

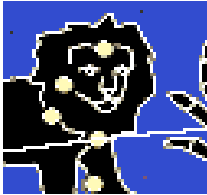


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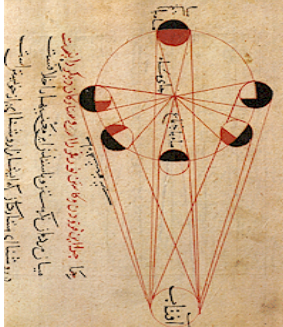

THE HEAVENS IN SCIENCE AND RELIGION

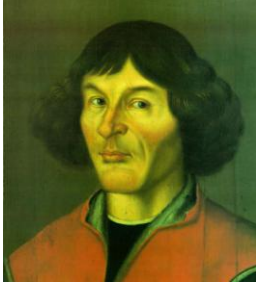


Mon, Wed, Fri 10:30-11:20



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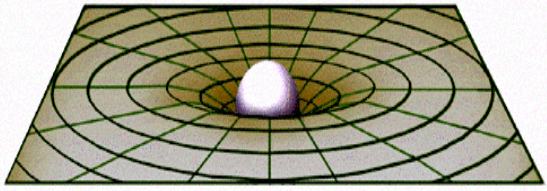
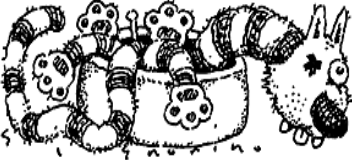


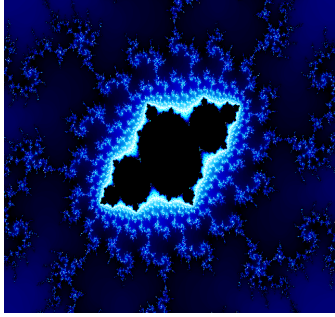
DATE	TOPIC	DESCRIPTION	ASSIGNMENTS
Jan 12-16	Intro to the Heavens	 A black silhouette of a zodiac constellation (Leo) against a blue background with yellow stars. <p>A basic overview of what the ancients observed in the heavens- the movements of the sun, moon, etc. Explanation of the Zodiac and the movements of the planets.</p>	Russell 1
Jan 21-23	The Bible and the Ancient Near East	 A golden relief carving of an ancient Egyptian deity, likely Isis, with a headdress. <p>This week we will look at the earliest cosmologies (understandings of the structure of the universe) among the ancient Babylonians, Egyptian, Greeks and how all of this influenced the writings in the Hebrew Bible/ Old Testament</p>	Koestler, I:2
Jan 26-30	The Beginnings of Western Cosmology	 A complex geocentric cosmological diagram with Earth at the center and concentric circles representing celestial spheres. <p>An examination of the cosmological theories of Plato and his pupil Aristotle. Although these two thinkers disagreed profoundly on many issues, their teachings formed the basis of Western astronomy, astrology and theology until Galileo. Their views also form the basis of our calendar.</p>	Koestler, I: 3,4 Russell 2

<p>Feb. 2-6</p>	<p>The Heavens in Early Judaism, Christianity and Islam</p>	 <p>A look at the births of both Early Christianity and early Rabbinic Judaism in the world of the late Roman Empire. Both religions (and Islam a few centuries later) adopted Roman physics and cosmology as a basis for their theologies. We shall look at the relationship between science and theology in these three religious traditions.</p>	<p>Koestler I: 5 Russell 3, 4</p>
<p>Feb 9- 13</p>	<p>Medieval Cosmology and Theology</p>	 <p>The full development of Christian, Jewish and Muslim astronomy and theology occurred during the Middle Ages, we shall look at the scientific progress made, especially by Muslim scientists, and look at the teachings of such theologians as Thomas Aquinas and Moses Maimonides</p>	<p>Koestler II: 1,2,3 Russell 5, 9</p>
<p>Feb 16-20</p>	<p>Popular Religion: Heaven as Paradise</p>	 <p>Besides the intellectual arguments about the physics of the universe, there was a popular religious understanding of the heavens and of the location of Paradise or Eden, and of the Underworld. We will look at a number of religious writings, paintings and manuscript illuminations which show this popular side of Western religious traditions.</p>	<p>Russell 6, 7, 8</p>

Feb 23-27	The Copernican Revolution and Protestantism	 <p>The sixteenth century saw the breakdown of nearly two thousand years of Greco-Roman thinking, both in the sciences, with Copernicus, and in Roman Catholicism, with Luther and the Protestant Reformation.. We will look at how these changes came about and how Protestantism and new scientific discoveries related to each other.</p>	Koestler III
March 1-5	Galileo and the beginning of Modern Science	 <p>Copernicus observations and calculations challenged the accepted cosmologies. His work was carried forward by Johannes Kepler and Tycho Brahe. But the real breakthrough to a new understanding of "how the heavens go" goes to the credited of Galileo Galilei. We shall look at his physics as well as his new view of the heavens and what these meant for Western religion.</p>	Koestler IV
March 8-12	B R E A K		
March 15-19	The English Reformation and Newton	 <p>Although Galileo was instrumental in breaking down the old Aristotelian view of the heavens, it was Isaac Newton who first came up with a viable alternative. In fact, Newton's physics remains useful to this day. But Newton's new physics ad massive implications for theology, which had been based on the now discredited Aristotelian model. One new religious movement heavily dependant on the science of Newton was Deism. We will</p>	Koestler V

		<p>look at the breakdown of Catholic hegemony in England and how this made possible the new physics of Newton and some of the new theologies of the time.</p>	
<p>March 22-26</p>	<p>The Heavens of the Protestants</p>	 <p>Distrustful of Roman Catholic teaching and armed with the new theories of Newton, Protestant thinkers in Europe began to rethink the nature and physics of heaven. We will look at some of these Protestant thinkers, including Swedenborg.</p>	<p>Russell 10, 11, 12</p>
<p>Mar 29-April 2</p>	<p>The Nineteenth Century - electricity and the spiritual world</p>	 <p>Newton assumed the world was physical ("corpuscular" in his words). But the nineteenth century discovered that there were realities beyond the corpuscular. In science was the discovery and investigation of electricity and electromagnetic waves. Religion saw the birth of a variety of spiritualist, theosophic and mystical movements. We will look at the interrelationships between the scientists and the religious thinkers at this time.</p>	<p>Controversy over Electricity Spirituality and Electricity</p>

<p>April 5-9</p>	<p>Relativity</p>	 <p>By the beginning of the twentieth century it was clear that the physics of Newton could not account for all reality. The whole notion of physics, now including electro-magnetism, had to be re-thought. It was Albert Einstein who developed a new theory -- relativity -- which included but went beyond Newtonian science. The world as Einstein saw it was very weird, and has had tremendous implications for modern day theologies.</p>	<p>Special Relativity</p> <p>General Relativity</p> <p>Martin Buber (excerpt)</p>
<p>April 12-16</p>	<p>Quantum Physics and the Discovery of the Universe</p>	 <p>As weird as the universe of relativity is, the physics of quantum mechanics is even weirder. At the same time, the first few decades of the twentieth century, astronomers began to see the universe as we know it. Galaxies, for example, were first discovered and studied. The universe by the middle of the twentieth century was a very strange place, destroying almost all of our old assumptions. How were theologians, and religious people in general, to make sense of all this when using language still based on Aristotle?</p>	<p>Intro to Quantum Physics</p> <p>History of Astronomy (look especially at the 20th century)</p>

April 19-23	God, Chaos, Black Holes and String Theory	 <p>This last week looks at some of the latest theories about the cosmos and the questions they raise about how it works and where the divine might be in all of this (How was the universe "created" , for example, or how might God still be able to play a role in what is going on, etc.).</p>	Chaos Theory String Theory God and Physics
April 26	Where Do We Go From Here	General conclusion, evaluations, etc.	

GRADNG SCHEME

DATE DUE	TOPIC	LENGTH	PERCENTAGE
Feb. 9	Greco-Roman Cosmology	3-4 pages	15
March 5	Traditional Western Heavens	4-5 pages	25
April 7	Modern Physics and Spirituality	4-5 pages	25
April 29 (final)	Where Are We Now?	4-5 pages	25
Class Participation			10