

HSCI 2453: God and nature in the pre-scientific world
Spring 2010

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office hours: Monday 1.30-2.00, Tuesday 3.00-3.30, or by appointment.

Class meets TR 1.30 to 2.45 in Burton Hall, room 119.

Introduction

The sixteenth and seventeenth centuries saw the rise of a "new science", with the theories of Copernicus, Galileo, Newton, and others. The new scientific ideas raised important new questions, which went well beyond the scientific domain – on the authority and correct reading of the Bible, on miracles, etc. The outcome of the debates of the early modern period in many ways determined our present view of the world

In popular view, the rise of the scientific world-view often is seen as bringing discredit on established religious views. As a matter of fact, conflicts did occur. The trial of Galileo is the best known example. However, the new views were not necessarily anti-religious.

Moreover, it should not be forgotten that from its side, the new science was deeply impregnated by the religious environment in which it arose. Indeed, without some ulterior religious motives, it is debatable whether modern science would have emerged at all.

These various aspects will be studied in this course. We will not describe the "rise" of modern science and the "downfall" of religion. Rather, we will trace how both religious and scientific ideas were modified under each other's influence; why they sometimes clashed, and sometimes found ways to go together. "Science" and "religion" will not be considered as timeless philosophical abstractions, but as phenomena changing over time. Studying the various debates, our main question will not be who got it right, or how people *should* regard the relation between science and religion; but why people acted as they did, and how the relation between science and religion took shape in practice.

General rules

Students are supposed to keep up with the reading schedule and participate in class discussions. Information given during the meetings is part of the examination. If you have to miss a class, please let me know in advance.

It is the policy of the university to excuse the absence of students that result from religious observances and to provide without penalty for the rescheduling of examinations and additional required class work that may fall on religious holidays. Please see me in advance. Any student in this course who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact me personally as soon as possible so that we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunities.

Assessment

Students are assessed by class participation, essays and a final. Quizzes may be asked to help assess participation. The final is a take home exam. There will be a separate instruction sheet how to write essays. The first essay will ascertain that everybody understands the rules of the game. It is therefore shorter and weighs less heavily. Students can ask to make one extra essay to replace one they feel they made below their ability. (The assignment will be different.) Please ask me within a week after the essay is returned.

Participation:	100 points (20 for each of the five parts of the course)
First essay:	50 points
Essays 2-4:	300 points (100 points each)
Final:	50 points
Total	500 points

Course readings

- Karen Armstrong, *A short history of myth* (Edinburgh etc: Canongate 2005) 1-11, 119-135.
- Peter Harrison, 'Fixing the meaning of Scripture. The Renaissance Bible and the origins of modernity' (2002).
- R.W. Scribner, 'The Reformation, popular magic, and the "Disenchantment of the world"', in: *Journal of interdisciplinary history* 23 no. 3 (Winter 1993) 375-494.
- Max Weber, 'Science as a vocation', *Readings and commentary on modernity* (Malden etc. 2005) 321-327.
- Owsei Temkin, *The falling sickness. A history of epilepsy from the Greeks to the beginnings of modern neurology* (Baltimore: Johns Hopkins Press 1945) 100-113, 137-152.
- Anthony T. Grafton, 'Joseph Scaliger and historical chronology: the rise and fall of a discipline', *History and Theory* 14 (1975) 156-181.
- Gerard Mercator, *Atlas or a geographic description of the world* (Amsterdam 1636, repr. Amsterdam 1968), fragments.
- R.J. Blackwell, *Galileo, Bellarmine and the Bible* (Notre Dame and London: University of Notre Dame Press 1991) 5-22.
- Maurice A. Finocchiaro, *The Galileo affair. A documentary history* (University of California Press 1989) 47-54 and 67-69.
- Johannes Kepler, *New astronomy* (Cambridge etc. 1992) (translated by William Donahue) 58-66
- R. Vermij, *The Calvinist Copernicans. The reception of the new astronomy in the Dutch Republic* (Amsterdam 2002) 241-251, 272-288. Accessible on line at http://www.knaw.nl/publicaties/pdf/991129_11.pdf and http://www.knaw.nl/publicaties/pdf/991129_13.pdf.
- R. Bartlett, *The natural and the supernatural in the Middle Ages* (Cambridge: Cambridge University Press 2008) 35-70.

- Thomas Aquinas, *Summa theologiae. Latin text and English translation*, XL (Cambridge: Blackfriars 1968) 71-85 (part II-2, quaestio 96, on superstitious practices).
- C. Scott Dixon, 'Popular astrology and Lutheran propaganda in Reformation Germany', in: *History* 84 (issue 275) (1999 July) 403-418. (on JSTOR)
- Wouter J. Hanegraaff, *New Age religion and Western culture. Esotericism in the mirror of secular thought* (Leiden 1996) 384-401.
- Gary B. Deason, 'Reformation theology and the mechanistic conception of nature', in: David C. Lindberg and Ronald L. Numbers, *God and nature. Historical essays on the encounter between Christianity and science* (Berkeley etc: University of California Press 1986) 167-191.
- Jonathan Israel, *Radical Enlightenment. Philosophy and the making of modernity 1650-1750* (Oxford 2001) 242-246.
- Baruch Spinoza, *Theological-political treatise*, Samuel Shirley transl.(Indianapolis 1998) 71-79, 83-85 (from chapter 6: on miracles).
- Eric Jorink, 'Insects. The wonders of God in the humblest creatures"', from *Het boeck der Natuere. Nederlandse geleerden en de wonderen van Gods schepping 1575-1715* (Leiden 2006).
- Wiep van Bunge, 'Balthasar Bekker's Cartesian hermeneutics and the challenge of Spinozism', in: *British Journal for the History of Philosophy* 1 (1993) 55-79.
- R.H. Vermij, 'The Flood and the scientific revolution: Thomas Burnet's system of natural providence', in: Florentino Garcia Martinez and Gerard P. Luttikhuisen ed., *Interpretations of the Flood* (Leiden etc. 1999) 150-166.
- Stuart Clark, *Thinking with demons. The idea of witchcraft in early modern Europe* (Oxford 1997) 294-311.
- Johannes Kepler, The secret of the universe
- Richard H. Popkin, 'Newton as a Bible scholar', in: James E. Force and Richard H. Popkin ed., *Essays on the context, nature, and influence of Isaac Newton's theology* (Dordrecht etc. 1990) 103-118.
- B.J.T. Dobbs, 'Newton's Commentary on the Emerald Tablet of Hermes Trismegistus: its scientific and theological significance', in: Ingrid Merkel and Allen G. Debus ed., *Hermeticism in the Renaissance. Intellectual history and the occult in early modern Europe* (Cranbury, NJ, 1988) 182-191.
- The Newton project of the university of Sussex:
<http://www.newtonproject.sussex.ac.uk/prism.php?id=1>

Reading schedule. The schedule may be subject to modification.

1. Introductory topics

- Jan 19 Introduction
21 Armstrong, *A short history of myth*
26 Harrison, 'Fixing the meaning of Scripture'
28 Scribner, 'The reformation'; Weber, 'Science as a vocation'
- Febr 2 Temkin. *The falling illness*.
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2. The Bible and science

- 9 Scaliger, 'Chronology'.
(Essay 1 due)
- 11 Mercator, *Atlas*
- 16 Blackwell, *Galileo, Bellarmine and the Bible*; Finochiaro, *Galileo affair*
- 18 Kepler, from *New astronomy*
- 23 Vermij, *Calvinist Copernicans*
- 25

3. Religious views of nature.

- March 2 Bartlett, *The natural and the supernatural*
(Essay 2 due)
- 4 Thomas Aquinas, *Summa theologica*
- 9 Dixon, 'Popular astrology'
- 11 Hanegraaff, *New Age religion*
- 16, 18: Spring vacation, no class
- 23 Jorink, 'Insects'

4. Religion and the new scientific view of the world

- 30 Deason, 'Reformation theology'
(Essay 3 due)
- April 1 Spinoza, *Theological-political treatise*; Israel, *Radical Enlightenment*
- 6 Vermij, 'The Flood'
- 8 Van Bunge, 'Balthasar Bekker'
- 13 Clark, *Thinking with demons*
- 15

5. Some great scientists.

- 20 Kepler, *Secret of the universe*
- 22 (no class, absence of instructor)
(Essay 4 due)
- 27 Popkin, 'Newton as Bible scholar'; Dobbs, 'Newtons's commentary'
- 29 Newton project
- May 4 t.b.a.
- 6 t.b.a.