

Science and Religion: A Philosophical Analysis

Course Number: Phi 81.1

Institution: St. John's University

Instructor: Marie George

Course Outline and Reading List (subject to revision):

I. INTRODUCTION

-Students will be asked to write out their views on the relation of religion and science.

-Instructor will present various positions taken by scientists.

Readings:

Einstein, "About Religion"

Aristotle on the Virtue of Religion

Suggested reading: Cosmos, Bios, Theos.

II. THE SCIENTIFIC METHOD AND ITS SCOPE: AN OVERVIEW

A. General considerations regarding method

Readings: Aristotle: Nicomachean Ethics 1098a28-b5, 1094b24; De Caelo 306a; Physics 193b33; Parts of Animals, Bk. I, c. 1; Metaphysics, Bk. II, c. 3.

B. The scientific method as developed and used in Physics (the hypothetical deductive method)

1. the scientific observation
2. laws; statistical laws
3. hypotheses and theories

Readings: 3 handouts

C. The scientific method and biology

Reading: Handout

Suggested reading: Arthur Peacocke, God and the New Biology, cc. 1-4.

D. Science, Natural Philosophy, and Metaphysics: a comparison of method and objects of study

Readings:

Handout

Excerpts from Aquinas's commentary on Boethius De Trinitate, qq. 5 & 6.

Aristotle, Metaphysics, 993b10.

E. Science and Theology:

Readings:

Summa Theologiae, I.1, articles 2, 7, 8. (Theology as science)

Augustine (as quoted in Leo XIII, "Providentissimus Deus," 23-25 and Pius XII, "Divino Afflante Spiritu", 7).

Thomas Aquinas, Summa Theologiae, I, 70.1 ad 3; Summa Contra Gentiles, Bk. II, art. 4.

John Paul II, "Letter of 1988 to Rev. George V. Coyne, S.J., Director of the Vatican Observatory". (excerpts)

John Paul II, "Address to the Pontifical Academy of Science," 10-31-92.

Catechism of the Catholic Church, #115-119 (Senses of scripture)

F. Science and Ethics:

1. Is there such a thing as "value-free" science?

Reading:

Albert Einstein, Out of my Later Years, 113.

Suggested reading:

Mariano Artigas, The Mind of the Universe (Philadelphia: Templeton Foundation Press, 2000), Part IV: "Science and Values."

2. Does Science have a role in determining morality?

Readings:

Michael Ruse and E.O. Wilson, "The Evolution of Ethics" (313-317)

"Is There a Gene for Compassion?" Steven Pinker's review of Robert Wright's The Moral Animal. (New York Times).

John L. Mackie, "The Law of the Jungle: Moral Alternatives and the Principles of Evolution." (306, 309-312)

William Provine, "Evolution and the Foundations of Ethics."

Rebecca Messall, "The Evolution of Genocide."

Paul Vitz, "The Psychology of Atheism."

III. THE CHURCH AND SCIENCE: HISTORICALLY FRIENDS OR FOES? (4 classes)

A. Church in regard to science:

1. Other worldliness and a progressive vision of time

Suggested reading: Stanley Jaki, The Saviour of Science.

2. The Church as defender of rationality and civilization

Readings:

Handout: Thomas Cahill, How the Irish Saved Civilization.

Joseph Cardinal Ratzinger, "The Case for Religion," in 30 Days, May 1990, 46-51.

Suggested reading: Joseph Cardinal Ratzinger, Introduction to Christianity, c. 3, The God of Faith and the God of the Philosophers, part 1: "The Decision of the Early Church in Favor of Philosophy."

Homework: What criteria does one use to distinguish a cult (in the sense of a religion regarded as spurious) from a legitimate religion?

3. Galileo

Readings:

Galileo, "Letter to Castelli."

Cardinal Bellarmine, letter.

4. Has the Church in any age ruthlessly attacked scientific inquiry?

Reading: Excerpts from Hitchcock, "Inquisition," and Marvin R. O'Connell, "The Spanish Inquisition: Fact or Fiction"

Suggested readings:

Andrew Dickson White, A History of the Warfare of Science with Theology in Christendom.

David Lindberg, editor God and Nature (Berkeley: University of California Press, 1986).

5. The traditional view of man in the world in the face of the Copernican revolution

Readings:

Aristotle, De Caelo, Bk. I, cc. 2 & 3; Parts of Animals, Bk I, c. 5; Nicomachean Ethics, Bk. VI, c. 5.

6. Church moral teaching and scientific experimentation [dissection of the human body; experimentation on animals; reproductive technologies]

Readings:

Gilbert Meilaender, "Begetting and Cloning," in First Things, June/July 1997, no. 74.

Suggested reading:

John Paul II, Reflections on Humanae Vitae (Boston: St. Paul Editions, 1984).

Joseph Cardinal Ratzinger, "Man between reproduction and creation: theological questions on the origin of human life," in Communio 16, Summer 1989, 197-211.

7. Creation Science, evolution, and Church teaching

Readings:

Pius XII, "Humani Generis", # 36. (#37 polygenism)

John Paul II, "Message to the Pontifical Academy of Science," 10-22-96.

Catechism of the Catholic Church, #362-368.

B. Science in regard to the Church and religion:

1. Science as a complement to faith: Kepler, Boyle, Newton

Readings:

M.J. Buckley, S.J., "The Newtonian Settlement and the Origins of Atheism" in Physics, Philosophy and Theology, 81-102.

Homework assignment on the above article by Buckley.

Handout: Is it Reasonable to go beyond the God of the Philosophers?

Aquinas, Summa Contra Gentiles, Bk. I, articles 3-9.

2. Science as a replacement for religion: A surer path to God than religion?

Readings:

Thomas Paine, excerpts from Age of Reason.

Thomas Aquinas, Summa Contra Gentiles, Bk. II, cc. 2, 3.

3. The Masters of the Universe mentality

Readings:

Sam Keen, Apology for Wonder, c. 5, "The Travail of Homo Faber."

Joseph Cardinal Ratzinger, In the Beginning..., 44-53.

Suggested readings:

Alice Ramos, "Human Life and the Primacy of Contemplation," in Proceedings of the Fellowship of Catholic Scholars, ed. Paul L. Williams (Pittston, PA: Northeast Books, 1990), 174-184.

4. Reductionism and the denial of the reality of non-material entities

Readings:

Thomas Aquinas: Summa Theologiae Bk. I, 84.2 and 84.7 (imagination); Disputed Question on the Soul, art. 14;

Marvin Minsky, "Will Robots Inherit the Earth?" Scientific American, Oct. 1994, 112, 113.

John Horgan, "Can science study consciousness?" Scientific American, July 1994, 88-94.

5. Interpretations of quantum mechanics and rationality

N.B. This section will probably not be covered due to time restraints and the difficulty of the topic.

Readings:

Gary Zukav, The Dancing Wu Li Masters, 85, 86, 255-280, 281-317.

J. Polkinghorne, "The Quantum World," in Physics, Philosophy and Theology, 333-342.

R.J. Russell, "Quantum Physics in Philosophical and Theological Perspective," Physics, Philosophy and Theology, 343-374.

IV. PROBLEMS OF ORIGINS

A. The Origin of the Universe - Does the Universe have a beginning in time? (1 class)

1. Scientific problems w/ determining whether the Big Bang was an absolute beginning

Suggested reading: M.A. Corey, God and the New Cosmology, 135-137.

2. Pre-scientific positions on the eternity of the world (Aquinas, etc.)

Reading: William Carroll, "Aquinas and the Big Bang."

B. The Origin of Life - A product of chance and necessity or intelligent design?

1. History of the argument from design

Suggested reading: Barrow and Tipler, The Anthropic Cosmological Principle, c. 2.

2. The champion of the argument from design: William Paley

Readings:

Michael Behe, Darwin's Black Box, 213-216.

William Paley, Natural Theology, cc. 1-3.

3. David Hume: Did he lay to rest the argument from design?

Readings:

Michael Behe, Darwin's Black Box, 217-219.

Suggested reading:

David Hume, Dialogues concerning Natural Religion.

4. Darwin and Richard Dawkins: Natural Selection takes over the Designer's job

Readings:

Richard Dawkins, The Blind Watchmaker. "Accumulating Small Change".

Michael Behe, Darwin's Black Box, 219-221.

5. Is Cosmic Teleology nonsense?

Readings:

Stephen Jay Gould, "The Evolution of Life on Earth." (Scientific American, Oct. 1994, 85-91).

Charles De Koninck, The Hollow Universe, 104-106.

Arthur Peacocke, Theology for a Scientific Age, (Cambridge: Blackwell, 1990), 117-121.

Robert Spencer, "On Speciesism"

C. The Origin of Human Life - Was the universe from its inception ordered to the apparition and sustenance of intelligent life? The Anthropic Cosmological Principle (3-4 classes)

1. The evidence

Reading: Hugh Ross - Design and the Anthropic Principle (summary)

2. The questions the evidences raises, and especially the relation of the various formulations of the ACP to the argument by design

Readings:

Marie I. George, O Wonder! O Brave Old Universe that has Such People in It! Reflections on M.A. Corey's *God and the New Cosmology*.

Howard J. Van Till, "Why does the Universe...."

Handout:

3. Extraterrestrial life

Readings:

Ernst Mayr, "The Probability of Extraterrestrial Intelligent Life," in Philosophy of Biology Today, 279-287.

Christian De Duve, Vital Dust, excerpts.

Final class to synthesize and summarize.

Reading: Ian Barbour, "Ways of Relating Science and Theology" in Physics, Philosophy and Theology, 21-45.