DISH & DISCUSS

THE SCIENCE OF RELIGION

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OBJECTIVES

*Explore the historical perspectives of past scientists, philosophers, and theologians on the relationship between science and religion.*

*Identify your perspective on the relationship between science and religion.*
PREMISES

Religion is not a homogenous term. As a whole, it is representative of many different perspectives and cultural systems at which the level of scientific dialogue varies.

Many forms of mathematics, the Scientific Method, and quantitative study existed prior to the modern Scientific Revolution ~ 1550-1700AD.

In the Western world, the term "natural philosophy" once encompassed fields of study that are today associated with science.
• Example: Isaac Newton's Philosophiae Naturalis Principia Mathematica (1687), for example, is translated “Mathematical Principles of Natural Philosophy”, and reflects the then-current use of the words “natural philosophy,” akin to “systematic study of nature.”
Science and religion, in this context, are considered to be different “ways of knowing.”

Science: Based on observation and data

Religion: Based on faith and divine revelation*

*Divine revelation defined in modern times is an insight or foresight provided by a deity.
DISCUSSION 1

What are the limits of human observation? Are there limits?

Is divine revelation scientifically explainable?
ANCIENT CIVILIZATIONS (3,500BC – 0AD)

The relationship between science and religion extends back thousands of years.

The Ancient Egyptian contribution to mathematics was largely based in divine revelation and spiritual meaning.

Philosophers of Greco-Roman societies, such as Plato, Aristotle, etc., were some of the first contributors to the scientific method:
  • Observation → Hypothesis → Experiment → Conclusion

In this era, Science, Mathematics, and Religion were considered to be fully integrated as the systematic study of nature and the universe's ability to reflect upon itself.
  • Thought, among other things, was considered uniquely divine in ancient times (mind as receiver of thought not creator)
Aristotle, Plato, among others, during the Greek era, were known as philosophers and theologians; nonetheless, they were early contributors to the Scientific Method.

The ancient study of the movement of the stars, known as “Astrology” was an early predecessor to modern Astronomy. Astrology was steeped in the notion that there was a spiritual relationship between the movement stars and life on Earth.

Ancient Egyptians used Sacred Geometry to describe the process of creation in their religious system. Egyptians used anthropomorphization (or mythology) to describe these sorts of phenomena.
MIDDLE AGE CIVILIZATIONS (0AD – 1500AD)

During the Middle Ages, scientific ideas continued to be largely based on religious traditions rather than direct observation and mathematical reasoning.

The African Islamic Moors of Spain (711-1492AD) made strides in mathematics, science, and architecture as a society based defined by religious tradition, providing many of the foundational tools and concepts that powered the Scientific Revolution in Europe.

However, a major paradigm shift occurred with the rise of Christianity, which separated nature from divinity. The Crusades, Reconquista, and other “holy wars” took place in this era, essentially extinguishing ancient religious systems.
MIDDLE AGE EXAMPLES (0AD – 1500AD)

African Islamic Moorish Scientists and Mathematician inspired a new form of mathematical thinking that today we call Algebra, as well as the Arabic number system (0,1,2,3,4,...), first developed by Indian mathematicians around the 6th Century AD.

During the Dark and Middle Ages of Christianity, the influence of scientific and religious bodies began to diverge as the cultures of religions labeled “pagan” were extinguished.

The Reconquista ended just before the European discovery of the Americas—the “New World”—which ushered in the era of the Portuguese and Spanish colonial empires.
MODERN CIVILIZATION (1600AD – Present)

During the Scientific Revolution, scholars began to rely more heavily on direct observation and experimentation, transforming natural philosophy into what we now know as natural science.

This change weakened the influence of religious bodies and encouraged the development of secular thinking.

In the early 1800’s, European scientist John Draper and writer Andrew White published numerous texts proverting what is known as the “conflict thesis.”
• Claimed that the narratives of science and ~Christianity are naturally in opposition.

In a 1997 Essay, Stephen Gould, a famous biologist and historian of science, created the Non-Overlapping Magisteria (NOMA) Model for religion and science, suggesting that religion and science represent two totally oppositional views.
MODERN EXAMPLES (1600AD – Present)

The Periodic Table of Elements, created by Russian chemist Dmitri Mendeleev in 1869, is a huge symbol of modern science and solidified a transition into materialist thought and secular thinking.

John Draper (L) and Andrew White (R) were major contributors to the “conflict thesis” of the 1800’s.

PERSPECTIVES

INTEGRATION
ANCIENT CIVILIZATIONS

INTERDEPENDENCE
MIDDLE AGE CIVILIZATIONS

INDEPENDENCE
MODERN CIVILIZATION
DISCUSSION 2

What is your perspective on the relationship between science and religion?

Where do they overlap, where do they differ?
DISCUSSION 3

What are the drawbacks and challenges of each of these perspectives?

What do you think is the dominant perspective at Caltech?
Caltech Center for Diversity
The STEMinar Series
May 17, 2017 12-1PM

DR. BOB SUZUKI

Class of 1967 Caltech Alum, Dr. Bob H. Suzuki, retired as President of California State Polytechnic University, Pomona in July 2003 after serving in this position for 12 years. As a professor at USC, he became deeply involved in civil rights and public and community affairs. Among numerous activities, he currently serves on the Boards of Directors of the Pasadena Bioscience Center and Leadership Education for Asian Pacifics (LEAP) in Los Angeles, on the Advisory Board of the Ahimsa Center at Cal Poly Pomona, and on the Board of Trustees of Western University of Health Sciences.

CSS Second Floor Common Area
Lunch will be provided
RSVP at diversity.caltech.edu/RSVP

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