Geocentric Cosmos

In 150 A.D., Claudius Ptolemy applied a geometric model to the heavens. Spheres and perfect circles formed the basis of his hypothesis of the planetary movements in a geocentric cosmology.

In the center of the cosmos is the Earth, in a state of rest, inclusive of both man and god. Out from the divine center, the Moon rotates in a perfect circle around the Earth. Next out is Mercury, which rotates in an epicycle, a circular rotation whose center forms the circumference that in turn circles the earth. Venus is next out, also with its own circular orbit that circles the earth. Then comes the Sun, with a simple rotation around the earth. Mars, Jupiter and Saturn follow. The finite universe is bounded by the Stars, fixed in stationary positions. As with the center of the cosmos, spirit emanates throughout the entire universe, within all the celestial bodies. The driving force of each planet's rotation through the cosmos is, in fact, its soul.

Based on the principles of geometry, the Ptolemaic theory is a complex model. But it works, more or less. The appearances are accounted for, and the essences are given meaning. All of the cosmos, god and man, has its place.

The Ptolemaic Cosmos

Ptolemy wrote down his hypothesis in a thirteen-volume book, *Almagest* (Syntaxis mathematica). Translated into Arabic in the 9th century, it was a standard reference work on issues of astronomy until the 16th century, for both European and Islamic astronomers.

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From the hill overlooking the village, you look out into the heavens. Your view is crisp and clear. In the dark of the night, the Planets shine bright...and You shine bright, perfect souls in perfect orbits in perfect harmony.

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In 1413, the first Spanish ships began raiding the coast of West Africa, taking cargo and capturing slaves from Arab traders. This was now possible because of the knowledge a new technology brought. The compass and sextant made distant navigation possible. The world was being very closely observed, and some people greatly benefitted from this new knowledge.

Heliocentric Universe

The Roman Catholic Pope asked a distinguished churchman and intellectual from Poland to reform the rather complex calendar. His name was Nicolaus Copernicus (1473-1543). Copernicus investigated an idea, first proposed in the 3rd century B.C., which placed the sun right in the middle of the universe, with the earth rotating around it. This heliocentric system was based on a much more mathematically rigorous explanation. Man was no longer the center of the cosmos. At the age of seventy, Copernicus reluctantly published his research, *The Revolution of the Heavenly Orbs*, and only printed at his death, in 1543.

The Church

In 1517, the Protestant Reformation began. The authority of the Roman Catholic Church was being seriously challenged. After much struggle, Rome would no longer be the primary interpreter and disseminator of theological knowledge. The Reformation affirmed everyone's right to interpret for him or herself. In time, authority would be with the individual, not just the clergy.