

## LaRouche On 'The Future Of Brazil's Agriculture'

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*The following report was prepared for an international conference on the subject of "Brazil And The Free Trade Agreement Of The Americas," scheduled to occur in Brazil at the end of October. Mr. LaRouche had been invited to participate in that conference as a commentator on agriculture, but is unable to attend due to security problems related to the planned visit.*

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There are four sets of facts which must be introduced first, before any competent statement or proposal could be stated, or adopted, concerning the prospects for agriculture in any part of today's world. These facts define the presently ongoing collapse of the present monetary-financial structures to be of a systemic character.

**Fact One:** During the second and third quarters of 2001, the world as a whole entered the terminal phase of a general collapse of the world's present, 1971-2001 floating-exchange-rate monetary and financial system.

This collapse is not cyclical; it is systemic. It is not an aberration within a system. There will be no rebound as long as the present system is continued.

This collapse is the inevitable result of the stubbornness with which governments, and other authorities, imposed bad policies upon the world's dominant monetary, financial, and economic systems. Although these trends could be reversed, that would require putting the entire monetary and financial system through government-directed bankruptcy-reorganization, with an accompanying return to the original, highly protectionist Bretton Woods system of the 1945-1965 interval. However, unless such a fundamental change in the system is

made, the presently ongoing, virtually world-wide collapse, will soon reach a point at which it appears to be bottomless. That is the situation we face during the relatively short term ahead.

At the beginning of this year, in an international webcast, I forecast that the remaining quarters of this year would be a disaster. The second and third quarters have been a disaster; without a sudden and sweeping reversal of current policies, the situation by the close of the fourth quarter will be worse. Once those qualifying considerations are taken into account, it is fair to report that we are, at this moment, sliding toward the nearby brink of a global precipice.

As we are about to enter the perilous fourth quarter of this year, we must recognize the recent multi-trillions-U.S. dollars collapse of that John Law-style financial bubble, called the "New Economy." We must see that collapse as merely the most conspicuous feature, until now, of a presently accelerating general collapse of the present global monetary and financial system as a whole.

There can be no competent formulation of policy in agriculture, or any other topical area, which does not acknowledge, and proceed from that primary fact of the world situation as a whole. As the end of the year approaches, the world as a whole, including its agricultural systems, is at the verge of a precipice of change, either a radical change for the better, or the worst.

**Fact Two:** In describing the current condition of the physical economy of the Americas and Europe, we must recognize the significance of what should have been an obvious, and also crucial difference, between the situation during the last great world-wide depression, in 1929-1933, and that we are experiencing today.

A dozen years after the end of the 1914-1917 war in Europe, a large part of the agricultural and industrial potential



*LaRouche was asked to advise Brazil on how to solve its agricultural problems. But, he warns, "any competent discussion of agricultural policy must be based on the presumption, that the 1971-2001 monetary-financial system will be placed under bankruptcy reorganization." Shown here: sugar cane harvesters in Brazil.*

of those nations still existed, as either active levels of per-capita physical output, or as potential which could be mobilized during a few years, under the kinds of policy introduced by U.S. President Franklin Roosevelt. Today, more than a generation, more than thirty years, instead of twelve, have passed under the ruinous measures set first set into motion, chiefly by London and the U.S.A., during the 1966-1971 interval. Failure to reverse recent decades' trends in monetary and financial policies, would result in a widespread demographic and related collapse of nations. In that case, what we would experience, would not be an economic depression, but, rather, a dark age. Entire nations and large sections of their populations would disappear, in a pattern similar to Europe's mid-Fourteenth-Century "new dark age."

Therefore, every plan for a recovery from the presently inevitable slide into depression will fail catastrophically, unless it recognizes that the present global catastrophe is not only systemic, but also potentially terminal, unless existing policies are radically reversed now.

**Fact Three:** During this period, especially since the savagely destructive economic policies of the 1977-1981 U.S. Carter Administration, the agriculture of Europe and the Americas has suffered extremely foolish, and destructive structural changes. Now, the price of survival which nations must pay, is a radical and sudden reversal of the so-called "structural reforms" in composition of investment, regulation, and employment, over more than three decades to date.

Any discussion of agricultural policy, whether bearing on patterns in international trade, or in the Americas, would be

a futile play with words, unless we are prepared to reverse the three sets of catastrophic trends in international and national economic policy which I have just listed. These are admittedly hard words; but, statements which must be accepted, if any fruitful actions are to be discussed and adopted.

Therefore, any competent discussion of agricultural policy must be based on the presumption, that the 1971-2001 monetary-financial system will be placed under bankruptcy reorganization. This reorganization must occur under the supervision of a combination of governments of sovereign nation-states. That new system must be consistent with the relatively successful, post-war monetary and trade system of the pre-1966 period. That is the model to be used for the new global and national monetary and economic systems to be created out of the remains of the hopelessly bankrupt present system. Under

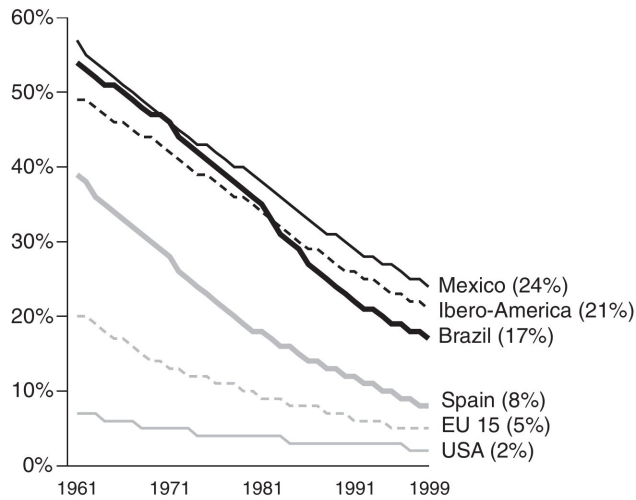
those conditions, certain feasible objectives for reformed agricultural policies become clear.

Admittedly, such reforms incur political risk. Since the events of 1789-1815 in Europe, wars and brutal dictatorships, such as that of Napoleon Bonaparte, Napoleon III, Mussolini, and Hitler, have been the hysterical response from ruling oligarchies which would rather destroy the planet, than accept a change in what those oligarchs regard as "our way of life." The lack of the political courage to choose the pathway of reason, rather than abandon a troubled society to such tyrannical reactions from Olympus, has been the chief reason for every catastrophe suffered by the nations of globally extended European civilization.

**Fact Four:** It must be recognized that most of the widely quoted, actual or merely reputed experts in related matters of finance and economics, have made their careers as propagandists for precisely those policies which have been the principal continuing cause of this crisis.

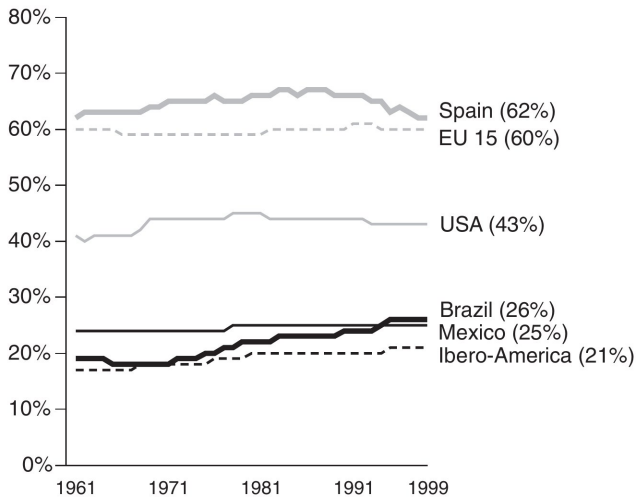
This crisis is the result of a change, from the successful monetary and economic policies of the 1945-1963 period, to the increasingly disastrous changes which have dominated the world's monetary and economic systems during the 1971-2001 years to date. With some commendable exceptions, most of those presumed experts have lately devoted their energies to defending a continuation of those policies and practices which have caused that disastrous change. The advice given by these experts is an integral, essential part of the axiomatic assumptions which have made the present catastrophe a systemic one. In that sense, they are not the doctor, but the disease.

FIGURE 1  
**Agricultural Population, As Percent Of Total Population**



Source: FAO.

FIGURE 2  
**Arable Land And Permanent Crops, As Percent Of Agricultural Area**

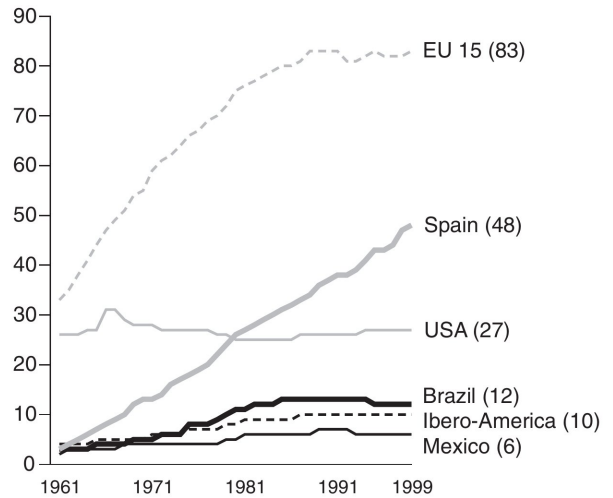


Source: FAO.

### The 'Cerrado' Syndrome

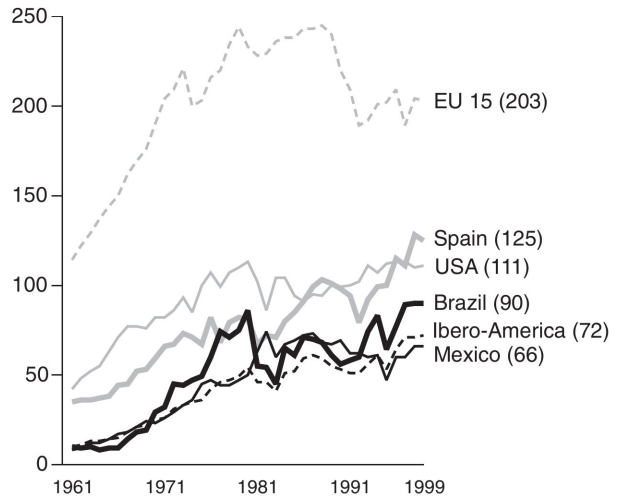
Look at the following sets of comparative statistical graphs for Brazil, Mexico, and Ibero-America as a whole, as compared with the cases of Spain, the case of fifteen nations of the European Union, and of the United States of America. My weekly magazine, the *Executive Intelligence Review*

FIGURE 3  
**Tractors In Use**  
 (Units Per Thousand Hectares)



Source: FAO.

FIGURE 4  
**Fertilizer Use**  
 (Tons Per Thousand Hectares)



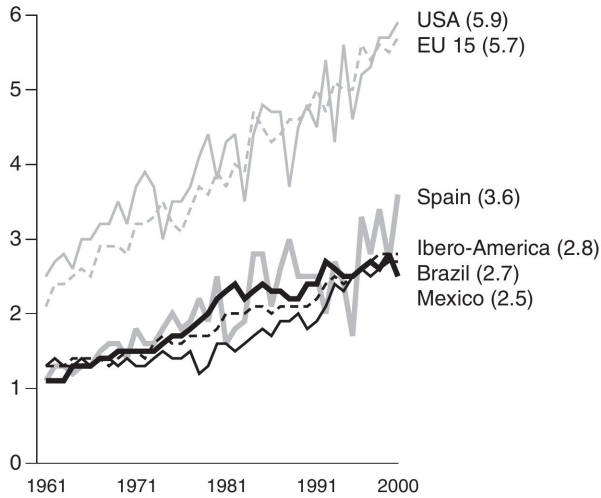
Source: FAO.

(*EIR*), has compared these trends for the years 1961-2000. This set of statistics compares the agricultural population with the total population, with land use, and production of cereals, beans, and maize, year by year, for this period. [See **Figures 1-9.**]

To illustrate a crucial feature of my argument, I shall ask

FIGURE 5  
**Cereals Yield**

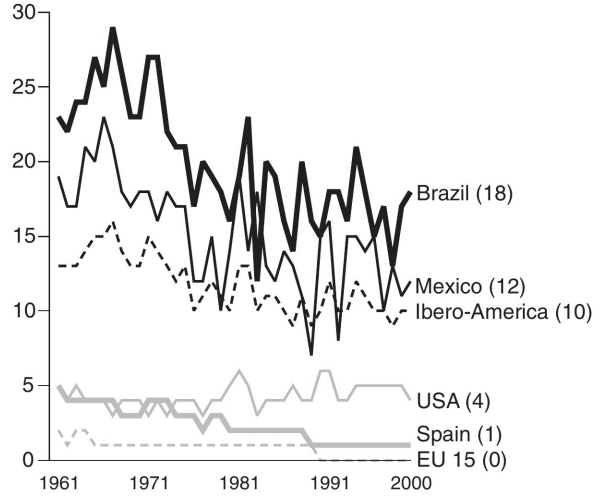
(Tons Per Hectare)



Source: FAO.

FIGURE 7  
**Bean Production**

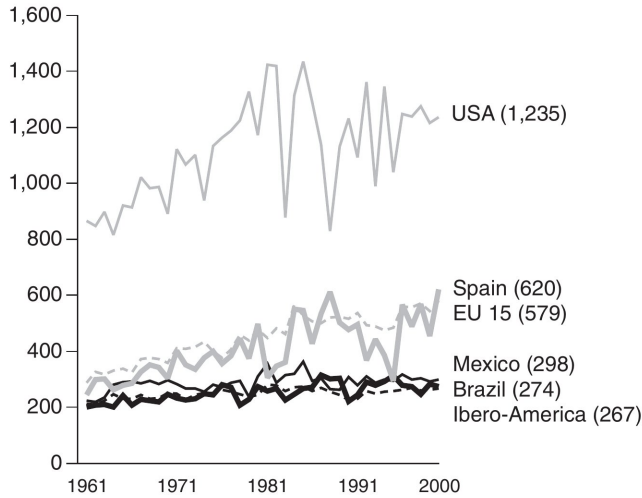
(Kilograms Per Capita)



Source: FAO.

FIGURE 6  
**Cereals Production**

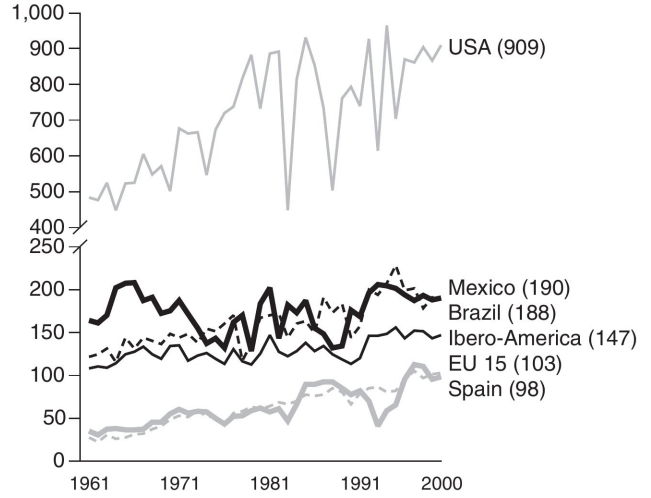
(Kilograms Per Capita)



Source: FAO.

FIGURE 8  
**Maize Production**

(Kilograms Per Capita)



Source: FAO.

you to turn your attention now briefly to the hopeful prospect for development of that Savannah area called the “Cerrado” region.

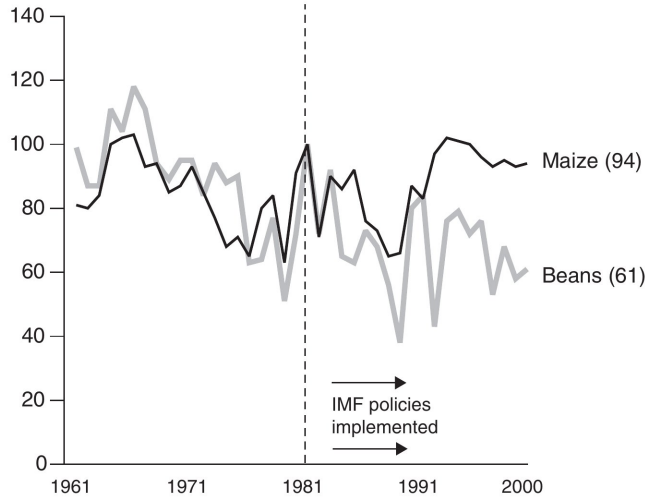
It would be impossible to make any competent assumptions respecting medium- to long-term trends in the future of agriculture, simply from such statistical studies. These statis-

tics do reflect, in some degree, the effect of terrible mistakes in agricultural-policy trends in the Americas during the recent quarter-century. They do not point to the comprehensive forms of effective solutions needed to prevent that built-in catastrophe which must occur, unless radical reversal of the past quarter-century’s trends is instituted very soon. Most of

FIGURE 9

**Mexico: IMF-NAFTA Policies Have Wrecked the Per Capita Production of Food Staples**

(Index: 1981 = 100)



Source: FAO.

FIGURE 10

**Brazil's Cerrado Region**



the solutions, like most of the disasters, lie chiefly in the domain of the effects of monetary and financial policies.

Yet, even considering the margins of error common to reporting official and related statistics, these data show a pattern which is useful to consider, as background for today's discussion. These figures illustrate some aspects of the downturn in agricultural policy-making of both the U.S.A. and Ibero-America during the recent two decades. However, taken by themselves, such figures greatly understate the actual severity of the problem. These and similar facts are important to consider, even though they, by themselves, tell us almost nothing about the future of agriculture. Such statistics are merely the shadows of reality, not the reality they reflect.

The case of "Cerrado" illustrates that point.

Brazil's area and location on the planet compels us to treat all general issues of its economic development from the standpoint of what the great Russian scientist Vladimir Vernadsky termed the noosphere. That means that to foresee a desirable future for Brazil, we must emphasize the role of the cognitive powers of the human species, as the agency which must exert its absolute rule over the biosphere. Except as man is able to revolutionize the biosphere in ways which increase the potential relative population-density of the human species, mankind were doomed to plunge into yet another of those absolute or relative dark ages which have brought to their end such fallen empires of the past as ancient Babylon, Rome, and Byzantium.

The ongoing collapse of the global system which the Anglo-American monetarist faction has imposed since the late

1960s, is to be understood, in its most essential features, as a plunge toward a planetary new dark age, a plunge caused chiefly by the trends in ecological policy of the recent thirty-odd years. The possibility of avoiding the new dark age looming before the world today, requires a prudent approach to reversing the disastrous ecological trends of these recent thirty-odd years. For Brazil, the potential of the Amazon riparian region and the so-called "Cerrado," typifies the area of decision-making in which the choice between greatness and doom will be made.

Therefore, for the purposes of today's subject, I have chosen to name my proposed approach "the Cerrado syndrome." I therefore ask you to consider a second series of maps, graphs, and charts, focussed on that subject. [See **Figures 10-11** and **Tables 1-6.**]

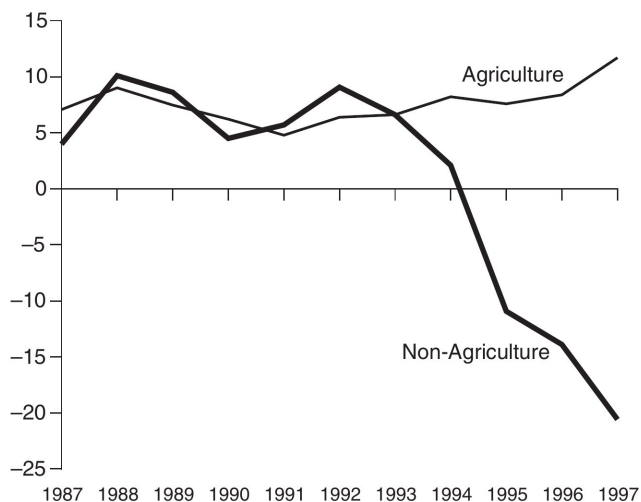
**The ABCs Of Brazil's Noosphere**

I must now summarize, very briefly, the underlying principles of my speciality, the science of physical economy. I reduce all economic functions to the terms of mankind's physical relations to nature. I describe all economic processes in the way implicit in a strictly anti-Euclidean form of Riemannian physical geometry. I define all essential such relations in terms of interaction among three distinct phase-spaces: 1.) Non-living processes, the so-called abiotic; 2.) The long wave of domination of abiotic by living processes, or what Vernadsky defined as the biosphere; and, 3.) Those functions of human cognition through which mankind exerts its rightful

FIGURE 11

**Brazil's Balance of Trade**

(Billions \$)



Source: IBGE, Brazil.

TABLE 1

**Land Use**

(Million hectares)

	World	Brazil
Total Area	13,000	846
Agricultural Area	2,900	547
(as % of Total)	22%	65%
Cultivated Land	1,500	53
(as % of Agricultural Area)	52%	10%
Available Land	1,400	494
(as % of Agricultural Area)	48%	90%

TABLE 2

**Brazil Land Area**

(Million hectares)

Total	846
Cerrado	205
(% of total)	24%

superior authority over the biosphere.

Despite the many points of agreement between my definition of these relations and Vernadsky's, there are two most crucial points of difference. First, where Vernadsky defines man's power over the biosphere in terms of individual discoveries of experimentally validated universal physical princi-

TABLE 3

**Potential Use Of Brazil's Cerrado**

	Area (million ha.)	Yield (tons/ha.)	Production (million tons)
Cereals (rain fed)	55	3.2	176
Cereals (irrigated)	10	6.0	60
Meat	55	0.2	11
Fruit	7	15.0	105
Total	127		
Area in use	61		
Area available	66		

TABLE 4

**Cereals Production In Brazil's Cerrado**

(Millions tons)

	1975	1980	1985	1990	1995
Soy	0.3	1.8	6.0	6.3	11.3
Maize	2.8	3.7	4.1	4.4	8.7
Rice	2.3	3.6	2.6	1.5	2.4
Beans	0.3	0.2	0.3	0.4	0.5
Wheat	0	0.1	0.2	0.1	0

TABLE 5

**Brazil Yields, Current And Potential**

(Tons per hectare)

	Brazil Average	Cerrado Average	Cerrado 'Good'
Rice	1.7	1.2	3.1
Beans	0.4	0.4	2.0
Maize	2.0	2.0	7.6
Soy	1.8	2.0	4.0
Wheat (irrigated)	1.7	3.8	5.5
Wheat (rain fed)	1.7	2.0	2.7

ples, I insist that it is the individual's use of such discoveries to transform the culture through which society acts on the biosphere, which is the primary expression of man's power over nature. Second, I have adapted Riemann's principles of physical geometry, as the way in which to conceptualize the functional relations among the three primary phase-spaces of abiotic, life, and cognition.

What I have done, through my own original scientific discoveries in this realm, has been to supply a much needed clarification of the reasons for the historically proven, absolute superiority, over the British free-trade system, of the American System of political-economy, as this is typified by Alexander Hamilton, Mathew Carey, Friedrich List, and

TABLE 6

**Importance Of Brazil's Agri-Business, 1999**

(Billions \$)

Total GNP	556.6
Agriculture GNP	56.2
Agri-Business GNP	223.2
Agriculture Exports	18.9
Agriculture Imports	5.5
Agriculture Trade Surplus	13.4
Agriculture Employment (millions)	17
Agri-Business Employment (millions)	27

Henry C. Carey. Notably, it was the U.S.A.'s turn away from that American System, as the American System is typified by Presidents Lincoln and Franklin Roosevelt, which made possible the global monetary, financial, and economic disaster which has been building up during the recent thirty-odd years.

My present summation of what I have called "the Cerrado syndrome," is an expression of the legacy of that American System which brought the U.S.'s rapid rise to the position of the world's leading economic power among nation-states, during the 1861-1876 period of the leadership of President Abraham Lincoln and economist Henry C. Carey. The most authoritative definition of that American System, is supplied by U.S. Treasury Secretary Hamilton's most famous reports to the U.S. Congress, on the subjects of public credit, a national bank, and manufactures.

Three principles dominate that American System: 1.) The absolute sovereignty of the nation-state republic, including its sovereign monopoly over the creation and management of its public credit and banking; 2.) The primary responsibility of the national and state governments for the development and regulation of basic economic infrastructure; 3.) The use of the means of sovereign control over public credit, banking, and basic economic infrastructure, to promote private entrepreneurship in agriculture, manufacturing, and related domains.

The importance of my work has been chiefly to clarify previously ambiguous features of such an American System. I apply these combined considerations now, to define "the Cerrado syndrome."

I measure the performance of national and world economy by a rule-of-thumb standard which I have described as potential relative population-density. This means the comparison of physical inputs and physical outputs as measured per capita and per square kilometer of surface area. These measurements should be measured in terms of functional cycles of not less than one to two generations, as I have illustrated that by the statistics referenced here.

In this long-term view of one or more generations, I assess

short- and medium-term, and local changes in functional features of economies, in terms of their impact upon previously foreseen long-term cyclical patterns.

It is extremely important to emphasize, at this point, that the attempt to measure performance of national economies chiefly in terms of either financial accounting, or, worse, in terms of the sum-totals of individual firms and localities, is foolish, and even disastrous over longer terms. Hence, the standard national-income and national-product accounting employed in today's national and international assessments, are inherently misleading, and have been disastrously misleading over much of the recent three decades.

We must also proceed from long-term cycles, as functional units of accounting for entire economies, both national and international.

The simplest way to demonstrate that point, is to note that the relative net physical productivity of an individual enterprise depends upon such external factors as the relative state of development of basic economic infrastructure, such as transportation, power, and water management. Similarly, the quality and level of education, and prevailing physical and cultural standard of living of households, is a principal external determinant of the internal productive potential of the individual enterprise.

We see such effects repeatedly in study of the problem of underdevelopment in national economies. The introduction of advanced industries into national economies, is beneficial on principle; but, if the level of general development of the infrastructure and population is relatively poor, the performance of even advanced individual enterprises will be crippled by the poor development of the national economy as a whole.

This brings us to the matter of national credit, especially the use of such credit for mobilizing an economic recovery from a disastrous world depression, such as that of the early 1930s, or the worse collapse in progress today.

### Credit Expansion

It is urgent that every government today look back to the crucial similarities between the recovery measures taken by President Franklin Roosevelt, and the recently famous proposals delivered to a secret 1931 Berlin meeting of the Friedrich List Gesellschaft by Dr. Wilhelm Lautenbach.

Given a situation, in which the physical economy of a nation has fallen to levels far below those required for long-term break-even, which is the state of every nation of the Americas and of Europe today. Given, the added difficulty, that a collapse of nominal financial capital, in the order of tens of trillions of U.S. dollars equivalent, has recently occurred, and that the bottom has by no means been reached, as today.

The obvious objective of governments and private enterprises, should be to increase employment in physical output, to levels above long-term break-even, and do that rapidly.

Given the existence of idled labor-force and growing mass unemployment, where does one find the long-term credit, at between 1-2% annual simple-interest charges, needed to “prime the pump” of the economy?

Admittedly, in the case of Hitler Germany, from March 1933 on, until the outbreak of war, the British and New York financier interests which had just recently put Hitler into power, allowed British agent Hjalmar Schacht to draw upon credit for the war mobilization which was then intended to lead to Germany’s destruction by the Anglo-French allies at the point Germany was trapped in an intended Napoleonic invasion of the Soviet Union. Without such curious backing as of the type provided by Hitler’s London and New York financial backers, where does a national economy go to find the credit needed to launch a general physical-economy recovery?

In such a conjuncture, the only possibility of gaining the needed long-term forms of credit, is the power of the sovereign nation-state, to put the existing financial system into bankruptcy-reorganization, and to issue long-term, low-price public credit for large-scale investments in development of basic economic infrastructure. The supply of income to the newly employed, the credits for purchase of needed supplies, and the stimulation of the market of vendors and the consumer market, provides the initial impetus for the needed avalanche of economic recovery.

Virtually every economy in the world, especially those of Europe and the Americas, is presently in such a desperate situation, actually a situation much worse in its underlying features than that of the early 1930s. Brazil is by no means alone in this predicament.

Brazil should now view such matters in the following, two-fold way: domestically, and in its relationship with the neighboring states of the Americas. The infrastructural development of the Amazon riparian region, and of the Cerrado, typify the larger package of measures needed for a successful use of public credit.

These measures should be viewed from the vantage-point of the noosphere as I have summarily described it.

South America is a continent of vast, largely untapped natural resources. The principal obstacle to the physical development of those resources is the lack of basic economic infrastructure in categories of transportation, power, and large-scale water-management. The objective must be to define the continent as a unified noosphere, which its inhabitants must manage.

The objective of management is not to maintain the biosphere in its present state, but to raise it to a relatively elevated state of health, which only mankind can do. It must be viewed as a vast farm, which, like a wilderness, must be improved and maintained so that the riches flow while the source of such riches is increased in a healthy way. We must not think, foolishly, of man as a parasite hunting-and-gathering in a biosphere; we must think of man as transforming the bio-

sphere, to raise it to higher levels of fruitfulness and good health than it could ever achieve without man’s willful intervention.

That is, in fact, Brazil’s only chance for long-term survival as a nation. It is the only chance for that presently imperilled continent as a whole.

The realization of the potential of the Cerrado typifies the kind of adopted sense of mission which is presently required for not only Brazil, but the continent as a whole. That is what I signify by “the Cerrado syndrome.”

This brings us to consider the fourth, and most crucial element of basic economic infrastructure: education conceived and directed as a science-driver force for the economy as a whole.

The fundamental principle of a science of physical economy, is the principled notion of the distinction which sets man and woman apart from and above all other living creatures, the quality of non-deductive reasoning called cognition. In physical science, this signifies that life can not be derived from non-living processes, and cognition can not be derived from living processes in general. Each of these three are respectively distinct phase-spaces. To use precise scientific language, in Riemannian physical geometry, we speak of these as multiply-connected phase-spaces of an unfolding differential form of physical geometry. This was demonstrated experimentally by Vernadsky et al. in one way, by me in another.

In laymen’s words, these three sets of principles always coexisted and interacted in the physical universe as a whole; their appearance in the modern forms of abiotic, living, and cognitive processes, is to be acknowledged as an expression of such ancient roots.

This function of cognition, is expressed by mankind in the typical form of an original discovery of an experimentally validated universal physical principle. It is through the sharing of the act of discovery, as through a Classical humanist mode of general education, that humanity builds up a repertoire of interconnected cognitive capabilities for imposing successful transformations in both human behavior, and in the universe on which man acts.

The possibility of increasing the rate of progress of mankind, in physical-economic and other terms, depends upon the degree to which this accumulation of cognitive knowledge of principles is maintained and accelerated to the advantage of the population in general. On this account, a system of education, so tasked with this mission, becomes the highest ranking of all public investment in maintaining and improving the basic economic infrastructure of the nation as a whole.

Projects conforming to “the Cerrado syndrome,” would bring Brazil safely out of the present crisis. The mission of developing educational systems as the fountains of scientific, technological, and general cultural progress, will bring Brazil and the continent to a brilliant future.