

The Galactic Science of Human Progress: Defending Humanity from Pandemics

by Megan Beets

This is an edited version of prepared remarks delivered to the LaRouche PAC's weekly Fireside Chat web-cast of March 26, 2020. Subheads, graphics and links have been added.

As you read the quotation below, imagine when it might have been said:

Our children will enjoy in their homes electrical energy too cheap to meter.... It is not too much to expect that our children will know of great periodic famines in the world only as matters of history, will travel effortlessly over the seas and under them and through the air with a minimum of danger and at great speeds, and will experience a life span far longer than ours, as disease yields and man comes to understand what causes him to age.

If you thought to yourself: "This sounds like the optimism of a bygone age," you are only *partly* right. Lewis K. Strauss delivered those remarks in 1954, while head of the Atomic Energy Commission, at a time when the U.S. was gearing up Project Sherwood, a program to develop controlled nuclear fusion.

This natural optimism about mankind's rightful place in and mastery over the universe has since been largely supplanted by the "green disease" of radical environmentalism, and the even more prevalent, overarching disease, *Malthusianism*; however, Lyndon and Helga LaRouche, and the movement they built, never accepted that.

In 1983, Lyndon LaRouche authored a [book](#) called *There Are No Limits to Growth*, in which he demolished the idea that the world is overpopulated. In that book, after asking the reader to imagine the forests we will grow and the cities we will build on Mars, he locates the value of each individual human life in its belonging to a creative being, unlike any other species on Earth, which has the potential to make a contribution to the progress of mankind and the universe as a whole.

Defense of All Humanity

In 2011, as tensions between the U.S. and Russia were dangerously escalating, the Russian government proposed to the U.S. a revival of Lyndon LaRouche's Strategic Defense Initiative, which in 1983 had been offered by then-President Reagan to the Soviets. This time, Russia, which renamed the policy the Strategic

Defense of Earth, proposed not only joint work on missile defense systems as in 1983, but also cooperation to defend the planet as a whole from threats from space, namely asteroids and comets. Though then-President Obama never responded (or if he did, he rejected the offer), Lyndon LaRouche did.

LaRouche recognized that humanity has reached a point where, in an age of nuclear weapons, warfare is no longer a viable option for resolving conflicts between nations—unless one wishes to risk elimination of the entire species. Therefore, we must develop a new, higher-order notion of defense. Conflicts among peoples can and must be worked out on the diplomatic stage, and so the notion of defense must be redefined as the *common defense of*

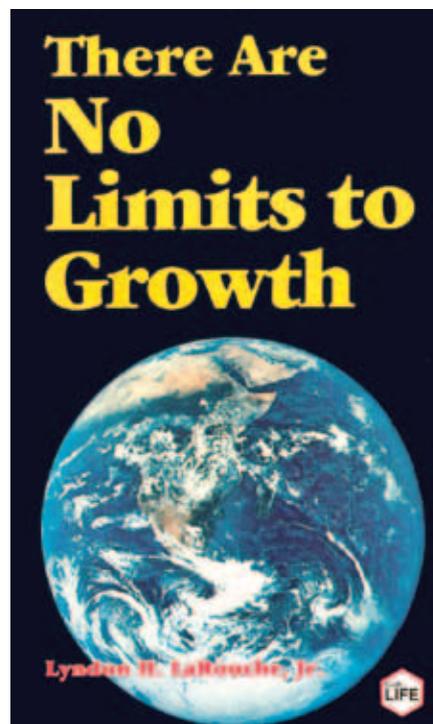
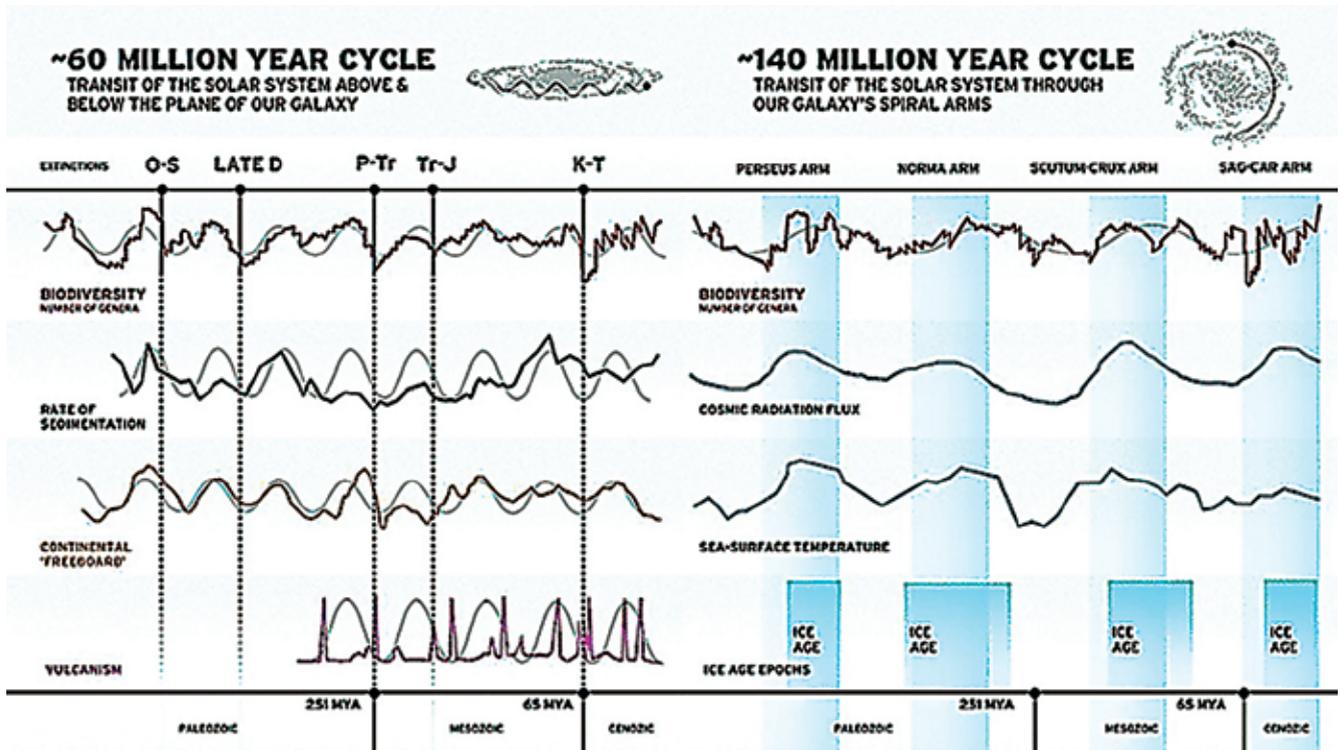


FIGURE 1



Graphical representation of the two theorized orbital cycles of our solar system through our galaxy—above/below the galactic disc and in/out of the spiral arms—and the corresponding cycles in biodiversity and geophysical/climate activity. The acronym MYA stands for “millions of years ago.”

all humanity, as our species exists on the planet, in the solar system, and in the galactic system.

For example, humanity is not only threatened by the possibility of an asteroid impact—which, depending on the size of the body, could wipe out a city, a continent, or even affect life over the entire Earth—but also faces threats from earthquakes, volcanic eruptions, major weather events, and disease. The only viable defense against these and other yet unknown perils is *progress*: scientific progress, increasing mastery over the causes of these phenomena, and the ability to deal with the levels of power wielded by them.

This is coherent with LaRouche’s discoveries in the science of physical economy, which show that human progress, the long-term survival of humanity, depends on our wielding more and more powerful physical principles, and higher and higher densities of applied power. For example, with the powers of modern chemistry, unavailable to mankind prior to the 18th century, we can create new materials with new and useful characteristics, such as resistance to heat or corrosion, and we can

lift a rocket off the planet and send it to the Moon.

The strategic defense of Earth, of humanity, must be seen from that standpoint. Begin by imagining the Earth from a vantage point in space, where you can observe the planet and its development over time as a unified whole. That planet isn’t floating alone in empty space—it is a captive, a subsumed feature, of a solar system which is run by our Sun. That solar system itself is a captured, subsumed element of the galactic system.

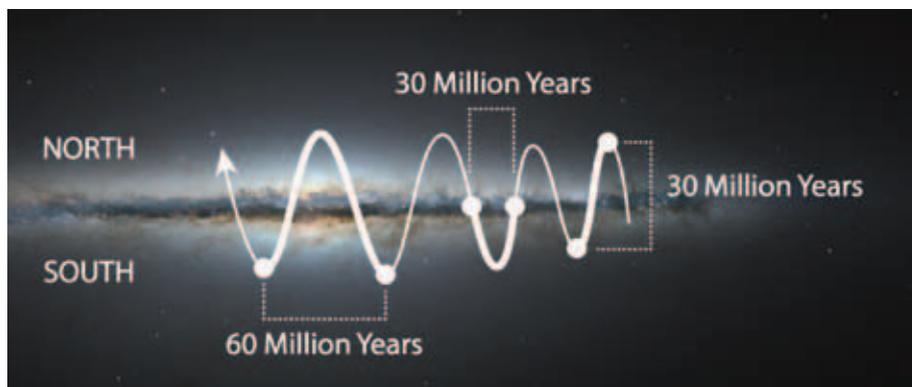
This becomes important in taking a look back at the history of processes on our planet, which are characterized by cycles.

For example, there are cycles of increasing and decreasing volcanic activity, cycles of continental uplift and subsidence, and cycles of extinction of species and creation of new species. All of these occur on a roughly 60-million-year time frame, which fits very nicely with what we know about our solar system’s travel through the galaxy. As it orbits the galactic center, the solar system also bobs up and down, perpendicular to the

FIGURE 2a



FIGURE 2b



Left: An artist's depiction of the Milky Way galaxy with its spiral arms—the bright areas having a much higher density of stars than the surrounding regions. Right: A depiction of the solar system's motion above and below the plane of the galactic disc, returning to the same relative position about every 60 million years.

plane of its orbit, being sometimes above the disk of the galaxy and being sometimes below. It returns to the same relative position every 64 million years.

Similarly, cycles of climate, so-called icehouse Earth and warmer periods, fit very nicely with a roughly 140-million-year cycle of the solar system's travel into and out of the very dense neighborhoods of the galaxy called spiral arms, in which there is a higher density of cosmic radiation. (See **Figures 1** and **2**.) With these two examples, you start to get a rough picture that phenomena that we think are Earth-bound, or Earth-generated, are actually very likely mediated by the Sun, or even by the activity of the galaxy.

Mastering the Science of Life

So why is all of this important in the middle of a deadly pandemic? A greater mastery of the science of life, which very much includes cycles of pandemic disease and activity of viruses, will absolutely require international cooperation of the best scientific minds, given the vantage point just referenced.

Take viruses. Viruses are very interesting little critters. They are unlike anything else in the biosphere—existing on the boundary between life and non-life—and are rather new to science. They weren't thought of as a separate entity from bacteria until the end of the 19th century, and their structure was unknown until the invention of the electron microscope in the 1930s.

We tend to think of viruses as horrible little things that make us sick—and some of them are! But they are

also pervasive on the planet and are tightly bound up with the evolution of life. Consider the fact that anywhere from 5 to 10% of the human genome is of viral origin, meaning that through persistent infection by many forms of life over many millions of years, genetic material was inserted into our cells by viruses and became a permanent part of our genetic makeup. The ability of human beings to digest starch, a fact which pasta lovers will appreciate, is due to a gene which originally came from a virus!

There are an estimated 10^{30} (a nonillion, or a million trillion trillion) viruses in the oceans. Two hundred thousand different types have been identified, with millions of viruses in a single teaspoon of seawater. A somewhat flashy example of something viruses have done in the oceans, is that they infected a type of sea slug called *Elysia chlorotica* and donated genetic material which gives it the ability to use borrowed chloroplasts to photosynthesize, thus lending it its beautiful green hue.

Human beings have also begun to make use of viruses to fight disease. For example, in gene therapy, viruses are used to inject certain genetic material into cells to fight sickle-cell anemia. Modified polioviruses have been used to fight glioblastoma, a particularly virulent brain cancer, with some success.

Regarding epidemics and pandemics, interesting work has been done going back to the 1970s on the influenza A virus. As most people know all too well, the flu is a seasonal phenomenon and is always present as a seasonal epidemic somewhere on the Earth—in the



The Elysia chlorotica sea slug gets its brilliant green hue from chloroplasts, originally ingested from Vaucheria litorea algae, and stored in its digestive system. The slug's ability to use the stolen chloroplasts to photosynthesize comes from genetic material transferred to the slug by a viral infection. Mysteriously, the same virus seems to kill off the adult sea slugs, almost simultaneously, at the end of their life cycle.

northern and southern hemispheres during their respective winters, and in the tropics roughly twice a year. Some have compared its migratory movement to that of birds. During such a seasonal epidemic, the flu breaks out simultaneously across vast areas of land, faster than person-to-person transmission could carry it, and at a certain point, disappears, despite the fact that all possible “victims” were not infected.

Influenza A also exhibits interesting cyclical activity, with new strains of the virus breaking out in a pandemic and taking over to become the dominant human infector (the old strain seeming to disappear) with a frequency that aligns closely

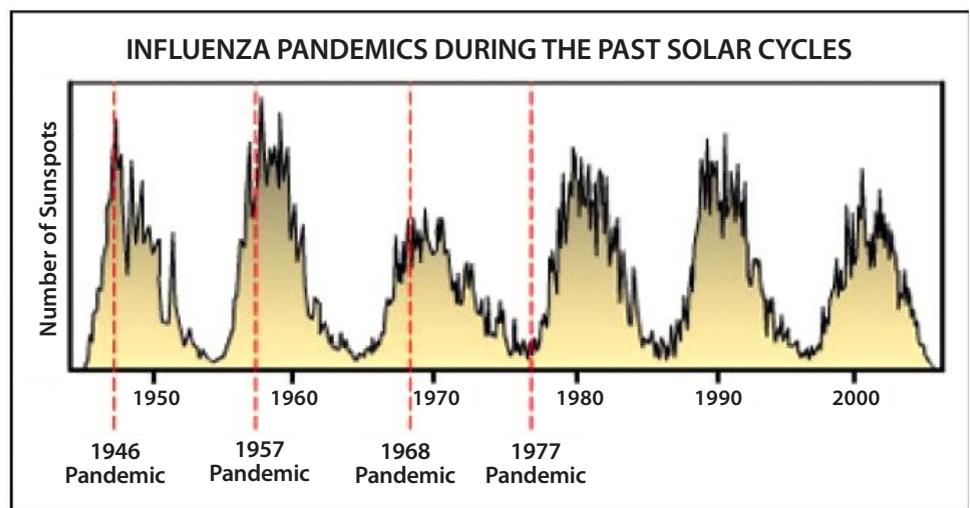
with the 11-year cycle of solar activity.¹ (See **Figure 3**.) What does this mean? What could the trigger be? While it is known that viruses can be activated and deactivated by light and radiation under certain conditions, the specific mechanism is not known in this case.

Though there are many unanswered questions, they cannot be taken out of the context of the anti-entropic development of life on Earth as modulated by our Sun and by our galaxy.

These things are raised *not* to say anything specific about the particular coronavirus that’s threatening humanity now, but to point to the fact that humanity has to emerge from this with a new paradigm of thinking, with a determination to make an evolutionary leap in our understanding of disease—viruses included—and of the science of life and our mastery of it. Gaining such mastery must be a cooperative process, with participation from the greatest minds, young minds, from nations across the world. This will have true economic value and can move humanity into a new paradigm in which future generations “experience a life span far longer than ours, as disease yields.”

1. Five of the pandemics of influenza A in the 20th century have occurred 11 years apart, and historical data going back to the 1700s has shown that of the 15 recorded influenza pandemics since that time, 12 have occurred within 1 year of a solar maximum or minimum. Qu, Jiangwen, “Is Sunspot Activity a Factor in Influenza Pandemics?” *Reviews in Medical Virology*, 2016. <https://onlinelibrary.wiley.com/doi/abs/10.1002/rmv.1887>.

FIGURE 3



The 1946, 1957, 1968, and 1977 influenza pandemics mapped against the 11-year solar cycle. Source: Tapping, Mathias, and Surkan, Canadian J. Infectious Diseases 2001.