

A Christian View of Science
MVOPC Adult Sunday School Class, 2022
By Benjamin Richards

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Lesson 2: Ancient Science

Human history contains at least half a dozen great civilizations, all of which possessed all of the *external* factors necessary for the rise of science: long periods of peace, economic prosperity, individual geniuses, etc. But in all of these, even the most promising preliminary steps down the road to science ended in disappointment.

I. Hinduism

According to the Hindu Puranas (religious writings of popular mythology and ethics), around 2000 BC the physical universe entered the last phase of a 4.3 billion-year long cosmological process that would keep repeating itself forever.

Periodic recurrences of the sun, moon, seasons, and planetary cycles suggest that all things are cyclical.

From the Vishnu Purana:

1 year	→	1 divine day
360 years	→	1 divine year
4,320,000 years	→	12,000 divine years (four yugas, one mahayuga)
4.32 billion years	→	1,000 mahayugas (one kalpa)
8.64 billion years	→	2 kalpas, one day in the life of Brahma
3.11 trillion years	→	360 days of Brahma (one year of Brahma)
311 trillion years	→	100 years of Brahma (one life of Brahma)

Brahma dies and rises forever. At the end of each day of Brahma, the universe is dissolved, and Brahma sleeps on his bed for one night. In the morning he creates again.

In Hindu (and all ancient) cultures, a preoccupation with eternal, cyclical conceptions of the universe provided a natural framework for escaping time and history. There was a deep-seated aversion to what is temporal, and a desire to transcend the chaos and irreversibility of individual existence. The Hindu religious rituals were repetitive symbolic actions by which they hoped to abolish time on the subjective level.

All the Puranas unanimously affirm that the present period is near the beginning of the final and worst yuga. Thus they believed that they were at the beginning of a 430,000 year long decay, after which the world would be destroyed. The depressing prospect promotes pessimism and despair: everything bad that happens is only going to get much worse. This is hardly the context to generate an optimistic or confident view of the future.

In the *Brahmavaivarta Purana*, the supreme god Vishnu visits the god Indra (his great-great-grandson), disguised as a 10 year old boy, to teach him a lesson about pride and purpose:

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Lesson 2: Ancient Science

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Human history contains at least half a dozen great civilizations, all of which possessed all of the *external* factors necessary for the rise of science: long periods of peace, economic prosperity, individual geniuses, etc. But in all of these, even the most promising preliminary steps down the road to science ended in disappointment.

I. Hinduism

According to the Hindu Puranas (religious writings of popular mythology and ethics), around 2000 BC the physical universe entered the last phase of a 4.3 billion-year long cosmological process that would keep repeating itself forever.

Periodic recurrences of the sun, moon, seasons, and planetary cycles suggest that all things are cyclical.

From the Vishnu Purana:

1 year	→	1 divine day
360 years	→	1 divine year
4,320,000 years	→	12,000 divine years (four yugas, one mahayuga)
4.32 billion years	→	1,000 mahayugas (one kalpa)
8.64 billion years	→	2 kalpas, one day in the life of Brahma
3.11 trillion years	→	360 days of Brahma (one year of Brahma)
311 trillion years	→	100 years of Brahma (one life of Brahma)

Brahma dies and rises forever. At the end of each day of Brahma, the universe is dissolved, and Brahma sleeps on his bed for one night. In the morning he creates again.

In Hindu (and all ancient) cultures, a preoccupation with eternal, cyclical conceptions of the universe provided a natural framework for escaping time and history. There was a deep-seated aversion to what is temporal, and a desire to transcend the chaos and irreversibility of individual existence. The Hindu religious rituals were repetitive symbolic actions by which they hoped to abolish time on the subjective level.

All the Puranas unanimously affirm that the present period is near the beginning of the final and worst yuga. Thus they believed that they were at the beginning of a 430,000 year long decay, after which the world would be destroyed. The depressing prospect promotes pessimism and despair: everything bad that happens is only going to get much worse. This is hardly the context to generate an optimistic or confident view of the future.

In the *Brahmavaivarta Purana*, the supreme god Vishnu visits the god Indra (his great-great-grandson), disguised as a 10 year old boy, to teach him a lesson about pride and purpose:

A Christian View of Science
MVOPC Adult Sunday School Class, 2022
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“I have known the dreadful dissolution of the universe. I have seen all perish, again and again, at the end of every cycle. At that terrible time, every single atom dissolves into the primal, pure water of eternity, whence originally all arose. Everything then goes back into the fathomless, wild infinity of the ocean, which is covered with utter darkness and is empty of every sign of animate being. Ah, who will count the universes that have passed away, or the creations that have risen afresh, again and again, from the formless abyss of the vast waters? Who will number the passing ages of the world, as they follow each other endlessly? And who will search through the wide infinities of space to count the universes side by side, each containing its Brahma, its Vishnu, and its Shiva? Who will count the Indras in them all – those Indras, side by side, who reign all at once in all the innumerable worlds?”

II. China

“China has no science, because according to her own standard of value she does not need any . . . China has not discovered the scientific method, because Chinese thought started from mind, and from one’s own mind.” – Yu-Lan Fung (distinguished Chinese scholar) in 1922

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But the Chinese rockets did not lead to a study of trajectories. Their compasses did not lead to circumnavigation of the globe. Their printing presses did not lead to a Reformation or Renaissance.

In Chinese (Confucianism & Taoism), the cyclic concept of reality stymies the idea of causality. The world is in endless cycles each lasting 23,639,040 years. In addition, they emphasize intuition as the central path to understanding, and they teach that nature is alive.

It was always difficult for them to assimilate new ideas because of their reverence/worship of the past.

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“I have known the dreadful dissolution of the universe. I have seen all perish, again and again, at the end of every cycle. At that terrible time, every single atom dissolves into the primal, pure water of eternity, whence originally all arose. Everything then goes back into the fathomless, wild infinity of the ocean, which is covered with utter darkness and is empty of every sign of animate being. Ah, who will count the universes that have passed away, or the creations that have risen afresh, again and again, from the formless abyss of the vast waters? Who will number the passing ages of the world, as they follow each other endlessly? And who will search through the wide infinities of space to count the universes side by side, each containing its Brahma, its Vishnu, and its Shiva? Who will count the Indras in them all – those Indras, side by side, who reign all at once in all the innumerable worlds?”

II. China

“China has no science, because according to her own standard of value she does not need any . . . China has not discovered the scientific method, because Chinese thought started from mind, and from one’s own mind.” – Yu-Lan Fung (distinguished Chinese scholar) in 1922

The Chinese attained tremendous technological achievements: the discovered magnets; gunpowder; developed mechanical, water-driven clocks; paper; and moveable clay printing 600 years before Gutenberg. By ~1000 A.D. they had algebra several hundred years ahead of Europeans.

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languages the divine code of laws which he had decreed aforetime.” He summed up the fundamental ideas of Chinese science by saying that an “uncreated universal organism, whose every part, by a compulsion internal to itself and arising out of its own nature, willingly performed its functions in the cyclical recurrence of the whole.”

III. Greece

Greece, of course, made tremendous achievements in their speculations on nature. No ancient culture achieved more in taking first steps on the road to science. Euclid’s *Elements* became the standard textbook for geometry for over 2000 years. Erastosthenes calculated the circumference of the earth and its axial tilt to remarkable accuracy. Hipparchus discovered the precession of the equinoxes. Ptolemy’s geocentric astronomical models remained standard until the time of Galileo. Galen was possibly the most influential physician who ever lived, and his works remained influential for over 1300 years.

But despite these achievements, Greek science was unable to progress to a self-sustaining enterprise.

They were unable to progress beyond geometry: their astronomy remained descriptive rather than explanatory, and Greek advances in terrestrial physics remained limited to statics, which is much more amenable to geometry, rather than dynamics, for which insights beyond geometrical are required.

Socrates rejected the Ionians’ and Atomists’ reductionistic cosmology of inert matter and chance, because it left no room for right and wrong, freedom, etc. Socrates taught that the proper scope of physics is not what is the size, shape, and location of the earth, but rather what would be best.

Plato: “The deity, intending to make this world like the fairest and most perfect of intelligible beings, framed one visible animal comprehending within itself all other animals of a kindred nature.”

Plato also taught that there was an innate principle of evil in the material world, and that eventually chaos and disorder necessarily overwhelm the order initially established by the gods.

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Islamic culture preserved the Greek corpus from antiquity and transmitted it to Europe in the Middle Ages. Early Islam was serious about scholarship, with impressive achievements in mathematics and optics. But Islamic culture made few advances on Greek science, and even the early pioneering work in optics failed to inspire a sustained and vigorous interest in the subject.

With few counter-examples, Arab astronomy and astrology were always firmly linked. The Koran failed to inspire even a single extensive and rational treatise against astrology.

Their cosmology also featured the eternal cycles, with the Great Year, world year, and great cycle. The astrology and eternal cycles contributed to a strong sense of fatalism and helplessness. Why try to change the world if your destiny is decreed by the stars?

Most importantly, Islamic thought never attempted to tie the will of Allah to his nature (rationality). Allah's will was above every norm. As a result, one configuration of time and space units cannot determine what is to follow. There is no law, only the arbitrary and unfathomable will of Allah. Thus, if I drop a rock on my toe, the pain is put there by Allah, not because of the properties of rocks and toes. The laws of nature are subject to change.

One of the most influential Muslim scholars, Averroes, whose works run to 100 books and treatises, taught that "Aristotle invented physics and gave it a form to which nothing more could be added. He viewed it as 'miraculous' and well-nigh divine that after fifteen hundred years no error of any consequence could be found in Aristotle's physics. He attributed a sort of infallibility to Aristotle as he claimed that no anatomical observation of Galen could contradict Aristotle's conclusions because these 'are universal demonstrations, taken from propositions that are natural, primordial, universal, and essential. Now it is the property of such demonstrations that they cannot be contradicted by any sense perceptions.'" (Jaki, *Science and Creation*, 208).

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