, and Keynes, as does the British Fabian Society's

subsidiary, the Mont Pelerin Society of Friedrich von Hayek and Professor Milton Friedman. This is the basis for British monetary theory, a purely rentier-financier monetary doctrine. Beyond that, Cambridge University agrees with Henry C. Carey's description of British economy as capitalist elements subordinated to feudalistic elements. To explain what happens to a capitalist economy subordinated to monetarist policies, present-day British political economy employs Marx's *Capital*. It is this sort of fusion of Keynes and Marx which gave birth to both our own National Income Accounting practices of government today, and the world-wide proliferation of Cambridge University's Marx-referenced design of the same "systems analysis" which Robert S. McNamara and his harem of "whiz kids" introduced to the U.S. Department of Defense during the 1960s. Through such channels as the International Institute for Applied Systems Analysis (IIASA), an institution established jointly by the Soviet KGB, McGeorge Bundy, Britain's Lord Solly Zuckerman, and OECD Director Alexander King, this "Cambridge systems analysis" has been imported into the administrative practices of the Soviet government, as well as the neo-malthusian Global Systems Analysis organization associated with Ivan Frolov et al. today.

To understand the leading problems of the economy of the United States, and of the world under the Bretton Woods system, it has been necessary to expose the effects of the Keynes-Marx synthesis in shaping the economies affected. This is indispensable today; it was indispensable during the 1952-1959 period. LaRouche's attack on the systematic effects of monetarism was developed principally by adopting the von Neumann-Morgenstern *Theory of Games & Economic Behavior* as his chief adversary of reference on that account.[82] The remainder of the attack was against the built-in consequences of employing a Marx-referenced kind of

"systems analysis" under the umbrella of such a monetarist framework.

LaRouche's work from 1952 onward began with his refutation of the Wiener-Shannon doctrine of "information theory." He replaced the kind of popularized notion of "energy" associated with the statistical theory of heat, by a notion of *negentropy* coherent with the 1854 Riemann habilitation dissertation. The elaboration of this substitution provided the desired preliminary notion of *technology*. That latter is the topic of the section of this chapter immediately ahead. These views of negentropy and technology were employed as leading features of LaRouche's attacks upon monetarism, Marx's *Capital*, and the Keynes-Marx synthesis.

This method of attack upon the problem produced a general set of economic-policy criteria identical with those of the American System. The employment of that particular conception of *technology* gave birth to the method of forecasting LaRouche first employed for his January 1957 forecast, and the long-range forecast produced during 1958–1959.

The "business-cycle" analysis central to the 1958–1959 long-range forecast was developed in two layers. Putting monetary considerations momentarily to one side, LaRouche first examined the kind of business cycle which develops under the condition an economy continues to reinvest in the production cycle, but abruptly halts technological progress in the development of capital goods, as this analysis is indicated above. LaRouche then inserted this aspect of the business cycle within its monetary context of the 1950s. Instead of reinvesting $(C+S')$ only in the production cycle, an increasing portion of this revenue is diverted as income to ground-rent, usury, oligopolistic merchant-capital speculation in commodity traffic, and to services' components of D which are not functionally related to the indirect-costs' "overhead expense" of the production

cycle. He combined these two, by treating the generation of $(C+S')$ within the production cycle as the ultimate payments basis supplying rent and debt service as income to rentier-financier accumulations of nominal assets.

To construct a long-range forecast by such means during 1958–1959, it was also necessary to know with reasonable certainty whether or not institutionalized policy-shaping influences would maintain the same criteria of policy-making response to unfolding, devolutionary developments which had characterized those institutions during the 1945–1959 period. On the assumption that the specific form of policies would be altered, but that the monetarist interest and its associated criteria would continue to predominate, a simplified mathematical function incorporating the assumption that those criteria would persist, produced the long-range forecast described in an earlier chapter of this Special Report.

In layman's terms, all of the mathematical functions included in that forecasting "model" were essentially of the form of "compound-interest" functions. The most simplified of the geometric models adequate to describe approximately such a process defines the totality of an economy as always having the value of a unit-circle, the value "1." Analysis focuses, initially, not on the increase of the amount of goods produced, but examines the changes in relative values of the "pie-chart" sectors, as the economy (symbolized by the evolving circle) proceeds through successive "reinvestment" cycles. The absolute growth of the economy, in respect to number of its population, number of its total labor force within that population, and quantity of tangible-goods-production output, is a growth of the form symbolized by a growing circle, as such growth is ideally represented by the generation of a cone. Actually, the development of economies according to their descrip-

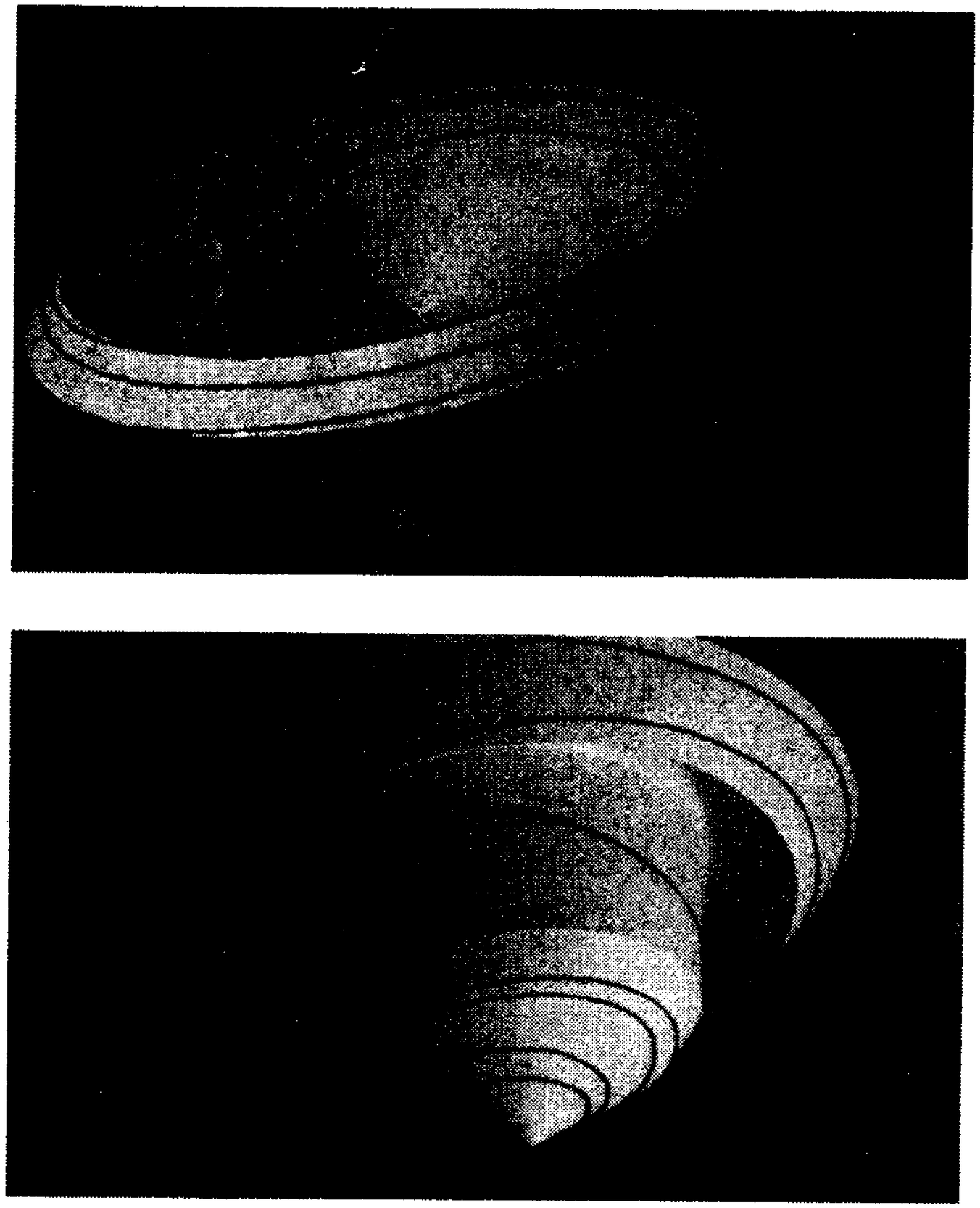
tion by such functions of reference, is not a neat, ideal cone, but more like the growth of the horns of a freakish goat.

The underlying basis for this horn-like geometrical modeling of economic processes is implied by the resemblance of any closed-thermodynamic-process sort of reinvestment cycle to the Fibonacci series, even if such a process passes through variously entropic (negative growth) and negentropic phases in the elaboration of the closed thermodynamic process over extended, successive cycles. The connection to the Golden Section, and to Gauss's derivation and application of the arithmetic-geometric mean, is implicit. That implication, intersecting Riemann's treatment of elliptical functions, points to the obvious importance of Riemannian physics for treating such processes.

The mental-visual image of a simplified version of such a process, using the leading considerations identified as used for LaRouche's 1958–1959 long-range forecast, is rather easily grasped by the mind as a single act of conceptualization. This mental-visual image was the full scope of the "model" LaRouche employed to develop that long-range forecast, and nothing more than that. It was a matter of turning on a three-dimensional television screen in his mind, and tracing through each phase of the growth of the geometrical image transforming itself on that screen.

The later development of the LaRouche-Riemann method for computer-assisted forecasting was a more complicated matter.

The moment a developed mental-visual image is shifted in residence from its place in a single mind, and is forced to seek existence in a process of communication and coordinated practice among a significant number of persons, an appropriate language must be adopted for this social activity. The temporary setbacks encountered, until the cooperating group has



A geometrical representation of changes in rates of economic growth often looks like the horns of a freakish goat. Shown, models of changes in growth in the West German economy, exposing visually the disasters emerging under Chancellor Willy Brandt.

fully mastered such an appropriate language, are a cheap price when compared with the enormous benefits to be realized by bringing many minds to bear on the same conception. It was necessary, before the work on the computer-assisted "model" could begin in December 1978, to expend much of the 1970s in educating former students of LaRouche's one-semester course in Riemannian physics' implications. This was the temporary setback. Yet, as a result, the specialized knowledge possessed and developed by many minds could be assimilated into a coordinated undertaking.

Most notable was the participation of specialists in mathematics and mathematical-physics specialties, especially plasma physics. The technological implications of plasma physics and related categories of relativistic physics could now be assimilated directly into the treatment of technology within the "model."

Technology, the Logos, and Human Creative Powers

As we have indicated, the effect of technological progress in increasing the ratio S'/C relative to a previous state of the economic process, is the central feature of the required mathematical, closed-thermodynamic functions required for economic analysis. This feature, technological progress, is introduced to the economic process from outside that process, at least, as thermodynamics appears to define the process. It is a production of the creative powers of the human mind.

All living processes, as biological processes, have the morphological-functional characteristics implicit in self-similar proportioning of form and function according to the Golden Section. It has been shown, for example, that plants can develop hereditable characteristics without genetic modification, in a seemingly

"Lamarckian" adaptation to favorable kinds of increase of the chemical and other energy-throughput features of their environment. It is suspected by some biologists, on the basis of this and other evidence, that the living organism's hereditable characteristics are not determined exclusively by genetic inheritance, but by larger processes of tissue as a whole, processes able to alter "willfully" the genetic facet of the reproductive processes as a whole.

This sort of evidence complements the general picture of evolutionary development of the biosphere, when that biosphere is examined as a unified process. The general effect of alterations of primitive, plant, and animal life-forms, the alteration of their relative population densities, their changing interactions, LaRouche has long insisted since reflections on Rashevsky's biophysics, present us, over a span of perhaps three billions years of development from proto-living processes, a picture of rising negentropy of the biosphere as a whole, and of related transformations in geology, geography, the creation of the atmosphere and oceans, the evolution of weather and climate, in a direction coherent with the rising negentropy of the biosphere as a whole. This evidence demonstrates a directed character to evolution of the biosphere, and therefore its constituents, as a whole. This evidence conclusively refutes the malthusian concoctions of Darwin, Wallace, Huxley, et al.

LaRouche's argument includes the following points of relevance to what is presented in the later paragraphs here.

Using the same approach to mapping the history of the development of the biosphere employed for study of negentropic economic processes, he demonstrated that the characteristic feature of the biospherical process is, in terms of the energy-flux density of biological activity of biomass generally, the equivalent of a rising

potential relative population density, including the transformation of our planet's geology, geography and climate consistent with the increase of such potential. This evidence of the mathematical function implies that the characteristic feature of individual organisms within the biosphere as a whole is analogous to the implicit economic value of the productive activities of the individual within an economy as a whole: of either contributing to increase of negentropy or entropy. Additionally, it is implicit that the directed character of evolution, shown by increase of the equivalent of potential relative population density for the biosphere as a whole, is negentropic.[33] Not only are living processes negentropic in their mode of existence; the principle of evolutionary development within the biosphere is also negentropic.

This coincides, in refutation of Darwin et al., with the implications of the Golden Section characteristic of living organisms. Organic processes are intrinsically negentropic, such that the entirety of the "mechanisms" of living processes are characteristically negentropic. Therefore, an interpretation of living processes, such as "natural selection," which proceeds from root assumptions coherent with entropy, is an arbitrary and false interpretation of biological evidence.

The same negentropic principle is the characteristic feature of societies which are not dying. (A society which adopts a zero-energy-growth policy of practice, a zero-technological-growth policy of practice, is a dying society.) This negentropic feature of societies is not something carried over from mere biology, as we think of biology in terms of the characteristics of living tissue or of the range of behavior of animal species. Animal behavior, as its potential is measured in terms of changes in potential relative population density, is approximately fixed relative to its environment, except

as man intervenes with animal training and other superimposed actions to change this. Only man can *willfully* increase its species' potential relative population density by orders of magnitude. Such willful effects of mental life are not found in the biological potentialities of any lower species. Although the negentropic potentials of human creative discovery for practice have the same principled form as negentropic evolution in the biosphere generally, these powers are generated by thought, not by means attributable to the willful behavior of animal species. Although human thought is mediated by biological processes of brain function, no study of brain function from the standpoint of study of lower organisms can account for the thoughtful powers of the human brain.

LaRouche has argued that not all aspects of human thought and related willful behavior are *directly* expressions of that capacity which distinguishes man from beasts. He insists that only one included aspect of human consciousness and related willful behavior is actually "divine." He locates that distinguishing quality in those capacities of the human mind congruent with *a process of perfection of the hypothesis of the higher hypothesis*. He insists that this quality of the human mind is active in all normal human individuals, even though those individuals are not usually conscious of this quality in a directly conscious way. It is the intervention of this quality into other features of human willful behavior, such that: The superiority of lower qualities of human thought to the attributable mental qualities of animals, he argues, is entirely the result of the impact of the highest quality of the human mind upon the lower functions of ordinary forms of day-to-day conscious behavior.

Nonetheless, although he describes this highest quality of human thought-potential as "divine," he rejects what he terms "the Jesuitical mystification" of

this thought-potential by Descartes and others. This quality, he insists, is not a quality of ourselves beyond mortal comprehension, provided we understand the Being of the Creator and Logos from the vantage point identified in Plato's *Timaeus* and the opening portion of the Gospel of St. John.

LaRouche's views diverge from popularly held general opinion, but not from the stated viewpoint of Plato (naturally enough), or Cardinal Nicholas of Cusa, Johannes Kepler, Gottfried Leibniz, or Bernhard Riemann. In the instance of each of these cited personalities, and other provable instances, their leading contributions of mathematical physics were directly motivated by the same philosophical standpoint as LaRouche's. *There have been no atheists among the great scientific discoverers*, nor could there be.

This may appear a contradiction, in light of the fact that the principal adversaries of LaRouche's, as well as Cusa's. Kepler's, Leibniz's, Riemann's method over the recent five centuries have been the Jesuits. LaRouche replies, that the Jesuits are not Christians; there may be exceptions to this among the ranks of the order, but the order as such is anti-Christian on principle. It is Gnostic, like the specific kinds of freemasonic orders which the Jesuits created, and with which they have been intimately associated since the concoction of the Rosicrucians of Fludd et al. The Aristotelian standpoint central to the Jesuits, is a mechanistic conception of the universe, into which it is impossible to introduce a God consubstantial with universal Creation, but only arbitrary deities from outside the universe. The Gnostic standpoint represented by the Jesuits was aptly described from the inside, according to LaRouche, by the *Varieties of Religious Experience* of Harvard University's William James, as is demonstrated in the current, syncretic practice of

Jesuit "liberation theologists" in Central America and elsewhere.

This is consistent, LaRouche emphasizes, with the history of Venice's relationship to the Papacy; whenever a Pope is assassinated by poisoning or other means, "Look to Venice," he warns, "or to the networks coordinated by Venice in concert with the monastery at Mount Athos." The Jesuits are the most prominent secret-intelligence arm of the Venetian *fondi*, and are intimately partners of those currents operating under the umbrella of the Eastern Rite which are coordinated through Mount Athos. "Corner a Jesuit," LaRouche reports from his frequent experience, "and he will evade any rigorous fact either by rolling his eyes upward, announcing the presence of one more inexplicable 'mystery,' or project exactly the same sophistry by declaring that reality 'is interconnected.' They do not adore the Judeo-Christian God, but rather worship religion as such, as James defines religion. They are the priests of Isis."

LaRouche's treatment of the hypothesis of the higher hypothesis is situated with respect to the implications of technological progress.

The sustaining of technological progress, at least in net effect, over the span of human existence, impels us to shift our study of technology away from narrow examination of one-at-a-time new discoveries. The net outcome of human existence is that these discoveries are subsumed by an ordered process, a process consistent in effect with negentropy. There have been exceptions to sustained progress, he admits, stressing the "model" of the Roman Empire and its inevitable internal collapse in the West, as an example of what disaster results whenever the famous injunction of the Book of Genesis is subjected to persisting repudiation in practice. "The former civilizations which collapsed

into mere barbarous or savage relics of their earlier population levels and culture," he stresses, "accomplished a rather catastrophic reduction in those populations which became the bearers of a zero-technological-growth culture." The rise of the human population from primitive levels of approximately ten-millions potential, to an estimated four-and-a-half billions today, was the benefit we have accumulated from those phases of development of civilization which sustained technological progress.

He shifts the focus away from the isolated particular discovery, to the process which generates successive discoveries. He stipulates that we must abstract from that empirical evidence from history, two adducible features of successive advances in technology. We must focus attention on the increase of potential relative population density through the advances effected under the influence of a continuously developing specific culture. We must also focus on the different rates of advancement accomplished in comparison of such cultures.

As the evidence is being brought into this form for study, we must examine the internal characteristics of the associated cultures. We must adduce those characteristic ideas about scientific discovery which, as cultural influences, shape the approach the individual discoverer has adopted. That permits us to examine the kind of development of scientific thinking which occurs in the span of development of a culture, to compare different scientific or equivalent factions existing and contending against one another within that culture, and to trace the internal history of development of scientific and scientific-like ideas within each faction and within the culture as a whole.

What was of the greatest interest to him, is to discover something deeper in such processes of development of scientific-like cultural currents: "What ought

to be of greatest importance and interest for us, are the kinds of ideas which cause the relatively highest rates of advancement in the rate of fruitful discoveries, the ideas which not only revolutionize scientific-like thinking in general, but which have, historically, caused the most fruitful advances in generalized scientific-like thinking."

He has described scientific progress in general as occurring simultaneously on three distinguishable levels.

"*First, there is the level of simple hypothesis*. Proceeding from prevailing scientific ideas, an individual or group of individuals formulate an experimental hypothesis consistent with those prevailing criteria. These criteria implicitly, at least, state a belief concerning the way in which the universe is organized. Given an interesting problem, the individuals steeped in that belief attempt to explain that problem in a manner which is consistent with that belief. This is a simple experimental hypothesis.

"*Second, the level of higher hypothesis*. This hypothesis corresponds to an experimentally validated notion of physics-in-general. This hypothesis implies that everything we know from observation and experiment in our universe is consistent with a certain general belief, a belief that our universe's actions, in terms of cause-and-effect, can be adequately explained by simple experimental hypotheses consistent with this belief.

"*Third, the level of the hypothesis of the higher hypothesis*. The overthrowing of an entire system of belief, successively, a successive overthrowing of entire higher hypotheses, poses the question whether or not there is some ordering principle underlying such scientific revolutions. The relevance of such a question is more or less readily subjected to experimental authority: does the sequence of scientific revolutions cor-

respond to successive advances in society's potential relative population density? To the degree such an ordering is empirically demonstrated, the question follows: is there some adducible principle of discovery which is common in some way to each of the successful scientific revolutions? Is there some adducible principle of discovery, on the level of the hypothesis of the higher hypothesis, whose action corresponds to general advances in potential relative population density?"

LaRouche identifies that treatment of the hypothesis of the higher hypothesis as the proper way in which to situate Plato's *Timaeus*. "The *Timaeus* centers around the rigorous proof of the general, lawful nature of our universe, adduced by combining the principled significance of the circle with the implications of the Platonic Solids. The rigor which Plato employs in adducing general principles from correlation of those two crucial pieces of evidence, is directly an exhibition of the hypothesis of the higher hypothesis. It is the principle of discovery embedded in the *Timaeus* in that way, which is the required approximation of a universal principle of discovery. The entirety of the progress of modern European science, from Cusa through Riemann, is, as we have indicated, a fruit of the application of that same principle of discovery to effect successive revolutions in scientific knowledge."

This coincides with the point we outlined at the beginning of the chapter. Fundamental advances in scientific knowledge have occurred through overturning at least some among the basic assumptions underlying the edifice of, for example, an entire body of prevailing mathematical physics. Successful scientific revolutions of this sort do not occur through a *random exploration* of possibly alternative axiomatic assumptions. They have occurred through application of the same kind of method for fundamental criticism of assumptions implicit in the *Timaeus*.

Not only does this identify the root of sustained

technological progress through scientific progress. As we have indicated in discussion of economic processes, *technology* itself centers on a notion of *organization* which is primitively located in the coherence of the principle of the circle to Leibniz's principle of least action. "The principles of discovery underlying successful scientific revolutions are not merely something whose incidental benefit is to enable us to be clever in our approach to technology. Those principles of discovery are directly coherent with the essential, organizational principle at the core of technology." This connection, LaRouche stipulates, must guide our assessment of the connection between scientific progress and the negentropic effects of technological progress in economic processes.

"This connection permits us to say that the Golden-Section implications of technological progress, and what the Golden Section implies, in turn, show that this negentropic characteristic of such economic processes is a reflection of the characteristic features of the process of discovery contributing technological progress. The mental processes associated with creative scientific discovery mediate the characteristics implied by the Golden Section.

"Since it is only by such means that mankind increases its potential relative population density, it is only by such means that human behavior is brought into agreement with the lawful processes governing the universe. By such means mankind makes possible its own continued existence, which it cannot make possible in any other way. It is only as mankind acts in this way, to effect technological progress, that mankind is acting to meet the requirements of self-preservation. Yet, for the reasons given by Plato, the ultimate means upon which this successful behavior depends is the hypothesis of the higher hypothesis, man's approximation of knowledge of the Logos.

"This implies something which directs our further

exploration of this matter. It implies that it is the process of successive, successful revolutions in scientific knowledge, and not any existing body of scientific belief at any time, that is the aspect of mankind's mental life and practice which is congruent with the Logos. *This signifies, that the laws of the universe are not of the fixed form associated with any particular level of development of scientific belief.* It signifies, that *the real laws of the universe are laws expressed as ordered changes in the apparent, fixed form of laws supposed to prevail in that universe.*

"On precisely this point, we isolate the feature of Riemann's work which is the main point of difficulty among mathematical physicists generally. Even those who have apparently mastered leading features of what Riemann developed, appear unable to "get inside" the process by which Riemann produced these discoveries. This specific kind of difficulty is most conspicuously demonstrated in connection with Riemann's 1854 habilitation dissertation, the only document published during his lifetime in which he identifies the kernel of the program underlying all his other work. A kindred difficulty commonly appears among mathematicians in connection with Georg Cantor's 1871–1883 work on the conception of the transfinite orderings."

LaRouche has identified A. Einstein's famous formulation $E = mc^2$, as an example of this failure to grasp the work of Riemann "from the inside"; to the extent that Einstein implies the arbitrary and false principle of an assumed Conservation of Energy, in the scalar sense of "energy," LaRouche has stated, that formulation is admittedly useful, but ultimately false. LaRouche points out that the idea of a Cauchy-Riemann function is not only a contradiction in terms—two, irreconcilable notions of the universe as a whole are involved—but that the toleration of such a miscegenation reflects a general state of affairs, an incapacity to grasp the essential internal features of Riemann's discoveries.

LaRouche has recommended that the 1854 dissertation be studied by comparing this with a posthumously published set of notes by Riemann, available in the Dedëkind edition of Riemann's selected writings as an appendix. This appendix is identified as "Herbartian antinomies," which focus upon the issue whether the universe is characterized by an underlying creative principle. This set of "Herbartian antinomies" lists the fundamental assumptions for the case that such a principle prevails and, oppositely, that it does not. Riemann chose the assumptions corresponding to the judgment that such a creative principle prevails, and devotes his later work principally to the question of proving this. The 1854 dissertation is a preliminary statement of the general program which Riemann elaborated to this effect.

For LaRouche, as for Riemann, the hypothesis of the higher hypothesis is not merely a capability by means of which man may more accurately "explain" the lawful composition of the universe. It is the Logos's power to change the universe, acting through the divine potentiality of mankind. "It is from this standpoint, LaRouche insists, "that we must define the elementary subject-matter of fundamental scientific inquiry. As in Riemann's 1854 dissertation, the properly adopted primary subject matter of scientific inquiry is discovery of the lawful manner in which the universe changes its own laws." This is the key to Riemann's solution of the problem we identified earlier: Given the fact that our experimental observations are limited to phenomena of the discrete manifold, how can we know with certainty the causal processes peculiar to the unseen, continuous manifold? The 1854 dissertation provides the germ of the solution.

Most people unfamiliar with the aspects of the in-

ternal history of science identified in this chapter, bring two wrong but deeply held commonplace assumptions to this reading. In most cases, those objections have been lingering throughout most of this chapter, and have become agitated since the initial paragraphs of this present section of the chapter. The point has been reached to acknowledge and refute those objections.

In our reintroduction of discussion of the hypothesis of the higher hypothesis, in this present section of the chapter, we insisted that we must shift the perception of primary fact from the isolated, particular discovery, to treating the process of successive discoveries as an irreducible fact instead. This simple shift of focus runs counter to the influential British-empiricist doctrine of "inductive science." Most people, including educated professionals, are convinced that "facts" occur only in a form approximately small, almost instantaneous, "hard balls" of simple, direct sense-perception. The suggestion, that such "hard balls" of sense-perception are merely "ephemerals," and that the primary quality of experimental evidence must be chosen from among *processes subsuming some qualitative transformation*, is inevitably disquieting.

On principle, such resistance to the approach employed by LaRouche must tend to persist at least up to the point that the objector has recognized that it is experimentally demonstrable that "inductive science" leads to wrong conclusions, whereas the method adopted by LaRouche leads to successful results. The objections may linger even after that point, but at least the fact that the methods used by LaRouche are demonstrably *efficient* methods of scientific inquiry is registered.

The reader is encouraged to examine Plato's treatment of the matter of *universals and ephemerals*, any good translation (or the Latin original, of course) of Cusa's *De Non Aliud* ("The Non-Other"), Leibniz's

Monadology, for example, and so forth, as a way of putting this matter of method for adducing facts into historical perspective. Otherwise, what we have indicated throughout this chapter, bearing on fundamental advances in modern science over the recent six hundred years, provides adequate general reference. It is not an exaggeration to emphasize, that all fundamental advances in European science over that period have been accomplished from the methodological standpoint adopted by LaRouche, and that no fundamental advance has actually been accomplished using the empiricist's Baconian emphasis on the hedonistic principle of "little hard balls."

The second objection bears more directly on the question of the Logos.

It is the popular assumption, that the universe as a whole is intrinsically "inorganic," and that the lawful characteristics of living processes must be discovered by reference to universal laws of an "inorganic universe." LaRouche's—and Plato's, Cusa's, Kepler's, Leibniz's, and Riemann's—argument, to the effect that the Logos embodies the principle associated with living processes, seems to overturn everything taught about the fundamentals of physics in textbooks.

The view that the universe is "inorganic" in the sense that Newtonian physics, for example, implies, is readily and conclusively refuted mathematically, by reference to the simple evidence of the role of the Golden Section in astronomical phenomena. Kepler's laws determine, within the scope of necessary adjustments, the precise values of the solar orbits, to the point that necessary adjustments do not undermine Kepler's proof in any essential respect. Newtonian physics leads to false results, where Kepler is accurate. Then, there is that crucial matter of Kepler's determination of the correct harmonic values for the orbit of a destroyed planet. Additionally, there is the matter of spiral gal-

axies, and of the importance of Kepler's Third Law bearing upon star rotation within galaxies, and crucial implications of that Third Law for the generation of a solar system with the periodic table of elements of our solar system from a star of the class of our Sun. *A characteristic principle, the Golden Section, ostensibly uniquely associated with living processes on our planet, is an included feature of the organization of our universe as a whole.*

Dr. Tennenbaum, in his paper referenced for illustration in this chapter, has employed a design specified by LaRouche. This design centers upon employing two conical functions as analogues of coordinates, to generate a Riemannian potential-surface, such that the generation of, and transformations associated with a *relativistic world-line* are mapped by reference to functional values of those "coordinates."

The first significant result obtained by Tennenbaum, in elaborating that geometrical schema, was to discover the congruence of this construction with the determination of the Gauss arithmetic-geometrical mean, to which we have referred earlier in this chapter. Examining that discovery of Gauss's in terms of this geometrical approach, a fresh approach to a general theory of elliptical functions was the next result. In addition, Gauss's approach to determination of the distribution of prime numbers, geometrically rather than arithmetically, popped out as a further implication, with bearing on related features of Riemann's work. These results are implicitly derived from, and cohere with Riemannian physics; LaRouche's design of the initial approach was derived, in the sense of "heredity," from Riemann's program, and was prompted, more immediately, by the importance of developing a refinement of the physical notion of "energy" consistent with the LaRouche-Riemann method for economics.

The most specific motive was the need to state the

physical conception of "energy" in the terms of reference needed to correlate the abrupt increase in use of lasers and laser-like relativistic technologies in the U.S. economy with the effects of this upon projectable growth rates. What is needed is an improved approach to quantum electrodynamics which provides a coherent approach to lasers, relativistic "particle-beam" technologies, and related matters, by aid of which to become able to predict with fair accuracy the impact of new developments to appear along these lines over the next one to two decades.

The "hylozoic" view of universal law adopted by LaRouche is no arbitrary speculation. It is grounded in crucial evidence, and is directed to very practical results which could not be obtained except from that "hylozoic" standpoint of reference.

LaRouche compares his "hylozoic" view of the universe as a whole with the cited admonition from the Book of Genesis. "If the universe as a whole is composed according to the same principle of negentropy exhibited by living processes, but more exactly exhibited by human creative processes, what does this say of the existence of inorganic processes and objects?" he poses the question. "The implication is," he responds to his question, "that inorganic processes are ephemerals, are lower, inferior aspects of the universe as a whole, whose function within the universe is to serve the universal creative principle we encounter in our efforts to master the hypothesis of the higher hypothesis. I might defend Genesis's commandment by saying that it is not our biological existence which obliges us to exert dominion over all other living things and nature in general. We must do this for the sake of that within our nature which corresponds to the divine. Our human nature is not that which resembles the beast within us; our human identity and our rightful authority over nature as a whole is the degree to which

we perfect the agreement between our wills and the Logos, that we perfect our practice according to the hypothesis of the higher hypothesis. If this dedication is associated with the principle of 'love' as St. John implies, I believe we have thereby secured to ourselves our true human identity. We act upon the universe, not so much for satisfaction of material needs, but out of love for being in harmony with the Logos."

LaRouche and Riemann

"I had become acquainted with Riemann initially through the work of Professor Luther Eisenhart,"[34] LaRouche reported; "it would not have occurred to me to return to his work as I did, but for the better part of a year reworking Cantor. Cantor taught me how to think about mathematics, from the top, not from underneath as textbook-classroom habits lead us to do. Picking up Riemann's habilitation dissertation after the better part of a year soaked in Cantor was like experiencing an explosion from inside me. Suddenly, in one evening's reading that and rereading it, it seemed that I had stumbled across the key to everything.

"The two points which struck me indelibly were, first, that least-action, as Riemann defined it, generated the transformations in the attributable topology of the continuous manifold causing perceptible changes in the phenomena of the discrete manifold. The second point which struck me was the fact that we may obtain certain knowledge of the continuous manifold by means of those special kinds of experiments which address, successfully, relativistic transformations observable in terms of reference of the discrete manifold."

In the immediate aftermath of that encounter, LaRouche concluded that experimental proof for any of the experiments implied by this dissertation would

be conclusive evidence that the so-called Law of Conservation of Energy was not only an arbitrary, axiomatic assumption, but demonstrably false. In a very specific sense, the universe creates additional energy. This "creation" of additional energy takes the form implied by the dissertation: an increase of the *negentropy* of the universe. This universe as a whole has a *negentropic*, not *entropic* direction.

LaRouche emphasizes that the true importance of Riemann's work is located not so much in the admittedly impressive instances of his elaborated contributions to mathematical physics. He locates Riemann's fundamental accomplishment in the feature of his work which is mathematically the simplest, a simple pair of interconnected modifications of our way of thinking about the universe in general.

Bernhard Riemann: *"Suddenly, in one evening's reading" of his habilitation dissertation, LaRouche reports, "it seemed that I had stumbled across the key to everything."*

Referring to the researches of Dr. Uwe Parpart-Henke into the Riemann archives, LaRouche emphasized: "For me, the most important benefit of Uwe's work was Uwe's stress on Riemann's references to Dirichlet's Principle. Placing the antinomies, the 1854 dissertation, Dirichlet's topological principle, and the notion of a Riemann surface side-by-side, we can trace out the main features of the way in which Dirichlet's teaching enabled Riemann to accomplish his breakthrough. The work of all of us has been set into high gear by Uwe's discoveries in this connection." It was during the course of a series of seminars near Wiesbaden, West Germany, during 1981, that LaRouche specified the first phase of the project to which we have referred as illustration here. It was a deeper insight into Riemann's thinking, made possible by a series of discussions of Dirichlet's Principle, which prompted the idea of the project to, as LaRouche put it, "pop into my head," as one of those seminars was in the process of breaking up.

LaRouche is not a physicist. He is an economist primarily. Yet, no economist deserves the name of that profession unless he or she treats economic processes as essentially the science of technology. To obtain the improved discoveries such an approach to economic science requires, LaRouche pushes those associated with him into undertakings which those pushed often view at first as beyond their capabilities at the moment. This occurs not only in matters bearing on mathematical physics, but in many other areas of inquiry. In the area of physics, this takes the form, often, of LaRouche stating: "I know this will work. Here's what I mean."

Perhaps, LaRouche is the philosopher he set out to become back during the middle of the 1930s.

Notes

1. Sokolovskii, V.D., Marshal of the U.S.S.R., *Soviet Military Strategy*, 3rd Ed., (Moscow, 1968), Stanford, 1975.
2. Montgomery, Paul, "How a Radical Left Group Moved Toward Savagery," *New York Times*, Jan. 20, 1974; Montgomery, Paul & Blum, Howard, "U.S. Labor Party: Cult Surrounded by Controversy," "One Man Leads U.S. Labor Party on Its Erratic Path," *New York Times* Oct. 7-8, 1979; Editorial: "The Cult of LaRouche," *New York Times*, Oct. 10, 1979.
3. LaRouche, Lyndon H., Jr. & Goldman, David P., *The Ugly Truth About Milton Friedman*, New York, 1980.
4. Shultz, George & Dam, Kenneth W., *Economic Policy Beyond the Headlines*, New York, 1977.
5. Spannaus, Nancy & White, Christopher, *The Political Economy of the American Revolution*, New York, 1977, *passim*. The 1790–1791 Reports to the Congress by Treasury Secretary Alexander Hamilton, on the subjects of credit, a national bank, and manufactures are directly referenced.

   On this and material referenced in the following pages, see also: LaRouche & Goldman, op. cit., Salisbury, *The Civil War & The American System*, New York, 1978; White, Carol, *The New Dark Ages Conspiracy*, New York, 1980.
6. Chaitkin, Anton, "Treason in America: From Aaron Burr to Averell Harriman," *The Campaigner*, May 1983; *New Solidarity*, New York, Vol. XIII, Nos. 87, 88, 89, 92, 94, 96, January-February 1983, for documentation on Aaron Burr and his connections; on the New England families, see unpublished research by Chaitkin, plus Carey, Mathew, *The Olive Branch*, Philadelphia, 1815.
7. Chaitkin, unpublished researches.

8. On the deaths of Presidents William Henry Harrison and Zachary Taylor, see unpublished researches on the Lincoln assassination and its background by Goldstein, Paul. On the backgrounds of the physicians involved in the Harrison and Taylor deaths, see unpublished research on New England Scottish Freemasonic families by Chaitkin. President Polk was opposed by the Whigs, because of his War with Mexico and his conduct of that war.
9. Chaitkin, researches. The controllers of the New England Abolitionists and Judah Benjamin's representatives plotted, not only to put Pierce and Buchanan in the White House, but to split the United States into several, "balkanized" parts.
10. Researches by Paul Goldstein.
11. Cf. Salisbury, op. cit.
12. See LaRouche & Goldman, and Carol White, op. cit. on the subject of the development of monetarist doctrine from J.S. Mill, onward.
13. LaRouche, Lyndon Hermyle Jr., *Only Beam Weapons Could Bring to an End the Kissingerian Age of Mutual Thermonuclear Terror: A Proposed Modern Military Policy of the United States*, New York March 1982. See also, Bardwell, Dr. Steven, *Beam Weapons: The Science to Prevent Nuclear War* July 1982.
14. Sokolovskii, op. cit., pp. 298, 454n.
15. Wrote Russell in 1946: "When I speak of an international government, I mean one that really governs, not an amiable facade like the League of Nations or a pretentious sham like the United Nations under its present constitution. An international government . . . must have the only atomic bombs, the only plant for producing them, the only air force, the only battleships, and generally, whatever is necessary to make it irresistible. . . . It will have to be bound by its constitution to intervene by force against any nation that refuses to submit to arbitration." Later, in 1951 Russell wrote in *The Impact of Science on Society*: "War has hitherto proved disappointing, but perhaps bacteriological war may prove effective. If a Black Death could spread throughout the world once in every generation, survivors could procreate freely without making the world too full. The state of affairs might be unpleasant, but what of it."

This and related relevant material on the establishment of Nuclear Deterrence has been documented by L. Talionis, "The Pugwash Papers," *Executive Intelligence Review*, Vol 10, No. 22, June 7, 1983.

16. Charles Darwin's published work was self-admittedly nothing but "Goebbels-like" apologetics for the doctrines of the British East India Company's professor of political economy, Thomas Malthus. This pushing of "natural selection" was used immediately by Huxley and others to promote "eugenics" associations and propaganda around the world, campaigning for measures of population-reduction against the darker-skinned races. The American Museum of Natural History, the center of U.S. support for Adolf Hitler's "racial hygiene" doctrines, was such a Darwinite "eugenics" center, from the beginning to the present day. On the same general subject, see Carol White, op. cit.
17. See Helga Zepp-LaRouche, Gabriele Liebig, and Professor Ali Mazaheri, addresses to the April 1983 Kiedrich conference of the International Caucus of Labor Committees, on this subject, 1983.
18. Zoakos, Criton, "Aristotle, Political Warfare, and Classical Studies," *Campaigner*, Vol. II, No. 7–8, September-October 1978. See also Zoakos, "Why Exactly, Does 'Menexenus' Spell Trouble for Yuri Andropov," *New Solidarity*, Nos. 29–30, June 1983.
19. "From Rome to the Third Rome—Roman Peoples and Space Between Right and Prophecy," was the title of a seminar held in Rome on April 21–23, 1983 on the traditional anniversary of the founding of Rome. The seminar was organized by "La Sapienza" of the University of Rome, which named as its purpose, among other things, "to overcome certain current conceptions that create artificial barriers between East and West." The cited seminar, whose participants included a member of the Soviet Academy of Sciences, and representatives of the Sorbonne, University of Paris, and University of Rome is one of an ongoing series on such topics.

20. Douglas, Rachel, and Vitali, Edith "Is Henry Kissinger Still a KGB Agent?" Panel at ICLC conference in New York, December 1982. See also, Douglas & Vitali, "Will Moscow Be the Third Rome?" *New Solidarity*, Vol XIV, Nos. 22, 26, 28, May–June 1983.
21. Goldstein, Paul, "Francois Genoud: Terrorist controller"; Thompson, Scott, "The Genoud networks and the plan to set the Mideast on fire," *Executive Intelligence Review*, Vol. 10, No. 15 April 19, 1983.
22. The information on Waddams and related matters is taken from a dossier on this gentleman.
23. Carrington address to the International Institute of Strategic Studies, as reported in the *Times* of London, April 22, 1983; Watt, David, "Coming to Terms with Andropov," *Times* of London, April 29, 1983.
24. LaRouche, Lyndon, "The Cultural Determinants of An Anti-Missile Beam Weapons Policy," published address to the New York conference of the International Caucus of Labor Committees, December 31, 1982, excerpted in *New Solidarity*, Jan. 10, 1983.
25. Wiener, Norbert, *Cybernetics*, Paris, 1947, Cambridge, Mass., 1948. It was the paperbound, Paris English-language edition which prompted LaRouche's first reactions to this book.
26. Leibniz Archives, Hannover, West Germany.
27. This point was developed by Dr. J. Tennenbaum, and reported, in part, in his April 1983 paper referenced in this text. Other sources on the point are numerous.
28. For an authentic English-language translation, see "Plato's *Timaeus*: The Basis of Modern Science," *The Campaigner*, Vol. 13, No. 1, February 1980.
29. Tennenbaum, Jonathan, *Development of Conical Functions, Particularly Elliptic Functions, as a Language for Relativistic Physics*, Wiesbaden, April 1983.
30. "A Refutation of Karl Marx, by A Veteran of the War," *New Solidarity*, March–April 1983; "The Fatal Flaw of Karl Marx," (German-language) *Ibykus*, April 1983.
31. Cf. Salisbury, op. cit., passim.
32. Morgenstern, Oskar and von Neumann, John, *Theory of Games and Economic Behavior*, Princeton, 1953.

33. LaRouche memorandum of March 1973, outlining the basis for a Riemannian approach to biophysics. This memorandum founded the section of the future EIR research staff which, in turn, took a leading role in the organization of the Fusion Energy Foundation a year later. Research accomplished over the intervening twelve months on the basis of the memorandum was a featured topic of a panel of a New York City conference held during Spring 1974.
34. Eisenhart, Luther P., *Riemannian Geometry*, Princeton, London, 1926.