

doesn't mean a uniform distribution of water; that means what we might call the equivalent of a least-action distribution of water, to get the highest average value of land, not the highest uniform value of land.

We also know that we require a certain amount of power, per square kilometer, to develop that square kilometer to a certain level of productivity for various kinds of land-use, such as reserve land, wilderness land (those are two different kinds of land uses); pastureland, as opposed to agricultural land in agriculture; forest land; land use for private habitation; land use for commercial functions; or land use for heavy or light industrial functions. In each of these cases, we require a somewhat different density of power supplied, per hectare or per square kilometer, and per capita.

Then, transportation: We require a least-action pathway of transportation, in terms of ton-miles per hour, essentially, or as one parameter, to be used. And, we generally find that

transportation will tend to follow the course of water, because water transport, rail transport, highway transport, and air transport, are all interrelated, in terms of their relative functions, within an economy. Also, the transportation of materials, whether by pipelines, or transportation of power, or transmission of power, all tend to follow most conveniently, a least-action pathway, which tends to bring these various modes of movement into a convergence, along certain lines of movement, just as water is moved along certain lines of movement. And, these two, and water, tend to converge.

Now, the network of water flows and transport flows, and the network of required energy flows, defines certain nodal points in the entire landscape, which are the proper sites of present or future urban centers. Urban centers are characterized as nodes of transportation, and also, nodes of distribution of power, that's the way a healthy physical economy functions.

LaRouche: 'A Leibnizian approach to city design'

On April 28, 1981, Lyndon LaRouche submitted a proposal to the Organization of African Unity as a supplement to the OAU's then recently released "Lagos Plan of Action." LaRouche's proposal was entitled: "Stop Club of Rome Genocide in Africa!" Almost a decade later, Africa is a dying continent, and U.S. President George Bush and British Prime Minister Margaret Thatcher are leading their nations into a strategic debacle likely to devastate not only the Middle East and Africa, but the industrialized West as well. It is long overdue for the kind of Leibnizian development programs advocated by LaRouche to be adopted by the international community.

The following excerpt is from the chapter of LaRouche's report entitled "A Leibnizian Approach to City Design."

The designing and building of even a single new city designed to house 250,000 persons is a costly investment. Implicitly, we are indicating the early development of a string of new cities throughout the region of an African "common market," each city with the *capacity* to sustain a population of from 100,000 to more than 2 million persons. This is indeed, a most costly investment!

Is it therefore too costly an investment to be considered for Africa at this time? On the contrary, *the savings of costs made possible with such cities are savings which relatively poor nations, such as African nations, cannot afford to defer.*

Let us review some of the kinds of savings of cost a modern city provides, and then indicate the reasons a new city is a far less costly investment than efforts to repair an old city.

The most obvious cost-saving provided by a modern city is the advantages provided by the density per square mile of inhabitants. . . .

The city is a cultural center

The core of the new city must be an educational complex. On all other points, our purpose here is to outline a sufficient number of the principal considerations to be included in city design so that the general conception of the design-problem is communicated.

The very center of the city—at least the *functional center* of the city—must be a complex of *pedagogical museums, libraries, and cultural centers* associated with the activities of those museums and libraries. All urban life should be organized around this complex of museums, associated parks, and teaching and research institutions. Naturally, this should include the leading medical services-research center of the entire region of the city and its surroundings.

Let us now contemplate the following hypothetical specifications for our new cities. The hypothetical criteria used for purposes of illustrating the concept here are the result of informed insight into certain of the leading problems of city-design, but are otherwise arbitrary assump-

Bringing the Dead Sea to life

I'll just give one example of what this leads to, in the Middle East.

It has been long discussed, that there should be a canal cut from the Mediterranean, to the Dead Sea, and that the water flow from the Mediterranean to the Dead Sea, would improve that area, particularly if we lined the canal with a number of nuclear plants. And, the nuclear plants do not merely use distilled water, distilled or processed from the salt water flowing in, for their own functions, but they are generally producers of water.

Now, in some parts, we have a very high cost, in the Middle East, for water. And, we can produce water, with the aid of high temperature gas cooled nuclear reactors (HTGRs), much, much cheaper, at a fraction of what it costs to deliver presently. And, since water is the main bottleneck for development in the region, the supply of water by the

optimal method, that is, taking advantage of high temperature nuclear reactors, is the best means of supplying this.

So, we have a course. This water course, from the Mediterranean and Dead Sea, becomes an industrial pathway; it becomes, for purposes of economy, also an area of urban development—of industries, and some agriculture in the area close to the water—more efficient—and so forth and so on. And, that is the sort of thing one has in mind.

Now, let's go to a second topic, under the same thing.

The natural European Triangle

Let's take the example of the Triangle in Europe, the Triangle defined by sort of a spherical Triangle, from Paris to Berlin: Paris to Vienna, and up from Vienna, by way of Prague and Dresden, to Berlin.

This is an area of the greatest concentration of productive population density, industrial energy density, and so forth,

tions for purposes of illustration. The purpose of this interpolated exercise is to outline the scope and implications of the policymaking involved.

Let us assume that we have defined two categories of urban centers. The first is a city in the proper sense of the term's conventional usage: a population center including residential, industrial, commercial, and educational centers. The second is an industrial city, linked in each case to the labor force of one or more nearby cities of the first category. The link is provided chiefly by a combination of high-density, high-speed passenger rapid-transit services and freight service.

For cities of the first category, let us assume that we have prescribed that each city will be designed to expand its number of inhabitants to a predetermined maximum population, that the allowed city-designs provide for maximum populations of only the following scales: 100,000; 200,000; 300,000; 500,000; 800,000; 1,300,000; 2,100,000.

Let us also presume that we have prescribed that there will be no urban extension into the countryside beyond the prescribed limits of a new city's design. Each will be an urban "island" which is surrounded by (chiefly) modern agricultural fields and forests, and connected to only the most proximate other cities by rail and major highways. So, industrial cities will be set off by intermediating rural area from the relevant regular cities.

Let us assume that we have varied the designs of cities somewhat to take into account the fact that one may be situated on a seacoast, with a harbor; another may be on a navigable inland waterway; another may be landbound.

If it became desirable to have an urban concentration whose population exceeded 2,100,000 inhabitants in ca-

capacity, we would place another or two of the specified varieties of new cities proximate to one another, linking them by a dense-traffic, as a means of integrating the populations' functioning.

It is not hypothetical to propose that most of our new cities would be situated at either a seacoast, a navigable inland waterway, or an artificial waterway (such as a canal). For the present, and the foreseeable future, the advantages of cost of water-borne bulk and other heavy freight are so considerable that this cost-factor must be observed in all possible cases. This is not merely a matter of the freight traffic in and out of a functioning city. The building of a city is itself a massive problem of logistics. Otherwise, access to large supplies of water for commercial as well a population use is a major economic consideration. Therefore, in building an inland city in a site removed from major "natural" water courses, the construction of canals to that city to provide an additional mode of transportation of freight, as well as a conduiting of water supplies to the city and its surrounding agriculture (perhaps), is desirable. . . .

To the extent that the rate of progress of technology is limited . . . the modern industrial nation's economy's greatest problem is a *shortage of people!* Without employable productive labor, to transform the wealth represented by capital stocks into still-greater wealth, the profits of the exporting nations would tend to collapse. To have that added productive labor, that productive labor must be created by households of a corresponding larger population. Of course, the people contributed to the labor-force by those households must also be developed to competence in the levels of technology the invested capital stocks represent.