HISTORY 162/262

Problems in the Historical Encounter Between Science and Religion

Spring Quarter, 2011

H&SS 3027

Professor Robert S. Westman

Meetings: Wed. 12-2:50 p.m.

Office Hours: Thursday, 3-5 p.m.; H&SS 4072; often available after class.

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What this Seminar is about.

The purpose of this seminar is to study moments of crucial historical encounter between religion and science. But don't take that formulation as final. Anyone who has thought about this way of stating the problem for more than two minutes knows that this language is provisional since, among other things, the meanings of the terms "science" and "religion" are unstable over time and cultural location. Moreover, the conjunction "and" does its customary, sly work of keeping categories neat, tidy and oppositional. And what about "crucial"? For example, was the Galileo Affair, so-called, really crucial in the sense of typical or definitive of religion-science encounters? Are not science and religion basically and fundamentally at odds or even "at war" with one another--as some 19C historians and 20C journalists liked to say? Perhaps different episodes involving science and religion have nothing stronger than a (weak) family resemblance to one another. As John Brooke has put it: "There is no such thing as *the* relationship between science and religion. It is what different individuals and communities have made of it in a plethora of different contexts."

Prerequisites.

This class is an upper division seminar, open to undergraduate and graduate students. The class assumes that students have studied some area or period of history.

The class is conducted as a colloquium—seminar-style. Students will make weekly presentations on readings assigned from a group of books that contain the most recent studies of the main questions to be taken up in the class.

Schedule of Topics and Readings.

March 30. Introduction. Lecture devoted to the problem of the course and discussion of the syllabus and requirements.

April 6. Were Christianity and Islam in Conflict with Science in the Ancient and Medieval Worlds?

In: *Galileo Goes to Jail*

1. David Lindberg. "That the Rise of Christianity Was Responsible for the Demise of Ancient Science."
2. Michael Shank. "That the Medieval Christian Church Suppressed the Growth of Science."
3. Lesley Cormack. "That Medieval Christians Taught That the Earth Was Flat"
4. Syed Nomanul Haq. "That Medieval Islamic Culture Was Inhospitable to Science."
5. Katharine Park. "That the Medieval Church Prohibited Human Dissection"

In: *The Cambridge Companion*

6. David Lindberg. "The Fate of Science in Patristic and Medieval Christendom"

In: *Science and Religion*

7. Noah Efron. "Early Judaism"

April. 13. Was Christianity—especially the Catholic Church--in Conflict with Science during the 16C and 17C?

In *Galileo Goes to Jail*:

1. Dennis Danielson. "That Copernicanism Demoted Humans from the Center of the Cosmos"

2. Jole Shackelford. “That Giordano Bruno Was the First Martyr of Modern Science”
3. Maurice Finocchiaro. “That Galileo Was Imprisoned and Tortured for Advocating Copernicanism”
4. Noah Efron. “That Christianity Gave Birth to Modern Science.”
5. Margaret Osler. “That the Scientific Revolution Liberated Science from Religion.”
6. Lawrence Principe. “That Catholics Did Not Contribute to the Scientific Revolution”
7. Edward B. Davis. “That Isaac Newton’s Mechanistic Cosmology Eliminated the Need for God”

In: *The Cambridge Companion*

8. John Henry. “Religion and the Scientific Revolution”

In: *God and Nature*

9. Robert Westman. “The Copernicans and the Churches”

April 20. The Darwin Question.

In: *The Cambridge Companion*

1. Jonathan Topham. “Natural Theology and the Sciences”
2. Jon Roberts. “Religious Reactions to Darwin”

In: *When Science and Christianity Meet*

3. David Livingstone. “Re-placing Darwinism and Christianity”

In: *Galileo Goes to Jail*

4. James Moore. “That Evolution Destroyed Darwin’s Faith in Christianity—Until He Reconverted on his Deathbed”

5. David Livingstone. “That Huxley Defeated Wilberforce in Their Debate over Evolution and Religion”
6. Jon Roberts. “That Darwin Destroyed Natural Theology”
7. Robert Richards. “That Darwin and Haeckel Were Complicit in Nazi Biology”

April 27. The Creationism Question.

In: *The Cambridge Companion*

1. Ronald Numbers. “Scientific Creationism and Intelligent Design”

In: *God and Nature*

2. Ronald Numbers. “The Creationists”

In: *Galileo Goes to Jail*

3. Edward Larson. “That the Scopes Trial Ended in Defeat for Antievolutionism”
4. Ronald Numbers. “That Creationism Is a Uniquely American Phenomenon”

In: *When Science and Christianity Meet*

5. Edward Larson. “The Scopes Trial in History and Legend”

May 4. Field Trip to The Creation-Science Museum (Santee)

May 11. The Secularization Question.

In: *Galileo Goes to Jail*

1. John Hedley Brooke. “That Modern Science Has Secularized Western Culture”
2. Matthew Stanley. “That Einstein Believed in a Personal God”
3. Daniel Thurs. “That Quantum Physics demonstrated the Doctrine of Free Will”
4. Michael Ruse. “That ‘Intelligent Design’

Represents a Scientific Challenge to Evolution"

In: *The Cambridge Companion*

5. John Hedley Brooke. "Science and Secularization"
6. Simon Conway Morris. "Evolution and the Inevitability of Intelligent Life"

May 18. The Question of Unbelief.

In: *The Cambridge Companion*

1. Michael Ruse. "Atheism, Naturalism and Science: Three in One?"
2. Nancey Murphy. " Divine Action, Emergence and Scientific Explanation"
3. John Haught. "Science, God and Cosmic Purpose"

In: *When Science and Christianity Meet*

4. Ronald Numbers (again). "Science Without God: Natural Laws and Christian Beliefs"

In: *Science and Religion Around the World*

5. Bernard Lightman. "Unbelief"

May 25. Miracles, Prayer, Reading and the Soul.

In: *When Science and Christianity Meet*

1. Robert Mullin. "Science, Miracles and the Prayer-Gauge Debate"
2. Jon Roberts (again). "Psychoanalysis and American Christianity, 1900-1945."

In: *God and Nature*

3. James Moore. "Geologists and Interpreters of Genesis in the Nineteenth Century"
4. Fraser Watts. "Psychology and Theology"

June 1. Final Reflections.

In: *Science and Religion Around the World*

1. David Livingstone. “Which Science? Whose Religion?”

In: *The Cambridge Companion*

2. Mikael Stenmark. “Ways of Relating Science and Religion”
3. Peter Harrison. “Introduction”

Course Requirements.

1. **Oral discussion** of readings each week. Students are expected to come to seminar prepared to raise questions and offer their readings and understandings of the material. Each week one or two students will prepare a short paper based on that week’s reading and present the paper orally to the colloquium. A copy of this paper will be sent to the instructor *before* the presentation—no later than Monday evening. I will read your paper and send you suggestions for improvement.

2. **Final Paper**. The final grade will mostly depend on the final paper. However, class participation will affect the final grade by a "+" or "−". Keeping the journal is a requirement. I will offer some general comments on your journals, even though they will not be graded. I will collect your journals for review. Therefore, it is essential that you keep a neat and continuous journal. For undergraduates, the final paper should be no more than 15 pages; for graduates, no more than 25 pages. The topic will be drawn from the readings.

Guidelines for keeping the journal:

•Using your journal as a resource for the final paper, discuss how your own understanding of the relationship between science and religion has *changed*

from the first week to the last.

Final Paper Due: June 8 at Noon. No papers accepted after this date. Please put hard copy under my office door and send a second copy to me as an attachment. Instructions on format to be given in class.

4. **Journal Writing**. It is important to keep a journal for this class. Although I will not assign it a grade, I will ask you to submit it for my inspection at some (unannounced) point in the course. The purpose is to make sure that you are keeping up with various tasks associated with the reading. A journal will enable you to do a good deal of **informal writing**, writing for yourself to help you learn and understand the history of science and about the specific problem that we are studying. The habits formed from this exercise will also help you with other classes. As you write your entries, you can give free range to your ideas and freedom to your writing style. In other words, informal writing is not intended to be final or to be graded. Its aims are to find out what you know but do not yet realize, to reflect back on what you have read and what we have discussed in class. It can also provide an opportunity to develop new ideas and new points of view. Writing regularly in your journal should allow you to enjoy writing more. It will be very useful for you to read (and take seriously) Peter Elbow's **Writing with Power**. Comments on Elbow can also be part of your journal.

How to Keep the Journal.

1. **Kinds of entries.** It is a good idea to keep notes both on class discussion and on your reading. **Writing is a form of thinking.** Many people believe (erroneously) that “having an idea in your mind” is the same thing as trying to represent an idea on paper. They are related, but not identical activities. Keeping a record of what other people say in class is a good habit to cultivate.

2. **Entries made during class**. At the end of each class, write down the main

questions that we discussed. Also, write down anything that you did not understand. Don't let these matters slip by until the last week of the term.

3. **Entries written at home related to the assigned readings in the texts for each class session**. Here is an idea. Make a journal entry that involves a minimum of five minutes or about one full page of writing. This means that you should write **continuously** for at least five minutes without stopping your pen or computer. This is called "freewriting." Peter Elbow has a very interesting discussion of it. Read Elbow's treatment. Longer entries are better than shorter entries because they enable you to better develop your thoughts, insights, and questions. The more that you write, the more you will be actively engaged in topics related to our subject.

NOTE: RE-READ ELBOW FREQUENTLY. Some of you will forget what he has to say; others will forget that they have forgotten. I will remind you.

4. **One longer entry each week of a reflective or comparative nature**, reflecting upon what you have read, written or thought during the week, or comparing some aspect of this class to other classes or other learning experiences. You might write about how this class relates to other classes that you have taken, or to books that you have read, or to places that you have visited or ideas that have occurred to you about other aspects of The Galileo Affair but which are not covered by our readings. Write a longer reflective piece giving full range to your ideas. There are 10 weeks in the quarter, so you should have a minimum of 10 entries in this section. Write for a minimum of ten minutes, or about 2 written pages for each of these reflective entries.

5. **Longer, reflective entries written about each of the books for the course**. These entries may be on any topics that you choose, related to the book. They should be written as you read and complete the book. It is best to write the entries as you complete **each section** of the book, not all at once at the end. These longer, reflective entries should form an interesting collection of your ideas and conclusions about the books. You may also wish just to use this section to note down ideas that occur to you for the Final Paper.

6. Benefits. By keeping a journal, you will begin working on your final paper from the very first day. You may even have a chance to **revise** what you have written, to change phrasing, correct spelling and so forth. I realize that some may think this scenario to be "heretical"--but then, it will not be the only time that we will be discussing the topic of heresy in this class.

List of Required Books.

Peter Elbow. *Writing With Power.* Oxford University Press, 1998.

*Peter Harrison, ed. *The Cambridge Companion to Science and Religion*. Cambridge University Press, 2010.

*John Hedley Brooke and Ronald L. Numbers, eds., *Science and Religion around the World*. Oxford University Press, 2011.

*David C. Lindberg and Ronald L. Numbers, eds. *God and Nature: Historical Essays on the Encounter between Christianity and Science*. Univ. of California Press, 1986.

*David C. Lindberg and Ronald L. Numbers, eds. *When Science and Christianity Meet*. University of Chicago Press, 2003.

*Ronald L. Numbers, ed. *Galileo Goes to Jail and Other Myths about Science and Religion*. Harvard University Press, 2009.
*Ordered for UCSD Bookstore. Elbow should be obtained online.