

### New Ice Age Ahead

# Industrial Revolution: The Ice Age Challenge



**Below the sand, and farther than the eye can see,  
lays the 'gold' of the New Industrial Revolution  
150,000 cubic kilometers of it  
the 'gold' is basalt, a stone ten times stronger than steel!  
It melts at 1,200 degrees for industrial processing into  
anything**

**Whatever enables the use of a new material with increased utilitarian  
qualities and abundant supplies, powered by new energy sources, enables a  
New Industrial Revolution**

Humanity has progressed from the Stone Age to the Bronze Age, and from there to the Iron Age. Now the Basalt Age lies before us.

### The Basalt Age

The Basalt Age becomes enabled with technologies of large-scale, high-temperature, automated industrial production of a wider range of products than is generally imagined to be possible to be made out of molten stone, such as rail cars, automobiles, ships, aircraft, bridges, highways, mag-lev tracks, furniture's, even potentially clothing. The new Industrial Revolution would also include the automated production of houses with the kind of high-efficiency that society can provide itself free housing as an investment into itself for a foundation for its self-development. The new Industrial Revolution would also extend into the production of low-cost mechanized farm equipment, irrigation equipment, all the way to the large-scale automated production of floating agriculture modules to be spread across the tropics with floating bridges between the continents servicing the floating agriculture along the way.

### The imagination is the limit when materials and energy are unlimited

Steel making had enabled a vast industrial revolution in the past, which now modern civilization rests on, but steel is limited in supply, is difficult to produce, and it corrodes easily.

## **Basalt the miracle material**

In contrast, basalt is infinitely abundant; it is process-ready as it sits on the ground; is non-corrosive and non-abrasive; has a ten-times greater tensile strength than steel; is nearly as hard as diamond; is a three-times better thermal insulator than asbestos; is so fine in its grain that it can be extruded into micro-fibers; and for all that, it is only half as heavy as steel. It melts at temperatures above 1,200 degrees Celsius (slightly below the melting point of glass). Molten, it can be shaped into almost anything. And best of all, it is an inexhaustible resource. There exists enough basalt on the surface of the Earth to cover the entire land area of our planet more than 30 feet deep.

The application is presently limited by the high cost of energy that is required for high-temperature processing. With this limiting factor now ending in the dawning age of high-temperature nuclear reactors, such as the Liquid Fluoride Thorium Reactor that produces 500 degree heat, which can be easily pumped up to the temperatures required, a revolutionary potential in industrial production opens up with a near infinite horizon.

While the specific heat required for melting basalt is more than twice what is needed for melting steel, this factor becomes negligible when a large portion of the heat is recovered in the cooling process. Unlike with nuclear electricity production where a portion of the process heat is lost in the cooling towers that are required for creating the energy-work flow, no such requirement exists for the heat-based forming process where the heat can be recovered. Of course, in processing environments in the 1,200 degree range, automated processes do become increasingly required and can be designed to maximize heat recovery.

## **Automated industrial production**

Automated industrial production does not imply that human labor becomes obsolete. It only means that each hand thereby gains the productive power of a thousand hands, whereby the productive power of society becomes vastly increased. When less of the human labor becomes wasted, more can be accomplished to meet the human need, and the human need has been sadly neglected for far too long.

The introduction of new materials, energy, and technologies increase in economic power that is realized from human action. But more than that, it opens up creative potentials that have never been imagined before, to create a richer civilization, the kind that is due to a human being, and which is likewise long overdue. What is presently impossible to even contemplate, such as floating bridges spanning the oceans, floating agriculture, and free universal housing, will suddenly become possible with the limitless availability of materials and energy of types that are ideally applied to automated production.

For example, the production of houses can become so efficient that the houses can be given away for free as an 'investment' by society into itself to increase its creative and cultural potential by means of ending housing deficiencies forever. With the same materials it becomes possible to redirect the outflow of rivers in thin-walled arteries across the oceans to wherever in the world water is needed, ending water shortages forever. With automated processes it also becomes possible to lay floating bridges across the oceans, and to extend from them floating agricultural systems, and even to largely automate the agricultural production on them with more efficient farm mechanization and management, ending food shortages forever.

Floating agriculture placed into the tropics would serve also to protect mankind from the creeping agricultural losses that result from the Earth's transition into the next Ice Age glaciation cycle that may have already begun.

But even on the smaller scale, the basalt revolution enables new and powerful production processes across the entire spectrum of industrial production, including automobile production. A material that is ten times stronger than steel at half the weight and is non-corrosive and non-abrasive, is bound to enable innovations in industrial production not yet imagined. The 'thousand dollar' car may not be far off then. Compressed-air driven models are already being produced, even without the use of the advanced materials. The use of high-temperature molding of auto body units and parts promise to enable still further advances in the revolution

in automobile design and possibly even in automobile use. A similar revolution might be enabled in the railway transport arena, local and long distance, and also in the design of cities and the re-design of entire regions.

## **Deserts becoming new industrial centers**

Can you imagine the vast empty deserts of today becoming the garden cities of tomorrow with free universal housing (and not just free highways) thereby ending slum living, homelessness, and people living under the yoke of rent and mortgage slavery? Can you imagine the new cities surrounded with developing centers for indoor agriculture for efficient, fresh, local food production, and with brand new efficient industries and processes, so that a four-hour work-day becomes sufficient to meet all needs, and commuting times become measured in minutes instead of hours, with time left for family, culture, and intellectual development?

## **The meaning of industrial revolution**

This is what the powerful New Industrial Revolution that stands before us can enable, which we have presently the potential to create, enabled by basalt, by thorium nuclear power, by automated industrial production, and by the revolutionary return to the credit-society principle that the USA as a nation was founded on.

The wealth of society is located in what it produces for itself for creating a richer world with richer living. No other form of wealth exists except the wealth of benefits that flow from society's productive capacity becoming enabled. Any other form of wealth is an illusion. The platform of monetarism turns the world into a desert - the desert of devolution instead of economic revolution.

The age of economic revolution lies before us, without empire, without monetarism, and therefore without debt. The coming new age of a profound industrial revolution, however, won't be seen as a miracle when it happens, but will be seen as merely the natural freedom of mankind that becomes enabled by its use of powerful new materials, new energy, and a credit system for infinite wealth creation without inflation. All of these are presently within reach for mankind. We only need to enable ourselves to reach for them.

Basalt, and high-temperature nuclear power in automated industrial processes, can enable a thousand-fold increase in economic achievement for an enriched civilization. We have had this potential since the 1950s already when the Liquid Fluoride Thorium Reactor was born. Isn't it time that we start to develop the potential we have, instead of languishing in the desert of imperial poverty?

Two small steps would get us going to enable ourselves to realize the potential that we have, which has been kept bottled up for far too long. One of these steps would be to repeal the Federal Reserve and re-instate the Glass Steagall legislation to end monetarism (ending the stealing of wealth from society with the manipulation of money). And the other step would be, to re-enable the credit-society principle, expressed in the uttering of federal financial credits for the physical, scientific, and cultural development of the nation, and nations.

### **Free houses by the millions**

### **Basalt without limits**

### **Glass Steagall and Industrial Revolution**

### **The real and false Principle of Economics**

### **The story of the Horse Rancher**

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