

# Is Confucianism Compatible with Science?

by Mike Billington

Aug. 7—This author has argued for the past three decades<sup>1</sup> that, while there are profound differences between the cultural histories of the Chinese and European civilizations, and between the Confucian view of man and nature as opposed to the Judeo-Christian view, there is nonetheless a fundamental commonality in the nature of the conflicts in ideas which characterize the internal developments and retardations of human progress in the cultures of these two sides of the Eurasian continent.

That fundamental coincidence lay in

verse, and to apply those principles, through the technology of machines, to perfect the natural world and improve the quality of life for an ever-expanding level of population.

In European culture, this division is expressed in the conflicting views of Plato versus Aristotle, with the great Platonists (e.g., Nicholas of Cusa, Kepler, Leibniz, Schiller, Riemann, and Einstein) being those who generated every great era of discovery and cultural achievement. In China, the ancient conflict between the discoveries of Confucius and Mencius as opposed to the Legalist and Daoist tendencies, is parallel to the Plato-Aristotle divide, while the great Confucian minds such as Shen Guo and Zhu Xi drove the scientific and artistic discoveries of the Confucian Renaissance in the Song Dynasty (960–1279). It is precisely the new Confucian Renaissance taking place today in China that has generated perhaps the greatest transformation and development of a nation in all of his-



Confucius (551-479 B.C.)



Mencius (372-289 B.C.)

the battle between those who view man as an animal, who must submit to nature as it presents itself to the species, as an animal must, as opposed to those who see man as defined by that which distinguishes human beings from the animal—the creative power of mind, unique to the human species, which gives Mankind the power to discover new physical principles of the uni-

verse, following the nightmare of the Legalist “Great Proletarian Cultural Revolution” from 1965 to 1975 in the last decade of Mao Zedong’s life.

## Lyndon LaRouche on Scientific Method

The appraisal of “values,” like the appraisal of beauty, is not a matter of opinion or taste. These concepts must be looked at from above—from what the genius of the 15th Century Renaissance, Nicholas of Cusa, described as “the Mind of God.” Lyndon LaRouche, in his [essay](#) “On the Subject of Metaphor” in the Fall 1992 issue of *Fidelio* magazine, addressed the

<sup>1</sup> See “Toward the Ecumenical Unity of East and West: The Renaissances of Confucian China and Christian Europe,” in *Fidelio*, Summer 1993, pp. 4-35; “The Taoist Perversion of Twentieth-Century Science,” in *Fidelio*, Fall 1994; and “The Deconstructionist Assault on China’s Cultural Optimism,” in *Fidelio*, Fall 1997, pp. 26-66.

question of the scientific method required for both the discovery of new physical principles of the universe and the composition of truly creative and beautiful works of art:

Lurking among the numerous accomplishments of modern science, there is the absurd, but popular delusion, that “physical science” is both “materialist” and “objective.” The worst, and most widespread forms of this delusion assume, first, that scientific method is essentially statistical, and that “mathematical science” is associated with measurement of forces acting along a straight-line pathway between two points.... The proof, that such definitions of “objective science” are absurd, is elementary; that proof is given as a central feature of this author’s introductory course in Leibniz’s science of Physical Economy.<sup>2</sup> We summarize the background considerations, point by point:

1. If man were a mere animal, that is, like a baboon, a creature innately disposed to what is called “primitive hunting and gathering” modes of social reproduction, at no time could the living human population of this planet have exceeded about ten million individuals

2. The increase in the human population, and the associated improvements in life-expectancy and standard of existence, are the cumulative benefit of what we may identify most simply and fairly as “scientific and technological progress.” The measure of this function of progress is an



Plato (428-348 B.C.) (left) and Aristotle (384-322 B.C.), in a detail of *The School of Athens* by Raphael.

increase in the potential population-density of the human species; this represents a higher *per-capita* standard of living and longevity, combined with a decrease in the total number of hectares required to sustain an average individual human life.

3. These improvements are expressed functionally through a succession of successful, radical changes in human productive behavior.... These changes in the behavior of successive levels of upward development of society are analogous in form or function, and effect, to successful, upward biological evolution of species among the lower forms of life.

4. Thus, the problem of both discovering and choosing a *Type* of sequential ordering of thought-objects, corresponding to a negentropically ordered succession of revolutionary scientific modifications in known scientific principles, is a *subjective matter*. It is a matter of discovering which subjective *Type* of creative-mental generation of thought-objects corresponds to a negentropic sequence of increase in man’s cultural potential for increasing potential population-density.

Thus, from this point of view, the subject of *science* is that higher-order of thought-object—a *transfinite*—which correlates formal scientific progress with rate of increase of this science-driven rate of growth of a culture’s potential population-density. In other words, man will fully increasing mankind’s power to perpetuate ever-more successfully his own species’ dominating existence within the universe.

This view is in contrast to the popularized materialist *mythos* of so-called “objective science,” of man as the contemplative mathematician-observer.

2. See Lyndon LaRouche, “In Defense of Common Sense,” Chapters II-IV; and “The Science of Christian Economy,” Chapters II-IV and VI, in *The Science of Christian Economy*, The Schiller Institute, Washington, D.C., 1991.

## Plato—Confucius and Mencius

The Allegory of Plato's Cave in *The Republic* captures Plato's concept of scientific method. To discover the laws governing the universe, it is essentially meaningless to rely on the senses, to "measure" things according to their physical attributes as apprehended through the senses. Rather, like the shadows on the wall observed by those in Plato's cave, cast by firelight from people and activities taking place behind them, our sense perceptions of things and events are but the shadows of complex phenomena connecting everything and every action to virtually everything else in the universe.



Plato's Cave, attributed to Michiel Coxie the Elder (1499-1592).

Understanding nature, and discovering previously unknown principles of nature, depend profoundly on the uniquely human capacity to recognize contradictions in mankind's current state of scientific knowledge, then formulate original hypotheses to explain higher-ordered principles than those previously known, which reconcile the apparent contradictions, based on examinations of the harmonies underlying the phenomena. Such discoveries, when confirmed through practice over time to advance the potential population density, transform the entire body of knowledge specific to that stage of human development.

Plato wrote, in his autobiographical "Seventh Letter," after consideration of the idea (not the form) of a circle:

For in learning these objects it is necessary to

learn at the same time both what is false and what is true of the whole of Existence, and that through the most diligent and prolonged investigation; ... and it is by means of the examination of each of these objects, comparing one with another—names and definitions, visions and sense perceptions—proving them by kindly proofs and employing questionings and answerings that are void of envy—it is by such means, and hardly so, that there bursts out the light of intelligence and reason (*nous*) regarding each object in the mind of him who uses every effort of which mankind is capable.

We will see later the parallel understanding of the genius of the 12th Century Song Dynasty Renaissance, Zhu Xi.

Contrast Plato's concept with that of Aristotle, and you will immediately see why Aristotle was so beloved by oligarchs of all ages. From Aristotle's *De Anima*:

Since, according to common agreement, there is nothing outside and separate in existence from sensible spatial magnitudes, the objects of thought are all in sensible forms, both abstract objects and all the states and affections of sensible things. Hence, no one can learn or understand anything in the absence of senses, and when the mind is actively aware of anything, it is necessarily aware of it along with an image,

for images are like sensuous contents.... While in respect of all the other senses we fall below many species of animals, in respect to touch we far excel all other species in exactness of discrimination. That is why man is the most intelligent of all animals.

Man is intelligent due to the sense of touch. How can such idiocy be tolerated for all these centuries? Probably because Aristotle also asserts in his *Politics*: "For that some should rule and others be ruled, is a thing not only necessary, but expedient. From the hour of their birth, some are marked out for subjugation, others for rule." Totally unscientific, but most pleasing to oligarchs.

Plato lived from 428 to 347 B.C. Confucius lived a

century earlier, from 551 to 479 B.C., while his greatest follower, Mencius, lived at about the same time as Plato, from 372 to 289 B.C. I find the most perfect expression of Confucius' understanding of Mind and of the capacity of Man to comprehend the laws of the universe in an even more ancient poem from the *Book of Poetry*, quoted by Mencius, about which Confucius said: "The author of this poem knew indeed the principle":

Heaven, in creating Mankind,  
Created all things according to Law,  
Such that people can grasp these laws,  
And will love virtue.

—*Mencius*, Book 6, Part 1, Chapter 8

Mankind, the poem asserts, is uniquely capable of mastering the laws of the universe, adding that discovering these laws comes from and inspires a spiritual quality, that of loving virtue. Virtue here is not just doing good or being kind, it is the advancement of knowledge of the principles that govern our universe, and applying them to the benefit of mankind.

Mencius addressed the difference between sense perception and true knowledge directly. Asked why, although all humans are human, some become great while others are petty (little), Mencius responded:

Those who follow their greater part become great. Those who follow their petty part become petty. The senses of hearing and seeing do not think, they are misled by things. Things interact with things and lead them astray. It is to the mind (heart) that is given the office of thinking. It is through thinking that man achieves virtue (truthfulness). If he does not think, he will fail to do so. This (the mind and the senses) are what Heaven has given us. If one stands fast on what is greater (the mind), then what is lesser (the senses) will not be able to take it from him.

—*Mencius* Book 6, Part 1, Chapter 15

A scholar of the 18th Century, Feng-shen Yin-te, is famous for a poem called "The Microscope," from 1798, which reflects this Mencian concept:

With a microscope you can see the surface of things.  
It magnifies them but does not show reality.  
It makes things seem higher and wider.  
But do not imagine that you are seeing the things themselves.

But China also had its own "Aristotles." Chinese history continues to this day to be characterized by debates between Confucians and followers of Legalists

and/or Daoists, the two major schools of thought in Ancient China opposed to the Confucians. Xun Zi (298–238 B.C.), whose ideas gave rise to the Legalists, countered Mencius, rejecting his view that man is born essentially "good" due to the creative powers of the mind, arguing instead that man is born with nothing but "greed, envy, hate, and sensual passion" (sounding very much like Adam Smith!) such that "the nature of man is evil."

Like Aristotle, who argued that man is born without any inherent mental qualities, so, also, Xun Zi relegated the mind to passively recording sense perceptions, while "knowledge" was deemed merely the compilation

and organization of sensory data. Knowledge of the infinite, of Heaven, was impossible as well as useless, argued Xun Zi: "If man longs for what is in Heaven, then he is deluded. Only the sage does not seek to understand Heaven.... The really skilled man has things he does not do; the really wise man has things he does not ponder."

Although Xun Zi encouraged a pragmatic approach to using existing technology, he renounced real science, which derives from the investigation of underlying, unseen causes. In fact, he denies such unseen causes even exist: "You vainly seek into the causes of things. Why not appropriate and enjoy what they produce? Therefore I say—to neglect man and speculate



Xun Zi (298-238 B.C.).



*The Daoists Lao Zi (left) and Zhuang Zi (Chuang Tze), rejected the idea of science itself.*

about nature is to misunderstand the facts of the universe.”

As to the Daoists, Lao Zi and Zhuang Zi (Chuang Tze), much beloved by the back-to-nature cults in the West, they did not so much reject the scientific method of Plato and Mencius, of hypothesis and cognition over sense perception, but rejected the idea of science itself. Lao Zi’s infamous poem, beloved by British intelligence profiler of China and its history, Joseph Needham, reads:

Banish wisdom, discard knowledge, and the people  
will be benefited a hundredfold.  
Banish benevolence, discard righteousness, and  
the people will be dutiful and compassionate.  
Banish skill, discard profit, and thieves and  
robbers will disappear.  
Banish learning, and there will be no more  
grieving.

Zhuang Zi (369–286 B.C.) expressed his hatred of science and technology in his description of an imagined meeting between Confucius and a peasant who is scooping water with a cup from a trench to irrigate his field. Confucius says: “If you had a machine here, in a day you could irrigate one hundred times your present area. The labor required is trifling as compared with the

work done. Would you not like one?” He describes a well-sweep, whose foot-driven pulley with wooden scoops lifts water from an irrigation ditch. The Taoist peasant denounces Confucius, insisting that one who is cunning with instruments must also have a scheming heart, cannot be pure and incorrupt, and is thus not a fit vehicle for the Dao. “It is not that I do not know of such things,” he says, “I should be ashamed to use them.”

### **The Scientific Method of the Renaissance—China and Europe**

The greatest eras of scientific development and

population growth in China and in Europe fell a few centuries apart—the 11th and 12th centuries in China, during the Song Dynasty, and the 15th and 16th centuries in Europe. In both cases, a major spur to the many discoveries in science and art was the revival of classical culture—in Europe, the revival (or rediscovery) of Platonic Greek thought, and in China the reconstitution of Confucianism, sometimes called Neoconfucianism. I will examine here the underlying scientific method which drove these bursts in human knowledge and nation-building in China and in Europe.

Shen Guo (or Shen Gua, 1031–1095) was a scientific, military, and political genius who was associated with the great reformer Wang Anshi (Wang An-shih, 1021–1086). Wang had been appointed to the Hanlin Academy and brought in to the capital Kaifeng in 1068 (about the time of the Norman conquest of England), at a time of near bankruptcy of the federal government and severe poverty among the peasantry.

The peasants were subject to the usury of private landowners and merchants, often paying 100% interest on loans between planting season and the harvest. From various positions in the government, including first privy councilor to the Emperor, Wang Anshi implemented policies mandating government intervention into the economy, many drawn from Mencius. Mencius had famously said:

There are people dying from famine on the roads, and you do not issue the stores from your granaries. When people die, you say, “It is not owing to me; it is owing to the year.” In what does this differ from stabbing a man and killing him, and then saying, “It was not I; it was the weapon?”

Wang Anshi’s “New Policies” were extensive. He reestablished the ancient “Ever-Normal Granaries” (government storage of grain in order to keep prices stable and to counter periods of crop failure), and launched a government loan system to provide 20% credit to farmers. He set up coordinated trading centers in every part of the country to protect against regional shortages. He oversaw the government construction of dykes and irrigation systems, while taxes were assessed depending on the fertility of the soil and access to water. Land reclamation and measures to control rivers were implemented. He rebuilt the military, and reformed the examination system to emphasize an understanding of the principles of the Confucian classics rather than rote memorization, adding topics related to contemporary law, science and medicine.

Shen Guo was the key scientist designing and implementing many of Wang Anshi’s reforms. The great China scholar Nathan Sivin wrote, “I evaluate Shen’s life as a case study in the reconcilability of Confucianism and science, which the conventional wisdom among Sinologues for over a generation has tended to place in opposition.” Shen’s accomplishments, both before joining the central government and while working with Wang, were legion. As reported by Sivin (in the *Complete Dictionary of Scientific Biography*, 1977), they included:

- He reclaimed several hundred thousand acres of swampland for agriculture, based on his own cartographic survey, deploying fourteen thousand men in the



Wang Anshi (1021-1086), a great reformer.



CC photo/Hans A. Rosbach  
A bust of Shen Guo (1031-1095) at the Beijing Ancient Observatory.

project. He calculated that the expanded grain output and protection from floods returned a tenfold profit on the cost of the project within a year.

- His study of astronomy led to the proof of the sphericity of the sun and the moon based on the phases of the moon, and documentation and explanation of the retrogradation of the lunar nodes. He became Director of the Astronomical Bureau in 1072, where he conducted a major reform of the calendar based solely on the sun, eliminating existing references to the moon. He wrote: “As for the waxing and waning of the moon.

Although some phenomena such as pregnancy and the tides are tied to them, they have nothing to do with seasons or changes of climate; let them simply be noted in the almanac.”

- He established a daily monitoring of the heavens using new measuring instruments over a five-year period, although the project was disrupted by political intrigue. He designed a new gnomon to fix the solstices; a new armillary sphere, and a new clepsydra to measure the times of observation. He determined that the polar star was variable, and that the then-current pole star rotated around the celestial pole by a 3-degree arc. (He did not explore the precession.)

- Shen is thought to be the first to use a compass, which he used in mapmaking, completing an atlas of China in 1087 (which has not survived) on a 1:900,000 scale. His work on the celestial pole also allowed him to determine that the compass did not point to true north or south.

- Shen discovered climate variability by observing petrified bamboo in a region too far north for bamboo in his own time. He wrote: “Can it be that in antiquity the land was lower and the climate moister, suitable for bamboo?”

- Shen discovered shells “running horizontally through a cliff like a belt,” concluding that “This was once a seashore, although the sea is now hundreds of

miles east. What we call our continent is an inundation of silt.... This mud year by year flows eastward, forming continental land.”

- Shen studied the relationship of numerical relations and the musical scales. He wrote two chapters on mathematical harmonics and stringed instruments, the resonance of octaves and strings on different instruments, as well as composition and performance.

Most important for our purposes here is Shen Guo’s direct reflection (in his *Dream Pool Essays*, composed during his retirement) on his own scientific method. Sivin emphasizes this, in part as a refutation of the British scientist and China scholar Joseph Needham (with whom Sivin collaborated for several years), who argued that Confucianism was incompatible with science. (Needham went so far as to argue that Daoist alchemy was the source of the scientific discoveries of ancient China. For this author’s refutation of Needham, see his 1995 [obituary](#) in the April 21, 1995 issue of *EIR*.) Despite his certification as a biochemist, Needham did not himself understand what science is.

It is useful to quote from Nathan Sivin’s insight into this issue with regard to Shen Guo, in which he specifically differentiates Shen’s method from that of the positivists, insisting that true science takes place in the mental process of examining the causality taking place behind the phenomena:

[The Chinese] sense of cumulative enterprise in mathematical astronomy did not imply the positivistic conviction that eventually the whole pattern could be mastered. Instead from the earliest discussions there was a prevalent attitude that scientific explanation—whether in terms of number or of abstract qualitative concepts, such as yin-yang—merely expressed, for human purposes, limited aspects of a pattern of constant relations too subtle to be understood directly. No one expressed this attitude more clearly than Shen. In instance after instance he emphasized the inability of secular knowledge to encompass phenomena: the reason for magnetic declination, why lightning striking a house can melt metal objects without burning the wooden structure, the way in which every constant and every mean value obscure continuous variation of every parameter. In his official proposals on the



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*A replica of a Ming Dynasty armillary sphere in the courtyard of the Ancient Observatory in Beijing.*

armillary sphere, he argued that measure is an artifact, that it allows particular phenomena to be “caught” (*po*) in observational instruments, where they are no longer part of the continuum of nature. That Shen saw as the condition of their comprehensibility.

Shen Guo also wrote commentaries on the works of Confucius and Mencius. He referred directly to the passage by Mencius quoted above, regarding those who rely solely on sensory perception rather than the creative powers of mind as “small men.” He reflected on passages in the *Book of Changes* to the effect that (in Sivin’s paraphrase): “understanding is a matter of the clarity and divinity within one’s mind,” and that this divinity, for Shen, is “the moral center of the individual.”

Shen was particularly fascinated by strange occurrences which could not be explained by the current state of knowledge, such as tornados, and the fact that lightning striking a house melted the metals without burning the wood. When he could not discover the underlying principles, he explicitly posed that there had to be intelligible causes, but that it would be up to future generations to discover them.

Shen relied on his belief in the coherence, but non-linearity, of the universe, including the mind itself. He formulated scientific hypothesis through metaphor, like Kepler, whose fundamental discoveries about the nature of the solar system expressed in his laws of planetary motion were predicated on a belief that the har-

monic relationships in music must, of necessity, exist in the relationships of the heavenly spheres as well. So also, Shen Guo, who was the first Chinese to intently study the motions of the planets, hypothesized an explanation for the apparent retrograde planetary motion similar to the Ptolemaic epicycles, but rather than Ptolemy's circular epicycles, Shen suggested that the planets follow the course of a willow leaf.

We look forward to future researches that will shed further light on the thinking of this great genius of almost a millennium ago, from another culture than ours.

It is useful here to note Kepler's insight into the superiority of a creative discovery in the mind, as opposed to simply learning something through observation. Galileo published his *Sidereal Messenger* in 1610, describing the results of his observation of the heavens after looking through a telescope for the first time. He was the first to observe the moons of Jupiter and the phases of Venus, confirming that not all bodies circle the Earth, and that Venus circled the Sun. Kepler, upon reading the report, responded with a letter, *Conversation with Galileo's Sidereal Messenger*, in which he expressed his delight in hearing of the new observations, but added:

What Galileo recently saw with his own eyes ... had many years before not only [been] proposed as a surmise, but thoroughly established by reason.... Surely those thinkers who intellectually grasp the causes of phenomena, before they are revealed to the senses, resemble the Creator more closely than the others, who speculate about the causes after the phenomena have been seen.

It is of note that the Jesuits who were preparing to travel to China in 1618 attempted, over a period of years, to get help from Galileo in preparing documents to take with them to China, but to no avail. When the request was extended to Kepler, he responded with a wealth of material, and maintained correspondence with the Jesuits in China throughout his life.

## Zhu Xi, Cusa and Leibniz

The Song Dynasty Renaissance of the 11th and 12th centuries culminated in the work of Zhu Xi (Chu Hsi, 1130–1200), whose dramatic advancements in Confucian ideas served as the bedrock of the education system throughout the following Imperial dynasties. Zhu Xi had studied the works of Shen Guo, and it could be said that his formulation of a new philosophic framework of the Confucian canon was predicated on the scientific method developed by Shen Guo, which itself drew on the concepts of Confucius and Mencius regarding man and nature.

This author has elaborated elsewhere the parallels between Zhu Xi and the creative genius of the European Renaissance, Nicholas of Cusa (1401–1464). A leading follower of Cusa, the 17th–18th century polymath Gottfried Wilhelm Leibniz, upon studying the works of Confucius and Zhu Xi, as translated by the Jesuit missionaries then in China, concluded that the philosophic view of man and nature underlying the scientific method of these Confucian scholars and scientists was both consistent with the Christian view developed during the European Renaissance, and, in particular, that Zhu Xi's notion of "Principle" (Li) was coherent with his own notion of the "Monad."<sup>3</sup>

Both Zhu Xi and Leibniz coined terms to represent the Platonic and Mencian notion of an unseen reality behind the appearances, connecting every object and every action to a dynamic coherent universe. Zhu Xi gave a new meaning to the term Li (理), meaning "Principle," signifying a universal, eternal Principle (Li), sometimes called the Supreme Ultimate, which contains all things in the created universe, indivisible, beyond time and place, and prior to all created things. But he emphasizes that Li is also present in all created things, governing the order of things and events. In order to understand the nature of anything, to grasp the



Johannes Kepler (1571-1630) discovered the laws of planetary motion.

3. See "The Deconstructionist Assault on China's Cultural Optimism," in *Fidelio*, Fall 1997, pp. 26-66; and "A 'Grand Design': Kepler and Renaissance in China," in *21st Century Science & Technology*, Summer 1996, pp. 51-64.



Portrait by Andreas Scheits, 1703



*Gottfried Wilhelm Leibniz (1646-1716), conveyed his study of Confucius and Zhu Xi to Europeans in his journal, Novissima Sinica, first published in 1697.*

principle of it, one must investigate the relation between the individual li and the universal Li.

Leibniz wrote “The Monadology” in 1714. This was 17 years after his publication of *Novissima Sinica*, (*News from China*) in 1697, in which he analyzed the writings of Confucius and Zhu Xi for his European audience. His use of the term Monad was certainly informed by his understanding of Zhu Xi’s notion of Principle (Li), about which Leibniz had written:

The first principle of the Chinese is called Li, that is, Reason, or the foundation of all nature, the most universal reason and substance; there is nothing greater nor better than Li.... [It] is not at all capable of divisibility as regards its being and is the principal basis of all the essences which are and which can exist in the world. But it is also the aggregation of the most perfect multiplicity because the Being of this principle contains the essences of things as they are in their germinal state. We say as much when we teach that the ideas, the primitive grounds, the prototypes of all essences are all in God.

Leibniz defines the Monad as “simple substance..., by simple we mean without parts,” but which is continuously changing. No two Monads are alike, as no

two things in the universe can be exactly alike. All composites, he asserts, are made up of such Monads. He essentially defines the soul as such a simple substance, and states that animals as well as humans have a soul, but of a different nature, since animals have perception but no creativity.

That Leibniz was reflecting on Zhu Xi’s Principle (Li) (among other ideas of his own and others) is clear from the following from the “The Monadology”:

God alone is the ultimate unity, or the original simple substance [monad], of which all created or derivative monads are the products, and arise, so to speak, through the continual lightning-like sparks of the divinity from moment to moment, limited by the receptivity of the creature to whom limitation is an essential.

### Philosophy and Scientific Method

Those who cling to Aristotelian thinking often argue that the philosophic outlook of a person is distinct from his or her scientific outlook and research. I would argue that this dishonest assertion is due to the inability to explain why those with a philosophic view of the world consistent with that I have described as Platonic and Confucian have made essentially every truthful scientific discovery throughout history—if you understand

“discovery” to mean a discovery of a universal principle of nature, rather than merely an observation of something never seen before, as with Galileo’s telescope observation.

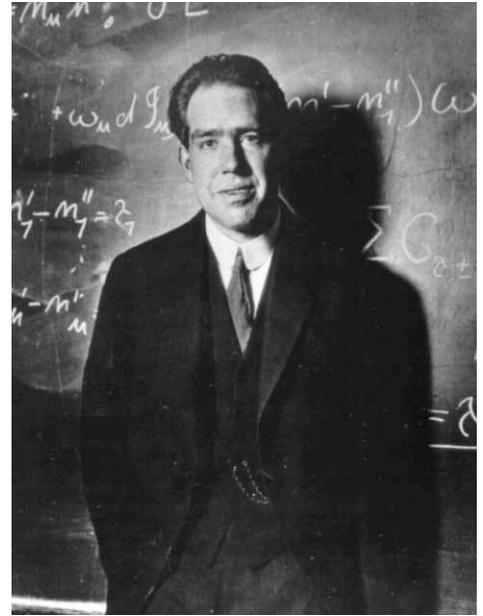
Kepler was confronted with this problem when virtually every scientific school of his day was willing to accept the rather absurd idea of the Ptolemaic epicycle to explain the retrogression of the planetary paths, using the argument that the epicycle theory served well enough for forecasting (although this was also false). Kepler, using the mind rather than mere observation, and based on the Platonic notion of the lawfulness and coherence of all phenomena in the universe, hypothesized the elliptical paths around the sun, and the cause for the placement of the orbits in the solar system based on the harmonies within the musical scale, and then carried out the necessary crucial experiments to confirm the hypothesis.

Similarly, Albert Einstein confronted the Copenhagen School of Niels Bohr and Werner Heisenberg in the effort to explain the apparent contradictions—the wave-particle paradox—in the propagation of light. At the famous 1927 Solvay Conference of the world’s leading physicists, Bohr argued that there is no answer to the problem, because of Heisenberg’s so-called “Uncertainty Principle”—that at the atomic level the phenomena can not be observed, even with instrumentation, since the particles involved in the act of observation impact the phenomena themselves. Therefore, Bohr argued, the best we can do is a statistical analysis of such phenomena and calculate the probabilities of possible outcomes—i.e., if we can’t see it, we can’t know it. Bohr wrote in his 1932 *Light and Life*:

This very situation forces us to renounce a complete causal account of the light phenomena and to be content with probability laws based on the fact that the electromagnetic description of energy transfer [i.e., classical mechanics] remains valid in a statistical sense.



Albert Einstein



Niels Bohr

Einstein, a Platonist, responded that “God doesn’t play dice,” and spent much of his life trying to find a unified field theory that would explain the nature of light in a unified manner. Like Shen Guo, he believed that if he failed to discover the higher-ordered principle, that simply meant it would require future generations to make the discovery, since a cause had to exist and to be intelligible.

### Wang Yangming

A brief note on the “Aristotelian” counter to Zhu Xi’s concept of Principle (Li) will further illuminate this issue. Zhu Xi had boldly applied his discovery of the concept of Principle by positing that a final sentence had been “accidentally” left out of the famous “Great Learning” (大学) from *The Book of Rites*. The passage reads:

The ancients, wishing that all men under Heaven keep their inborn luminous virtue unobscured, first had to govern the nation well; wishing to govern the nation well, they first established harmony in their household; wishing to establish harmony in their households, they first cultivated themselves; wishing to cultivate themselves, they first set their minds in the right; wishing to set their minds in the right, they first developed sincerity of thought; wishing to have sincerity of thought, they first extended their knowledge to the utmost.



Zhu Xi (1130-1200)



Wang Yangming (1472-1529)

To this, Zhu Xi added his “rediscovered” concluding sentence:

The extension of knowledge lies in fully apprehending the principle of things.

In other words, sense perception alone is inadequate in order to extend knowledge, and thus would lead to insincere thoughts, minds set in the wrong direction, a lack of self-cultivation, disharmony in the family, poorly governed nations, and obscured inborn luminous virtue. True knowledge required understanding the causes and the Principles (Li) underlying phenomena. The Supreme Ultimate doesn't play dice.

To this, a later official, Wang Yangming (1472–1529) in the Ming Dynasty, who is unfortunately lumped together with Zhu Xi under the category of “Neo-Confucianism” (which is as foolish as linking Plato and Aristotle as co-thinkers in “Greek thought”), set out to prove Zhu Xi wrong.

Arguing in like manner to the anarchists of today that there is no good or evil, and that knowledge only comes from action, Wang Yangming rejected Zhu Xi's addition to *The Great Learning*, insisting that Zhu Xi's Principle (Li) embracing all things, did not exist, that coherence of the universe outside the individual mind did not exist. To prove this, he and a friend determined to fully examine the bamboo in his father's garden, to discover if the bamboo's “principle” could be ascertained. After several days of such navel-gazing, both

fell sick and retired, concluding that Principle (Li) did not exist.

The conflict between Wang Yangming and Zhu Xi remains a serious and intense issue within China today, as does the Plato-Aristotle issue in the West. The poisonous British Imperial philosophy, embracing the colonial “geopolitics” of zero-sum, Darwinian survival of the fittest, and the reductionist mechanism of the likes of Bertrand Russell, must be confronted and destroyed, to be replaced with a new Renaissance for humanity as a whole.

The potential for such a new Renaissance is within our grasp, despite the apparently insurmountable “perfect storm” of a deadly pandemic, mass starvation, an economic and financial tsunami, and the mounting threat of nuclear confrontation and world war. And yet three space-ships are now on their way to Mars, a medical revolution is in the works in the drive to find a vaccine for COVID-19, and there is a discussion taking place between world leaders to hold a Summit of the heads of state of the permanent members of the UN Security Council—Donald Trump, Vladimir Putin, Xi Jinping, Emmanuel Macron and Boris Johnson.

Such a meeting is absolutely necessary, both to avert a war, and to collaborate in combating the virus, bringing economic development at long last to the former colonized nations of the world, and to establish a new international financial system which can foster peace through development.

The deteriorating relationship between the United States and China is orchestrated by the forces of Empire who will go to any extreme to prevent such a new Renaissance. The anti-scientific, Aristotelian, Legalist way of thinking has created the insanity of the Green New Deal, the anti-human intention to reduce the human population, to sustain the bankrupt financial system through austerity and genocide. A scientific method based on the recognition of the divinity of man through the gift of creative reason can and must be embraced for this moment of crisis to result not in global destruction, but a new Renaissance based on the common aims of Mankind.