

You're Human!

Do You Know What That Means?

by Robert Ingraham

PART THREE OF A SERIES

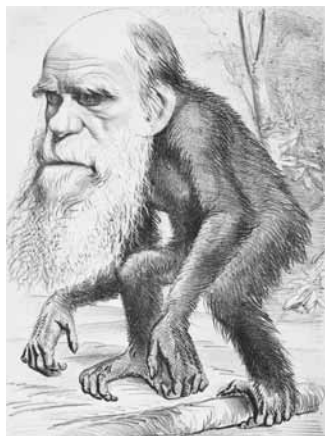
The necessity for the human mind to create that which is new will be the topic in this third part of our series.

III. The Power of Discovery

July 3—First, let us dispense with the lying frauds that have been handed down to us by that carnival barker for the British Empire, Charles Darwin, to wit, that mankind's evolution stemmed from “natural selection” and “survival of the fittest.”

To simplify, the argument goes something like this: As the human species progressed, it adapted. It had an apposable thumb; it possessed a larger cranial size; it went through mutations and change in DNA make-up—all of which can be measured and analyzed mathematically. Over time, through trial and error, mankind developed (stumbled upon) new types of tools and ways of using them. Somehow, in some way, the human species progressed, as sort of a “smart monkey.”

Edgar Allan Poe would laugh at such an analysis. The secret to the Promethean emergence of the human species is hidden in plain sight. Every leap forward, each intervention that unlocked new potentials for upward human development, flowed from an act of Discovery, from a



A cartoon caricature depicting Charles Darwin as the original smart monkey.

power that exists in the minds of human beings and is nowhere else to be found—as a self-conscious deliberate force—in the biosphere.

As stated earlier, any competent investigation must begin with the axiom-shattering implication of the human species' mastery and deployment of the power of fire. This is where the essence—the being—of the human identity is to be found: the discovery of new universal principles which enhance mankind's power over nature and increase the population and productivity of the human species. None of the stunning breakthroughs accomplished by individual humans can be explained by the image of a Paleolithic brute scratching around in the dirt and learning through “sense-experience.”

Communicating Ideas

In his 1998 essay “[When Economics Becomes Science](#),” Lyndon LaRouche addresses directly the source from which all human progress flows. One short excerpt indicates LaRouche's approach:

The characteristic—characteristically anti-entropic quality— of non-linear action, of any viable economic process, is the anti-entropic action located within the interval defined by a single individual's generation, of a single, validated new principle of our universe. It is the efficient relationship between that individual's sovereign cognitive action, and the increased power of the entire society in the universe, which is the essential definition of the science of physical economy. The kernel of that characteristic, determining relationship, is expressed in that Riemannian form of multiply-connected manifold, “ $n+m$,” we have identified above.

These sentences by Lyndon LaRouche provide the

only legitimate starting point for beginning an investigation into the truth about human advancement. For the remainder of this part of our discussion, we shall look at several human discoveries, including astronomy, navigation, and chemistry. We will preface those remarks with a look at how early Man sought to express the thoughts of his own mind. In all of this, what must be kept foremost is the appreciation of the anti-entropic power of the individual human mind in discovering new universal principles, which in LaRouche's words, led to an "increased power of the entire society in the universe."

There is a great deal of guess-work—and that's what it is—about when the human species first developed the use of language. The work in this field is poisoned by those who demand that human evolution must be examined *biologically*, not *cognitively*. In truth, the phenomenon of individual human discovery and the *socialization of discovery* are inseparable. The individual human being is both a creative, as well as a social individual, and it is self-evident that the communication of ideas has been part of human existence, even going back as far as the discovery of the use of fire. Only irrationalists or British oligarchs would deny this.

Concepts are formed and articulated with one's own power of imagination. An hypothesis is tested. A validated discovery is confirmed. Then, the social man acts to communicate his discovery and the *process of discovery itself* to his brethren. Such defines human social development. The human mind is more powerful—as a universal force—than any physical process, and the discovery of new universal principles and the socialization of those principles is the only legitimate definition of human culture. In studying the history of the human race, it is this cognitive footprint which the professional investigator must seek out.

All of the pre-historic physical evidence which has survived to the present day merely represents the *products* of acts of human discovery. What is more difficult—much more difficult—is to delve into the question of pre-historic human *noëtics* itself, and the further back one goes, the archeological record which will hint at the tell-tale signs becomes thinner and thinner.

Despite these difficulties, what has been un-covered to date is a revelation. Cave paintings still exist which are 40,000 years old; carved figures and statues exist from about the same period, and the earliest musical instruments go back to at least 30,000 BC, as does pottery. The oldest known engraved figures, dating to 70,000 BC, were recently discovered at the Blombos Cave, near Cape Town, South Africa. Numerous sites from Africa, to Europe, to China, to Indonesia, to Australia and many places in-between have yielded such artifacts. In all of this, we find the Mind of Man—exploring the nature of the universe and biosphere, depicting both physical ad-

vances of the human species (Riemann's "n-fold" manifold) and artistic expressions of the human identity (Riemann's "m-fold" manifold).

Look at the ivory statue of the Venus de Brassempouy, dated 26,000 BC. Was this the product of a brutish primitive human mind? Was this created by someone scratching in the dirt?

Human beings of the late-Paleolithic era deployed fire, investigated astronomy, navigated the seas, built dwellings, possessed finely-made tools, pottery, and implements, and they developed a remarkable

aesthetic sensibility, as evidenced by the paintings and other works they left behind.

These were all the products of individual human beings, examining the nature of the universe, discovering new physical principles, and communicating these discoveries to fellow human beings.

The Mind and the Universe

The nature of human existence is that the individual is always in an internal dialogue with himself—questioning, investigating and formulating hypotheses. This is where "human nature" is to be found, and Man has always sought means to communicate the products of these deliberations and discoveries among his fellow men. As Lyndon LaRouche states,¹ truthful human communication is based on "prompting the other person



cc/Jean-Gilles Berizzi

Front and side views of the Venus of Brassempouy, one of the earliest known realistic representations of the human face.

1. Again, in "[When Economics Becomes a Science](#)," reprinted in *EIR*, June 1, 2018.

to undergo the same creative process we have experienced within our own minds.” This did not begin at some later date. It has been with us since a man—or a woman—lit the first human-controlled fire.

We see the evidence of this human passion to communicate discoveries and to pass them down to future generations in the emergence of what is sometimes called the “oral tradition,” e.g., the Epics of Homer, the Fables of Aesop, and many other early works to be found in human settlements from throughout the world. Passed down for centuries—or even longer—usually sung, these renderings provide a picture of Man’s continuing investigation into the secrets of the universe. These are not just stories or myths.

Astronomy takes center stage in many of the tales,

several other locations, has been confirmed. One example is the Dispilio tablet, found in Macedonia and dated to 5,300 BC; another is the Vinca script, a set of symbols found on 6th millennium BC artifacts from the Vinca culture of southeastern Europe, an area also known for the early production of copper.

Astronomy

If you study a variety of creatures—cows, cats, sheep, and the like—you will notice that they almost never look up into the sky. Their eyes are directed downward, toward the search for food, possible enemies, or potential mates. Yet, for as long as humans have existed, our vision has been drawn upward. The searching of the heavens for truth, for lawfulness, has



cc/José-Manuel Benito

A limestone Kish tablet from Sumer with pictographic writing may be the earliest known writing, dating from 3500 BC.



cc/Chris S. Henshilwood

Engraved ochre from Blombos Cave in South Africa.

sometimes directly but often cloaked as metaphors, parables and anthropomorphisms, such as the personification of the Pleiades and other asterisms. The relationship of the human race to the greater celestial heaven, and the influence of the constellations on human existence appear again and again in the form of investigating the lawfulness of celestial motion. Geological processes and the crises which mankind had been forced to overcome also appear, including descriptions of famines and the effects of catastrophic weather changes from the earlier glacial and post-glacial periods. More will be said about all of this, particularly in relation to Homer, below.

As to written language, its origin may never be known. For those humans who lived prior to the last glacial maximum, nothing in the form of written languages—if they existed—survives. What is clear, however, is that the origin of written language preceded, by many millennia, the Mesopotamian Temple Culture of Sumer. Evidence of much earlier writing from Henan Province in China, dated at 6,400 BC, as well as from

distinguished humanity from the beginning. These ancient astronomers were not simply “observing patterns in the sky.” Individual acts of discovery took place—efforts to coax the universe to disclose its secrets, to unveil the lawful ordering of the celestial environment. As long as Man has existed he has sought to understand—and to bring within the self-conscious body of human culture—the nature of the universe—and his own role in ongoing creation.

In China, evidence of advanced astronomical observation has been found dating back to at least 14,000 BC, well into the period of the last glaciation. Additionally, the evidence presented by Bal Gangadhar Tilak in his *Orion* (1893) and *Arctic Home in the Vedas* (1903) is conclusive as to the pre-Mesopotamian development of a sophisticated study of astronomy.² There also exist numerous artifacts and ruins from the Neolithic era which were clearly devoted to astronomical observation. The Goseck

2. See: “[The Present Scientific Implications of Vedic Calendars from the Standpoint of Kepler and Circles of Gauss](#),” by Lyndon H. LaRouche, Jr.

circle, located in Germany and discovered in 1991, is dated to 5,000 BC. It is currently the oldest known “solar observatory” in the world. And then there are the Egyptian pyramids, which date to at latest 2,600 BC.

In Homer’s *Iliad* and *Odyssey* we find an extensive discussion and understanding of astronomical processes. The motions of Sirius, Orion, Ursa Major, Venus, the Pleiades, and many other celestial bodies and asterisms are described and discussed numerous times. One example which Homer presents is that the mid-summer appearance of Sirius above the horizon in the evening sky heralds a season of hot dry weather. Sirius is the brightest star of the constellation Canis Major (Greater Dog), and it is the annual appearance of Sirius which has given us the modern expression “dog days of summer.”

In Book 20 of the *Odyssey*, Homer also depicts a solar eclipse. What is most remarkable about this is that Homer also describes the precise position of Venus (high in the sky), the visibility of the Pleiades, and the retrograde motion of Mercury (Hermes) low in the evening sky. Recent astronomical research has shown that the occurrence of a solar eclipse with the precise conjunction of these three other astronomical events actually occurred about 1188 BC, almost 300 years before Homer was born, and approximately at the time of the downfall of Troy.

Navigation

Again, from Homer, the *Odyssey* Book 5:

*His sails expos’d, and hoisèd. Off he gat;
And cheerful was he. At the stern he sat,
And steer’d right artfully, nor sleep could seize
His eyelids. He beheld the Pleiades;
The Bear, surnamed the Wain, that round doth
move
About Orion, and keeps still above
The billowy ocean; the slow-setting star
Boötes call’d, by some the waggoner.
Calypso warn’d him he his course should steer
Still to his left hand.*

—translated by George Chapman

This is a description of navigation, over open sea, by the stars. The human species is the only creature capable of this, and this power was only made possible through an advanced understanding of astronomy. Open sea navigation was not accomplished through “trial and error,” i.e., get in a raft and hope for the best. The voyages of exploration which were carried out, as well as human emigration to distant lands, were all conducted by a human culture based on a growing body of scientific knowledge.

Evidence exists that humans were traveling over open bodies of water as early as 800,000 BC. After 100,000 BC, when *Homo sapiens* began to move out of Africa in large numbers, it is certain that this involved crossing the Red Sea in boats. There is also the case of Australia, where archaeological findings have dated the arrival of humans to no later than 40,000 BC, at a time—as today—when Australia was surrounded by water and could only be reached by voyage over open ocean.

Evidence exists of a late-Paleolithic maritime human culture, although most of the physical remains have been lost. During the last glacial maximum, the level of the oceans, worldwide, was about 400 feet lower than at present. Take a look at depth charts. Along many current shorelines, to reach a water depth of 400 feet you have to go several miles—or more—off shore. The centuries before the last glacial melt were the era of human expansion to every continent in the world (with the exception of Antarctica), and all of the coastal communities and villages that existed during those crucial centuries are long-ago submerged, covered with water, silt, sand, debris, and vegetation.

Take the case of the now famous Cosquers Grotto, off the coast of southern France, near Marseilles. In 1985, the entranceway to the Grotto was accidentally discovered by a French diver 121 feet below the surface. You can only access the grotto by swimming underwater through a long tunnel. Much of the contents of the Grotto have been destroyed by seawater, but at least 150 cave paintings still exist, some dating back to at latest 25,000 BC, at a time when the entire cave would



cc/SiefkinDR
Stencil of a human hand from Cosquer cave, near Marseille, France, dating from 27,000 Before Present Era.

have been on solid ground.

There is also the evidence from the Gulf of Cambay, off the coast of western India, where fossils dated to 7,500 BC have been recovered from a depth of 120 feet; or the underwater structures near Yonaguni, off the coast of Japan, dated to 8,000 BC. Similar findings have been reported from Mexico, to Morocco, to Scotland and South America.

The truth is inescapable. Mankind is a sea-faring species, and exploration and emigration over open seas is interwoven with a growing mastery of the understanding of astronomical processes, the motion of the stars, the sun and moon, as well as a deepening knowledge of ocean currents and weather patterns.

Chemistry

During the “Stone Age,” human beings did not simply find rocks lying around on the ground and break them into pieces which could be used as “tools.” Flint, for example, is a form of the mineral quartz. It occurs chiefly as nodules and masses in sedimentary rocks, such as chalks and limestones. It

has to be located, identified, dug out of the ground, and then chiseled to create any tools worth using. It is clear that the origin of this form of organized “mining” is far back in the Paleolithic, more than a million years ago.

The great discovery came when the extraction of raw materials was combined with fire, resulting in the invention of pottery, i.e., the chemical transformation of a raw material to a new manmade state from which it could not revert to its natural form. This discovery is precisely what Lyndon LaRouche means when he discusses how a single act of individual human discovery produces an anti-entropic leap in the power of the human species—an action which defines a new manifold of human potentiality.

Currently, the earliest date given for the application of fire to create new materials is about 30,000 BC, but as with all of these dates, nothing is certain. What is known is that it was not long before the fire-driven processes were applied to working with metals, as well as to the invention of new metals, i.e., substances which had no prior existence.

Much of this progress, including the usage of copper, iron and bronze, as well as the beginnings of animal domestication, was centered in a region which stretches from the Caspian Sea, through the Caucasus,³ along the shore of the Black Sea, into northern Anatolia, and then ending in the Balkans. The use of copper in tool-making dates back to at latest 9,000 BC, probably earlier, and the earliest verifiable high-temperature “copper-works” are from an archaeological site in present-day Serbia. The earliest large-scale smelting of iron took place in Eastern Anatolia, and the earliest known surviving iron artifacts were discovered in northern Iran. Glass was also invented in the same region.



A 35,000 year old flute, an early example of metal working.

Many of these developments were made possible by the invention of charcoal. Unshakable evidence exists of the use of charcoal by humans as early as 32,000 BC, and it was the application of charcoal to the production of copper which ushered in modern metallurgy, also making possible the later production of both bronze and iron. Charcoal burns at

temperatures up to 2,700 °C. By comparison, the melting point of iron is approximately 1,500 °C. Charcoal made large-scale metal-working feasible.

The invention of bronze supplied humanity with an enormous new power in terms of physical economy. Take a minute to consider what the manufacture of bronze involves. First, the copper has to be extracted from stone ore, which itself requires a high level of creative imagination. The addition of tin to create the *man-made* alloy bronze, a substance which had no prior existence, was the cognitive breakthrough. Working with copper, tin, and bronze involved blast furnaces, welding, soldering and the use of rivets, as well as large-scale engineering. The invention of bronze led to the rapid introduction of new types of tools such as plows, wheels, etc., resulting in a non-linear surge in mankind’s productive power.

3. Interestingly, a region associated with Prometheus, the fire-bringer.

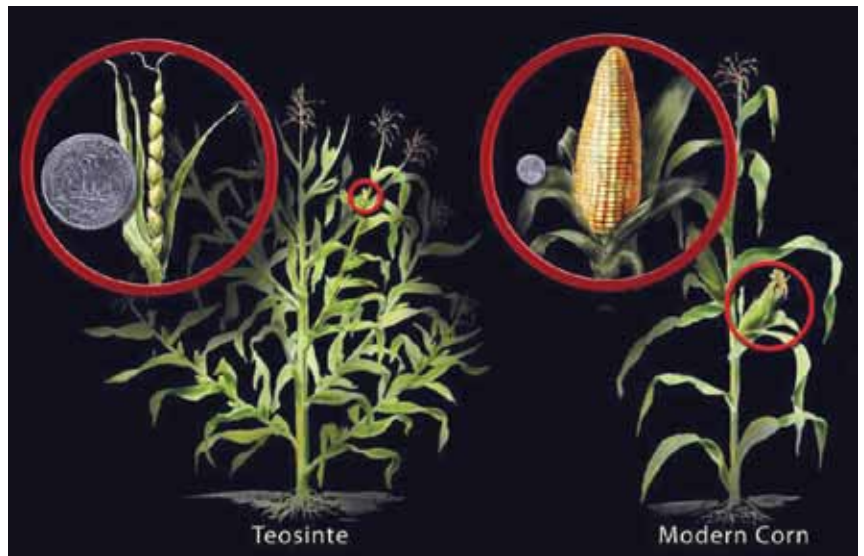
Human-Steered Evolution

During the late Paleolithic, mankind began to create a human-directed biosphere. Take the case of animals and plants. A recent discovery along the shore of the Sea of Galilee has proven that human beings were tending plants, including barley and oats, 23,000 years ago. The more important issue, however, is not the date of these developments, but the actual nature of what humans were creating.

Consider the actual mental concept behind the word “domestication.” Common-place usage defines the word to be synonymous with the idea that humans simply managed to “tame” wild animals, or discovered how to grow what were then pre-existing wild grains and vegetables. That idea is completely wrong—one hundred percent wrong. One example should suffice:

The grain we call “corn,” did not exist 50,000 years ago. Instead, a nearly inedible wild grain known as teosinte was its primitive ancestor. Through centuries of cross-breeding and experimentation, teosinte was transformed—by man—into the usable maize, which after further human intervention, was developed into modern corn. The corn which you enjoy at a Fourth of July picnic bears almost no resemblance to teosinte; it is entirely the product of centuries of human creative intervention. In reality, the human species has invented the food it eats. Humanity does not live off nature.

This same human intervention characterizes human relations with the lower beasts. Sheep and goats appear to have been the first animals (other than dogs)⁴ brought into the human-directed economy. All modern sheep are descended from the wild *mouflon*, and goats are descended from the *bezoar goat*. Both creatures inhabited the mountain slopes from central Turkey, eastward into northern Iraq and Iran. As with corn, modern sheep and goats bear little resemblance to their wild ancestors. Ten-thousand-year-old skeletons of these creatures already show significant physical transformations, indicating generations of human-steered breeding methods to develop a more



Nicolle Rager Fuller, National Science Foundation

Cultivated corn was domesticated from teosinte more than 6,000 years ago.

productive variation of the individual species.

What we are really dealing with is not “domestication,” but new manmade species which were then incorporated into human culture—a human-steered biosphere. This, together with the breakthroughs in astronomy, metallurgy and navigation, produced a new type of human society, more productive, using increasing amounts of energy per-capita, and capable of supporting denser population development.

The life-span increased. Nutrition improved. The development of agriculture was accompanied by new methods of flood control and irrigation, including the construction of canals and dikes. Mining for salt began, which allowed—for the first time—for the large-scale preservation of food. Fermentation was invented to prevent water-borne diseases. Ploughs and wagons were introduced. The use of brick in buildings and foundations, and the grinding of grain into flour became widespread. The engineering of boats improved, and sea-borne human colonization became common. Humanity had not only survived the extinction threats of the Paleolithic Era, but firmly established human civilization on every corner of the planet.

This is Vernadsky’s Noösphere asserting dominion over the biosphere, and acting to improve and upgrade that biosphere such that it will serve to further increase the potential for new human discoveries. All of this originated in the power of discovery which exists in each sovereign human individual.

To be continued.

4. Man’s companion, the dog, was domesticated at least 30,000 years ago, and there are even claims of dog fossils found alongside humans from 100,000 BC.