

History 304; Religion 369
Science and Religion: Dialogue and Debate
Fall, 2021
MWF: 2:30-3:20

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10:00, and by appointment

Course Description:

The relationship between science and religion has long fascinated students of the past. In the late nineteenth century, historians such as John William Draper and Andrew Dickson White succeeded in establishing the metaphor that continues today to influence the way many people understand the interaction of those two approaches to the nature of reality: warfare. Since 1900, however, the work of scholars has made it increasingly clear that the relationship between science and religion is far more complex than the conflict-oriented approach suggests. To be sure, that relationship has at times been characterized by tension and even animosity. At other times, however, the ideas embraced by theologians and scientists have overlapped, reinforced each other, or addressed entirely separate concerns.

This course deals with an important but limited segment of the history of the relationship between science and religion. It focuses primarily on the relationship between science and Christianity from 1500 to the present in Europe and North America. This is a survey course; we cannot hope to do justice to every aspect of the relationship between science and religion on two continents for five hundred years. Nevertheless, by using a chronological framework to examine the claims--both metaphysical and epistemological--of scientists, philosophers, and religious thinkers, we should be able to yield some useful insights and arrive at a number of meaningful generalizations.

The success of this course will be enhanced by informed and spirited class discussion. Accordingly, the classroom experience will consist of both lectures (formatted loosely to allow ample time for questions and comments) and discussion periods based on the assigned readings.

Course and Hub Objectives:

Through their examination of the relationship between science and religion in Europe and North America, students in HI304 will

1. Will learn how to analyze historical narratives, develop and evaluate interpretations based on historical evidence derived from primary and secondary sources, and construct and critically examine historical arguments [**Historical Consciousness**].

2. Will learn how to situate primary source material within an appropriate historical context [**Historical Consciousness**].
3. Will be able to demonstrate a knowledge of major scientific and religious ideas that played a prominent role in the history of Europe and North America, as well as how and why those ideas changed over time [**Historical Consciousness**].
4. Will be able to draw on a variety of concepts commonly used in the social sciences to describe human behavior. In particular, these concepts, which include , but are not limited to, cultural authority, secularization, cognitive dissonance, professionalization, and modernization, prove useful in addressing the question of what historical forces helped to shape the nature and dynamics of scientific thought and practice and their relationship to religious thought in both European and American culture. [**Social Inquiry I**].

Assigned Work:

The graded work consists of **CLASSROOM PARTICIPATION**, a **MIDTERM EXAMINATION** (tentatively scheduled for Friday, October 22), a **RESEARCH PAPER** (see below), and a **FINAL EXAMINATION**, which is scheduled for Tuesday, December 14, from 3:00 to 5:00 p.m. One half of the final examination will deal with material presented after the midterm examination, and the other half will require students to draw on material presented throughout the semester.

Grading:

The following formula will be used to compute the course grade:

Classroom Participation	20%
Midterm Examination	20%
Research Paper	30%
Final Examination	30%

Students must complete all written work in order to pass the course.

Attendance:

Students are expected to attend class regularly and are responsible for all material covered in class. Attendance on days in which class discussions are scheduled is especially important.

Required Reading:

David C. Lindberg and Ronald L. Numbers, eds., *When Science and Christianity Meet* ISBN 9780226482163 (hereafter SC)

Ronald L. Numbers, ed., *Galileo Goes to Jail and Other Myths about Science and Religion* ISBN 9780674057418 (hereafter GG)

Mary Shelley, *Frankenstein: 1818 Text* ISBN 9780199537150

H. G. Wells, *The Island of Dr. Moreau* ISBN 9780451468666

Other readings, hereafter abbreviated as BL, will be posted on the course website: <http://blackboard.bu.edu>.

Please obtain the editions of the books that have been listed above. This will facilitate discussions by ensuring that everyone will be referencing the same page numbers.

Research Paper:

Students are required to write a research paper dealing with an issue concerning the historical relationship of science and Christianity in Europe and/or North America since 1500. This paper, which must draw on a significant sample of material (i.e., several books and articles) from both primary and secondary sources, should be 8-10 typed, double-spaced pages in length. Students should secure the approval of the instructor for their topics by Monday, **SEPTEMBER 27**. The paper is **DUE MONDAY, NOVEMBER 22**.

Students are required to submit **TWO COPIES** of their papers. One copy will be returned to the student. All papers must be submitted in hard copy; electronic versions will not be accepted.

Papers are welcome at any point in the semester up to the due date, but please be warned that late papers are not accepted except in cases of serious and unforeseeable misfortune.

IMPORTANT: The penalties for plagiarism and other instances of academic misconduct can be--and properly should be--very severe. Students should consult the College of Arts and Sciences Academic Conduct Code (www.bu.edu/cas/academics/programs/conductcode.html) if they are unsure of official standards.

All ideas, as well as quoted or closely paraphrased material within a paper, must be clearly attributed to the source from which they are taken. Please consult with the instructor if you have any questions about this.

Paper Grading Rubric:

A research paper in the “A” range:

- Is written in lucid, occasionally even graceful, prose that flows freely.
- Is clearly organized.
- Is thoroughly researched.
- Displays insightful analysis and freshness of thought.
- Contains few, if any, errors of grammar or punctuation.
- Presents a perceptive and persuasive argument.

A research paper in the “B” range:

- Possesses most of the qualities of an “A” paper but is somewhat less ambitious and successful in its overall framing, structure, and/or execution.
- Displays a command of the material but is more modest in aim.

A research paper in the “C” range:

- Displays problems in formulating and sustaining a central argument.
- Is written in prose that is marred by a sizable number of errors of grammar or punctuation.
- Seems rather perfunctory in its description, analysis, and choice of detail.

A research paper in the “D” range:

- Generates prose that has little to do with the ostensible subject of the paper.
- Lacks any discernible organization.
- Is largely unsupported by evidence or argument.
- Is carelessly written, with little attention to grammar, punctuation, or appropriate syntax.

A research paper in the “F” range:

- Dramatically fails to conform to the requirements of the assignment.
- Seems utterly oblivious to the need for argument or evidence.
- Appears to display little effort and little knowledge of course materials.

Reading, Discussion, Paper, and Examination Schedule

Week 1 (September 2-3)

No required reading

Week 2 (September 6-10)

Reading:

Required: Barry Barnes, “Sociological Theories of Scientific Knowledge” (BL); Peter Harrison, “‘Science’ and ‘Religion’: Constructing the Boundaries” (BL); David C. Lindberg, “The Medieval Church Encounters the Classical Tradition: Saint Augustine, Roger Bacon, and the Handmaiden Metaphor,” in SC, 7-32; Michael H. Shank, “Myth 2. That the Medieval Christian Church Suppressed the Growth of Science,” in GG, 19-27

Week 3 (September 13-17)

Reading:

Required: Martin Luther, "Table Talk," no. 4638 (BL); Andreas Osiander, Foreword to Copernicus, *De revolutionibus* (BL); Galileo Galilei, "Letter to the Grand Duchess Christina" (BL); Dennis R. Danielson, "Myth 6. That Copernicanism Demoted Humans from the Center of the Cosmos," in GG, 50-58; Margaret J. Osler, "Myth 10. That the Scientific Revolution Liberated Science from Religion," in GG, 90-98

Week 4 (September 20-24)

September 24 **DISCUSSION:** Readings from Weeks 1-4

Reading:

Required: René Descartes, *Discourse on the Method of Rightly Directing One's Reason and of Seeking Truth in the Sciences* [abridged] [1637] (BL); Andrew Cunningham, "How the *Principia* Got Its Name: Or, Taking Natural Philosophy Seriously" (BL)

Recommended: David C. Lindberg, "Galileo, the Church, and the Cosmos," in SC, 33-60

Week 5 (September 27-October 1)

September 27 **PAPER TOPICS DUE**

Reading:

Required: Isaac Newton, "General Scholium" (BL); Lawrence M. Principe, "Myth 11. That Catholics Did Not Contribute to the Scientific Revolution," in GG, 99-106; Edward B. Davis, "Myth 13. That Isaac Newton's Mechanistic Cosmology Eliminated the Need for God," in GG, 115-122

Recommended: William B. Ashworth, Jr., "Christianity and the Mechanistic Universe," in SC, 61-84

Week 6 (October 4-October 8)

Reading:

Required: Blaise Pascal, *Pensées* (Modern Library ed.), fragments 67, 72, 76, 144, 146, 229-230, 233-234, 242-244, 273, 277-278, 280, 282, 347-348, 430, 469-470, 555, 560, 562-563, 580-581, 584-587, 792 (BL); Janet Browne, "Noah's Flood, the Ark, and the Shaping of Early Modern Natural History," in SC, 111-138; Thomas H. Broman, "Matter, Force, and the Christian Worldview in the Enlightenment," in SC, 85-110

Week 7 (October 11-15)

October 11 **UNIVERSITY HOLIDAY**

October 12 **SUBSTITUTE FOR OCTOBER 11 CLASS**

Reading:

Required: M. J. Buckley, "The Newtonian Settlement and the Origins of Atheism" (BL);
Mary Shelley, *Frankenstein: 1818 Text, Genesis*, Chs. 1-3, 6-8 (BL)

Recommended: John Hedley Brooke, "Science and Theology in the Enlightenment" (BL)

Week 8 (October 18-22)

October 20 **DISCUSSION**: Readings from Weeks 5-7

October 22 **MIDTERM EXAMINATION**

Reading:

Required: Ronald L. Numbers, selection from *Creation by Natural Law: Laplace's Nebular Hypothesis in American Thought* (BL)

Week 9 (October 25-29)

Reading:

Required: Mott T. Greene, "Genesis and Geology Revisited: The Order of Nature and the Nature of Order in Nineteenth-Century Britain," in SC, 139-160; James R. Moore, "Geologists and Interpreters of Genesis in the Nineteenth Century" (BL)

Week 10 (November 1-5)

November 5 **DISCUSSION**: Readings from Weeks 8-10

Reading:

Required: William Paley, selections from *Natural Theology* (BL); G. Blair Nelson, "'Men before Adam!': American Debates over the Unity and Antiquity of Humanity," in SC, 161-182; Nicolaas A. Rupke, "Myth 15. That the Theory of Organic Evolution is Based on Circular Reasoning," in GG, 131-141

Recommended: David N. Livingstone, "Re-placing Darwinism and Christianity," in SC, 183-202

Week 11 (November 8-12)

Reading:

Required: David Mislin, "'According to His Own Judgment': The American Catholic Encounter with Organic Evolution, 1875-1896" (BL); Marc Swetlitz, "American

Jewish Responses to Darwin and Evolutionary Theory” (BL); David N. Livingston, “Myth 17. That Huxley Defeated Wilberforce in Their Debate over Evolution and Religion,” in GG, 152-160

Recommended: Jon H. Roberts, “Darwinism, American Protestant Thinkers, and the Puzzle of Motivation” (BL); Robert Bruce Mullin, “Science, Miracles, and the Prayer-Gauge Debate,” in SC, 203-224

Week 12 (November 15-19)

Reading:

Required: Jon H. Roberts, “Psychoanalysis and American Christianity, 1900-1945,” in SC, 225-244; Ronald L. Numbers, “Science Without God: Natural Laws and Christian Beliefs,” in SC, 265-285; John Hedley Brooke, “Myth 25. That Modern Science Has Secularized Western Culture,” in GG, 224-232

Week 13 (November 22-23)

November 22 **RESEARCH PAPERS DUE**

November 24-26 **THANKSGIVING RECESS**

Reading:

Required: H. G. Wells, *The Island of Dr. Moreau*

Week 14 (November 29-December 3)

Reading:

Required: Matthew Stanley, “God and the Uniformity of Nature: The Case of Nineteenth-Century Physics” (BL); Matthew Stanley, “Myth 21. That Einstein Believed in a Personal God,” in GG, 187-195; Edward J. Larson, “Myth 20. That the Scopes Trial Ended in Defeat for Antievolutionism,” in GG, 178-186

Recommended: David B. Wilson, “On the Importance of Eliminating *Science* and *Religion* from the History of Science and Religion: The Cases of Oliver Lodge, J. H. Jeans and A. S. Eddington” (BL); Michael Ruse, “Myth 23. That ‘Intelligent Design’ Represents a Scientific Challenge to Evolution,” in GG, 206-214

Week 15 (December 6-10)

December 8 **DISCUSSION**: Reading from Weeks 11-14

December 10 **REVIEW FOR FINAL EXAMINATION**

Conspectus of Lectures

The lecture topics for this course often do not fit neatly into fifty-minute segments. Accordingly, students should understand that the topics listed below may be covered in more than a single class session:

Historical Models of the Relationship Between Science and Religion
 The Medieval Background
 Magic, Science, and Religion in Early Modern Europe
 The Copernican Challenge to the Medieval Synthesis
 Reaping the Copernican Harvest: The “Scientific Revolution,” Kepler, and Galileo
 Philosophy and the Scientific Revolution: Bacon and Descartes
 The Mechanization of Nature
 The Theological Implications of the Mechanical Philosophy
 Natural History and Religion, 1500-1700
 Radical Alternatives to Natural Theology
 Science and Providentialism During the Age of Enlightenment
 Enlightenment Unbelief and Its Antidotes
 Vitalism, Mesmerism, and the Forces Underlying Life and Thought
 Natural Cosmogonies and Religious Thought
 Geology and Religious Thought in Great Britain and America
 Sciences of the Human Mind and Anglo-American Religious Thought, 1800-1870
 The Nature and Antiquity of the Human Race(s)
 “Special” Creation and Early Evolutionary Theories
 Darwinism and Protestant Theology in Great Britain and America, 1859-1875
 Darwinism and Protestant Theology in Great Britain and America, 1875-1900
 Scientific Naturalism in Great Britain and America
 Psychology and Religious Thought, 1870-1940
 The Social Sciences and Religious Thought, 1830-1920
 “Sciences” of Spirit: Spiritualism and Psychical Research
 The Separatist Impulse
 Physics and Religious Thought Since 1870
 Modern Cosmology, the Issue of “Fine-Tuning,” and Religious Thought
 Creationism and Intelligent Design in North America
 The Human Sciences and Religious Thought Since 1960

IMPORTANT: This syllabus and all class lectures are copyrighted by Boston University and/or the instructor. Students who are enrolled in the course are allowed to share with other enrolled students course materials, notes, and other writings based on the course materials and lectures, but they may not do so on a commercial basis or otherwise for payment of any kind. Any sale or commercial use of notes, summaries, outlines, or other reproductions of lectures constitutes a violation of the copyright laws and is prohibited. Selling or buying class notes, lecture notes, summaries, or similar materials not only violates copyright but also interferes with the academic mission of the

University. It is therefore prohibited in this class and will be considered a violation of the student code of responsibility that is subject to academic sanctions.

NOTE: The above schedule and assignments are subject to change by the instructor.