HSCI 5990: Graduate Seminar in the History of Modern Science  
Spring 2015

Instructors: S. Moon (Organizer), P. Hale, H. Heyck, K. Pandora, P. Soppelsa

HSCI 5990 explores a variety of topics at the cutting edge of research in the history of modern science and technology. Rather than seeing this course as an introduction to some elusive canonical narrative of the history of modern science and technology, students should understand it as an opportunity to explore subjects of particular relevance in contemporary research which share underlying thematic connections. Taken as a whole, they allow us to inquire into the meanings of “modern” in the history of modern science.

Expectations:

All students are expected to simultaneously sit in on an undergraduate section of HSCI 3023. This is a good way to start to see the variety of approaches one might take to organizing a survey of the modern history of science.

Each week, students will write a response paper on the reading of that week. These papers should be 1000-1250 words long.

In general, these response papers are due by 5pm the Monday before the seminar meeting. (This timing is to allow the instructors to read all of the papers before the 9AM seminar meeting.) Each instructor will let you know how they expect you to deliver the paper (in their mailbox, on D2L, by email, etc.) If instructors have different expectations, they will let you know. If you hear nothing, assume the Monday due date.

All students are expected to turn in all essays, and to do so on time. Failure to do this may affect your grade. Please be in touch with faculty members as soon as possible if you have concerns about completing the work. Faculty pledge to return commented papers promptly (within one week of the class meeting.)

There are a repertoire of useful skills that a response paper can demonstrate. Common skills include for example: the ability to concisely summarize a complex argument accurately; understanding how the reading connects to wider historiographies; a critical response to the arguments/evidence in the reading(s); an exploration of existing critiques of the reading; a critique of the methodology employed, or a direct response to a question posed by the instructor. Other approaches are possible. Each of your instructors will offer you guidance on what they expect to see.

Regardless of the requirements of an individual assignment, we expect all papers to be written in a professional manner, with attention to good presentation (organization, grammar, spelling and like details.)
N.B. Please let Dr. Moon know right away if you are having any problems obtaining the reading for a given week. Students may find it useful to coordinate among themselves if they are sharing a library copy of the book.

**Week 1 (1/13): Organizational Meeting**

**Unit 1: Indigenous Knowledge and the Question of Modernities (Moon)**

**Week 2 (1/21): Sciences from Below: Rethinking Modernity**


**Week 3 (1/27): Indigenous Science?**


**Week 4 (2/3) Indigenous knowledge: Method or Archive?**


**Suggested readings on this subject:**


Unit 2: Disasters (Soppelsa)

Each week, your response paper should reflect on what conceptual work the topic of disasters does, respectively, in the history of science and the history of technology.

Week 5 (2/10) Disasters in the History of Science

Week 6 (2/17) Disasters in the History of Technology (9-11 and 3-11)

9-11
Gabrielle Hecht, “Globalization meets frankenstein? Reflections on terrorism, nuclearity, and global technopolitical discourse”
Scott Knowles, “Lessons in the rubble: The world trade center and the history of disaster investigations in the United States”
Miriam Levin & Rosalind Williams, “Forum on rethinking technology in the aftermath of September 11”


3-11
Nancy Langston, “Japan Forum: Introduction”
Simon Avenell, “From Fearsome Pollution to Fukushima: Environmental Activism and the Nuclear Blind Spot in Contemporary Japan”
Frank Uekoetter, “Fukushima, Europe, and the Authoritarian Nature of Nuclear Technology”
Jacob Darwin Hamblin, “Fukushima and the Motifs of Nuclear History”
Neil M. Maher and Cindy Ott, “Gallery Editors' Note”
Unit 3: Evolution (Hale)

Assessment:

Please submit a 1000-1500 word review of the primary work for each week (Ruse; Bowler; Richards). Your aim should be to summarize the main argument of the author. Please conclude your review with a brief comment on what you found most compelling, interesting, or confounding in the book!

Week 7 (2/24)

For this class we will read Ruse’s classic overview of the ‘Darwinian revolution’, the development and eventual acceptance of evolutionary ideas among British men of science. Originally written in 1979, a second edition was published in 1999, and, despite some signs of age, it is still a very good introduction to the period.

Reading:


and reviews:


Week 8 (3/3)

Throughout his career Peter J. Bowler has sought to undermine the idea of the Darwinian revolution. He does not deny that evolution became generally accepted among men of science by the end of the 1860s, but insists that the ideas that prevailed were not ‘Darwinian’. (See also Bowler’s *Eclipse of Darwinism*, in which he makes a similar argument, and his 2013 *Darwin Deleted*, in which he writes a counter-factual history of biology without Darwin).

Bernard Lightman, who has written extensively on the popularisation of science, has to some extent followed in Bowler’s footsteps. Echoing Bowler’s “non-Darwinian” thesis, he has argued that popularisers were similarly non-Darwinian. In a new edited
work, he and the historian of music Bennett Zon, have extended this analysis into the broader reaches of Victorian culture – in novels, plays, music, dance, theatre, architecture, art, photography, museum display and more; – in all of these arenas we see a thoroughly non-Darwinian evolution permeating Victorian Britain.

**Reading:**


**Further reading:**


Week 9 (3/10) Robert J. Richards has long argued that we need to take account of the influence of German idealism and romanticism in British biology (See his *Romantic Conception of Life* for a detailed study of this). In this book, Richards gives an overview of the development of evolutionary ideas, locating Darwin’s views in this history of ideas. His conclusions speak to the ‘non-Darwinian’ thesis advanced by Bowler and Lightman.

**Reading:**


Week 10 (3/17) Spring Break
Unit 4: Anthropology and Empire (Heyck)

Week 11 (3/24) Anthropology and Empire Pt. 1


Week 12 (3/31) Anthropology and Empire Pt. 2

Unit 5: Blind Spots in the History of Science at the Beginning and the End of the Modern Survey: Interdisciplinary Remedies (Pandora)

Week 13 (4/7)

Read:
Susan Scott Parrish, American Curiosity: Cultures of Natural History in the Colonial British Atlantic World (U of North Carolina Pr, 2006)

Supplementary:
Barbara Maria Stafford, "Exhibitionism" in her Artful Science: Enlightenment Entertainment and the Eclipse of Visual Education (MIT Pr, 1996)

Week 14 (4/14)
Steven Epstein, Impure Science: AIDS, Activism, and the Politics of Knowledge (U of California Pr, 1996)

Supplementary:
Excerpts from Gareth Mathews, The Philosophy of Childhood (Harvard U Pr, 1996)

Week 15 (4/21) Students returning from Junto…. No class.
Week 16 (4/27) Final week of class – Informal discussion.