

## HH3032 Science and Religion in History



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Many people have believed that science and religion are contraries. Science is often considered the paradigm of humans' rational thoughts that fight against all kinds of ignorance, bigotry, and superstition, which may include religious thoughts and practices. However, many historians of science after the late twentieth century have found that the relationship between science and religion is far more complex. In some cases, religions do hamper and suppress some scientists' claims and activities, but religions can also be a positive factor in the construction of scientific ideas and worldviews, including those for the rise of modern science. This course aims at your deeper understanding of this complexity in a historical depth.

### Assessment:

Midterm Paper (30%)

Final Paper (30%)

Quiz (10%)

Pre-Class Questions (10%)

Group Discussion Reports (10%)

Participation and Attendance (10%)

### Readings:

### Week 1 Introduction

Peter Harrison, *The Territories of Science and Religion* (Chicago: University of Chicago Press, 2015), pp. 1-19

Mark Noll and David Livingstone, "Introduction," in *The Warfare between Science and Religion: The Idea that Wouldn't Die*, edited by Jeff Hardin, Ronald Numbers, and Ronald Binzley (Baltimore: Johns Hopkins University Press, 2018), pp. 1-5.

### Week 2 European Antiquity

David Lindberg, *Beginnings of Western Science* (Chicago: University of Chicago Press, 2008), pp. 21-45.

Harrison, *Territories of Science and Religion*, pp. 21-54.

**Primary Source:** Plato, *Timaeus and Critias*, tr. Desmond Lee (New York: Penguin, 1981), pp. 42-46.

### Week 3 Science and Religion in the Medieval Societies

Ronald Numbers, ed., *Galileo Goes to Jail and Other Myths about Science and Religion* (Cambridge, Mass.: Harvard University Press, 2009), Chapters 3, 4, 5. (Read it at home)

### Week 4 Medieval Islamic World

George Saliba, *Islamic Science and the Making of the European Renaissance* (Cambridge, Mass.: MIT Press, 2007), pp. 1-15, 49-72.

A. I. Sabra, "Situating Arabic Science: Locality versus Essence," *Isis* 87 (1996), pp. 654-670.

**Primary Source:** Averroes, "Does Finite and Temporal Motion Require a Resistant Medium?" Edward Grant, ed., *A Source Book in Medieval Science* (Cambridge, Mass.: Harvard University Press, 1974), pp. 253-256.

### Week 5 Medieval Europe

Lynn White, Jr., "The Historical Root of Our Ecological Crisis," *Science* 155: 3767 (1967), pp. 1203-7.

Peter Harrison, *Territories of Science and Religion*, pp. 55-81, 136-141.

Edward Grant, *The Foundations of Modern Science in the Middle Ages* (Cambridge: Cambridge University Press), pp. 70-85.

**Primary Source:** "Condemnation of Aristotle at the University of Paris in 1277," *Source Book in Medieval Science*, pp. 48-50.

### Week 6 Scientific Revolution

Peter Dear, "Miracles, Experiments, and the Ordinary Course of Nature," *Isis* 81 (1990), pp. 663-683.

Frances A. Yates, "The Hermetic Tradition in Renaissance Science," in *Art, Science, and History in the Renaissance*, edited by Charles Singleton (Johns Hopkins University Press, 1968), pp. 255-274.

William Ashworth, Jr., “Christianity and the Mechanical Universe,” in *When Science & Christianity Meet*, edited by David Lindberg and Ronald Numbers (Chicago: University of Chicago Press, 2003), pp. 61-84.

**Primary Source:** John Ray, *The Wisdom of God Manifested in the Works of the Creation* (New York: Arno Press, 1977) – originally published in 1691.

#### Week 7 Trial of Galileo

David Lindberg, “Galileo, the Church, and the Cosmos,” in *When Science & Christianity Meet*, pp. 33-60.

Pietro Redondi, *Galileo, Heretic* (Princeton: Princeton University Press, 1987), pp. 321-332.

Mario Biagioli, *Galileo, Courtier: The Practice of Science in the Culture of Absolutism* (Chicago: University of Chicago Press, 1993), pp. 313-352.

**Primary Source:** Galileo Galilei, *Dialogue Concerning the Two Chief Systems of the World*, tr. Stillman Drake (Berkeley: University of California Press, 1967), pp. 46-52 – originally published in 1632.

#### Week 8 Darwinism and Religion

Owen Chadwick, *The Victorian Church*, Part II (London: Adam and Charles Black, 1972), pp. 23-35.

Kuan-yen Liu, “Yan Fu’s Xunzian-Confucian Translation of Thomas Huxley’s Evolution and Ethics,” in C. Mackenzie Brown, *Asian Religious Responses to Darwinism* (Cham: Springer, 2020), pp. 257-286.

Yulia Burenina, “Japanese Responses to Evolutionary Theory with Particular Focus on Nichiren Buddhists,” *Asian Religious Responses to Darwinism*, pp. 337-367.

**Primary Source:** Charles Darwin, *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life* (London: Murray, 1859), 416-425.

#### Week 9 Scopes Trial

Edward Larson, “The Scopes Trial and the Evolving Concept of Freedom,” *Virginia Law Review* 85 (1999), pp. 503-529.

Adam Shapiro, *Trying Biology: The Scopes Trial, Textbooks, and the Antievolution Movement in American Schools* (Chicago: University of Chicago Press, 2013), pp. 62-110.

**Primary Source:** Butler Act of Tennessee (1925).

#### Week 10 Creation Science in America

Ronald Numbers, *The Creationists: From Scientific Creationism to Intelligent Design* (Cambridge, Mass.: Harvard University Press, 2006), pp. 208-238, 270-279.

James R. Moore, “Interpreting the New Creationism,” *Michigan Quarterly Review* 22 (1982), pp. 321-334.

Raymond Eve and Francis Harrold, *The Creationist Movement in Modern America* (Boston: Twayne, 1991), pp. 112-117, 179-182.

Primary Source: John C. Whitcomb and Henry M. Morris, *The Genesis Flood* (Phillipsburg: Presbyterian and Reformed Publishing, 1961), pp. 120-130.

#### Week 11 Creation Science in the World

Hyung Wook Park, "Practicing Creationism: Science and the New Religious Practices in South Korea," *Almagest* 12 (2021), pp. 12-39.

Martin Riexinger, "Turkey," *Creationism in Europe*, edited by Stefaan Blancke, Hans Henrik Hjermslev, and Peter Kjaergaard (Baltimore: Johns Hopkins University Press, 2014), pp. 180-198.

C. Mackenzie Brown, "Hindu Creationism," *Almagest* 12 (2021), pp. 150-191.

Primary Source: Sangnam Oh, Yanghee Kim, Joonhee Kim, Daeho Kwon, Eunil Lee, "Elevated Pressure, a Novel Cancer Therapeutic Tool for Sensitizing Cisplatin-mediated Apoptosis in A549," *Biochemical and Biophysical Research Communications* 399 (2010), pp. 91-97.

#### Week 12 Biosciences and Genetically Modified Theology

Conrad Brunk and Harold Coward, *Acceptable Genes: Religious Traditions and Genetically Modified Foods* (Albany: SUNY Press, 2009), pp. 115-133.

Jieun Lee, "Promising Potency: Bio-Evangelical Networking in a Korean Stem Cell Enterprise," *Science as Culture* 29 (2020), pp. 594-616.

Ben Kasstan, "'A Free People, Controlled Only by God': Circulating and Converting Criticism of Vaccination in Jerusalem," *Culture, Medicine, and Psychiatry* 46 (2022), pp. 277-296.

#### Week 13 Religions, Modern Media, and Science Fiction

Daniel Stout, *Media and Religion: Foundations of an Emerging Field* (New York: Routledge, 2012), chapter 1, 5.

Douglas E. Cowan, *Sacred Space: The Quest for Transcendence in Science Fiction Film and Television* (Waco: Baylor University Press, 2010), pp. 3-33.

Also watch, Robert Zemeckis, *Contact* (1997).

#### **Essay Assignments:**

You are expected to write your midterm and final papers in accordance with questions prepared by me. The submission portal can be found in NTULearn's "Assignment" panel. These questions will be given in 2 weeks ahead of the deadline. You can refer to any sources to answer the questions, but the readings in the syllabus must be cited. The two papers will be graded based on their relevance, novelty, and ingenuity, as well as your way of citation and referencing. You must follow the Chicago Manual Style in your papers. Any late submission without proper reasons will be subject to penalty, which reduces the grade 5% per day. The style of the paper must follow the *Chicago Manual of Style*. This will constitute 10% of your grade.

**Pre-Class Questions:**

After finishing the required readings for each week, you must submit a question for discussion during the seminar. The question is to be uploaded in the course portal in NTULearn before 6 pm on each Tuesday. These questions will be graded according to their relevance, novelty, and ingenuity.

**Discussion Reports:**

Based on a few selected pre-class questions, discussion groups must submit their reports to NTULearn by 8 pm on Wednesday and present their conclusions in front of others during the class. All participating members' name must be written in the report, which will be graded according to their comprehensiveness, clarity, and academic depth.

**How to Find Readings:**

All readings are available in NTULearn's course portal. Most books used in the course will also be found in the NTU libraries.

**Absence from the Class:**

If you think that you missed a class for an acceptable reason, such as serious illness, family emergency, or university events, you need to submit an official document designating the reason (including your doctor's MC) and submit a report on a question that I send to you. This report may be about the course readings plus another paper. Your credit for participation and attendance for the week will be given in accordance with the quality of your report.

**Plagiarism:**

Plagiarism is a serious academic misconduct and may endanger a student's career in a highly severe way. It is done intentionally or unintentionally using another person's ideas and writings without any proper citation and/or quotation marks. Collusion, which may involve a close collaboration in completing an assignment, is another problem. Unless instructed otherwise, your midterm assignment should be done by yourself alone. Paraphrasing is an act of rewriting other people's ideas or arguments using your own words. While this is an acceptable practice in most cases, it can be an issue if you do not indicate that the ideas have come from another person's works. If you are not sure about how you should do regarding these issues, please do cite the referred sources in footnotes/endnotes and use the quotation marks around the terms you did not originally write. Even if you cited the source, your paper can be a problem without the proper

use of quotation marks. If any plagiarized sentence or paragraph is detected, the grade will be reduced to zero.