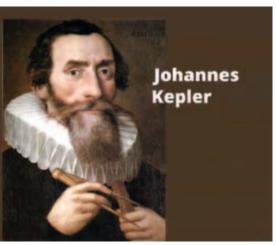
quality which enabled Kepler to take reflections of the "divine Nicholas," as he called Cusa, a step further, and to discover gravitation as the principle accounting for the orbits of the planets.

The most important distinction, however, which separates LaRouche from the bloodless accountants of the linear world of the rules-based order, who apparently have no problem wiping out millions of human beings with a click on their

computer, is that he was motivated by a passionate love for mankind. In literally hundreds of his articles, he emphasized the central importance of Plato's principle of agapē, of the idea of Paul's *I Corinthians* 13 of love, of which he says that it is the only universal principle upon which true morality can be premised.

This love for humanity was the guidance behind all his works in economics. Be it his early infrastructure development plans for all continents of the planet, or his visionary conception about the "The Woman on Mars," and the idea of future forests on Mars. In ev-



Sternwarte Kremsmünster

erything he did, he was motivated by the principle that "Each and all members of mankind are made in the image of what Plato in his *Timaeus* identified as both the composer and the continuing efficient principle and personality of this universe." Some may object and ask what this fundamental conception about the identity of mankind and the principle of the universe have to do with economics. As Bernhard Riemann says in his

dissertation, often quoted by Lyndon LaRouche, "Here we leave the realm of mathematics, and enter the world of physics."

The chance for a positive outcome of this present era of human history may very well depend on the hope that enough human beings—economists included—understand that difference, and replace the quackery of cybernetics, systems analysis, and Information Theory with LaRouche's science of physical economy in all universities, faculties, and textbooks around the world. Thank you.

Ding Yifan

The Importance of Physical Economics in Today's World

Ding Yifan is Deputy Director, Research Institute of World Development, China Development Research Center (DRC). This is an edited transcript of his presentation to the August 14, 2021 LaRouche Legacy Foundation seminar, "On the 50th Anniversary of LaRouche's Stunning Forecast of August 15, 1971: So, Are You Finally Willing To Learn Economics?"

I'm very honored to be able to take part in this very important

event of the Schiller Institute, and to talk about the importance of physical economy in today's world.



LaRouche Legacy Foundation Ding Yifan

Lyndon LaRouche is the inventor of "Physical Economics." When the Nixon Administration defaulted in 1971 on the U.S. commitments to the Bretton Woods system, and decoupled the U.S. dollar from gold, Bretton Woods collapsed.

Mr. LaRouche forecast the danger of excess liquidity in the world. And 50 years later, many things predicted by Mr. LaRouche are happening. If we do not pay attention to these matters today and

let them continue to develop, the world will advance in a more threatening direction in the future, and bring us into a dangerous abyss.

We must be aware of the two incidents mentioned by Mr. LaRouche: the abuses of currency issuance and the disorderly development of the financial industry:

1. 'Fiat Money'

When the U.S. dollar is decoupled from gold, the U.S. government is easily tempted by making monetary mistakes indiscriminately. In fact, many countries have made the same mistakes, but they have all paid a heavy price for it. 2,000 years ago, under the Han Dynasty, Wang Mang usurped the power and issued new coins. He decided to mix gold in the newly issued currency with brass. Prices soared, and Wang Mang's regime was overthrown 14 years later.

After the Mongols occupied the Central Plains, they established the Yuan Dynasty. They found that the paper money system created by the Song Dynasty, the previous dynasty, was very convenient, so they accepted it all. However, in the Song Dynasty, paper money was only a substitute for metal currency, which facilitated commodity transactions.

The Yuan Dynasty turned the paper money into a sort of "fiat money," and traders had to exchange metal currencies for paper money in the market before buying commodities. Marco Polo noticed the phenomenon, and he noted it in his memoir. When the Venetians came into China, they had to exchange gold pieces into paper money before purchasing commodities in the market.

When the Yuan Dynasty was short of money, more paper money would be issued to supplement the finances. Soon, the proliferation of paper money caused inflation and also insurrections everywhere in China, and the Mongols were soon driven back to the northern grasslands.

Since the 1970s, the currency issued by the United States has flowed all over the world. As the U.S. dollar has a unique status as the world's reserve currency, the excessive liquidity of the U.S. dollar has brought huge inflationary pressures around the world. In recent years, the U.S. government seems to be addicted to the use of "debt monetization."

Since the COVID 19 epidemic, the Federal Reserve, the central bank of the United States, has bought as much bonds as it had purchased since the 2008 financial crisis. When the central bank buys bonds from the

market, it means in economic textbook [talk], it's "printing money." The consequences of printing money in such a way is easily imaginable.

2. 'Financial Entropy'

The disorderly developments of the financial industry have become the entropy of this era, rather than a tool to provide blood for the economy. Mr. LaRouche, in his book, *So, You Wish to Know All About Economics?* used the concept of "entropy" in physics, to describe those activities in the economy that are working, but cannot generate the kinetic energy to promote technological progress.

Entropy was proposed by the German physicist Rudolf Clausius and refers to kinetic energy that cannot be used for work. LaRouche believed that if a society becomes entropic, it is a dissipative structure. It will consume a lot of energy without producing any real useful value, and will eventually exhaust the resources of the entire society.

Since the "deregulation" of the U.S. financial market in the 1980s in the United States, financial institutions and financial trading have grown exponentially. Although wealth on paper has increased a lot, it has not contributed greatly to the real economy. Although the expansion of financial assets has absorbed somehow the excessive liquidity, it has not allowed money to flow into the physical market. Although it has contributed to preventing an overall rise in prices, it has created a vicious circle of "boom and crash."

Since then, without bubbles, the capital market cannot operate normally. But the bubble will definitely burst, one day or another. Therefore, to maintain this vicious circle, we must continue to create "myths" and make those poor retail investors in the stock market believe that as long as they follow these "myths," they can get rich overnight.

Today, financial derivatives transactions have been completely decoupled from actual demand; and they are the entropy of today's economic development.

Take the oil futures trading as an example. The annual oil futures trading is as high as more than 380 billion barrels every year, while the annual global oil consumption is only about 36 billion barrels. The trading volume of oil futures is more than ten times that of oil consumption. Most futures transactions are conducted only by financial institutions. They don't care where the end user is, they only care about

making the difference of the investment.

Although oil futures trading is an important product in the financial market, it may not be the trade with the largest gap between futures and real products. In other words, the degree of disconnection between the virtual economy and the physical economy is very high, perhaps more than ten times. And most of the virtual economy is idling there, and in the end, it is not transformed into real things.

This is the "cancer" of the world economy today; and without getting rid of this cancer, we may slip into the entropic society that Mr. LaRouche mentioned. I will stop here today. Thank you very much for your attention

Yekaterina Fyodorovna Shamayeva

Design and Management of Sustainable Development and an Interdisciplinary Synthesis of the Fundamental Ideas of the Schools of Lyndon LaRouche and Pobisk Kuznetsov

Yekaterina Shamayeva holds an advanced degree in engineering, and has been a Senior Lecturer at various academic institutions. She has worked closely with a circle of scientists who were personally associated with the late Pobisk Kuznetsov, the visionary Russian scientist and expert in industrial planning and management, who became Lyndon LaRouche's friend and hosted his first visit to Moscow in 1994. This is the translation of her presentation to the August 14, 2021 LaRouche Legacy Foundation seminar, "On the 50th Anniver-

sary of LaRouche's Stunning Forecast of August 15, 1971: So, Are You Finally Willing To Learn Economics?"

Good day, dear colleagues and friends. Allow me to begin with two quotations. The first comes from that outstanding person, Lyndon LaRouche, and consists of excerpts from two of his works:

The crucial fact upon which all sound economic decisions are now premised, is ... that the presently reigning financial and monetary institutions, are ... hopelessly and profoundly bankrupt.... [From a 2000 article]

[T]he correlative of increase of potential relative population-density is an increase of both the per capita and per square-kilometer increase



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of energy-flux density, as measurable in some term such as kilowatt degrees per square meter, a measure combining consideration of the number of kilowatts per square meter and the energy-flux density (as reflected by temperature equivalents) at which that energy is supplied. [From his 1984 book on economics]

The second quotation is from Lyndon LaRouche's colleague from the USSR and Russia, the encyclo-

pedic scholar Pobisk Kuznetsov:

A transition to sustainable development requires that economic science not be isolated from physics and technology, but that they undergo a new synthesis. The conflicts that arise are a struggle for sources of energy.

The ideas of Lyndon LaRouche and Pobisk Kuznetsov bring together their fundamental views and the requirement for value to be linked to natural-science processes and measurements; in the words of Pobisk Kuznetsov, human activity needs to be brought into accordance with the laws of Nature and their projection—the laws of social development (in terms of power, rising labor productivity, and a budget of social time).