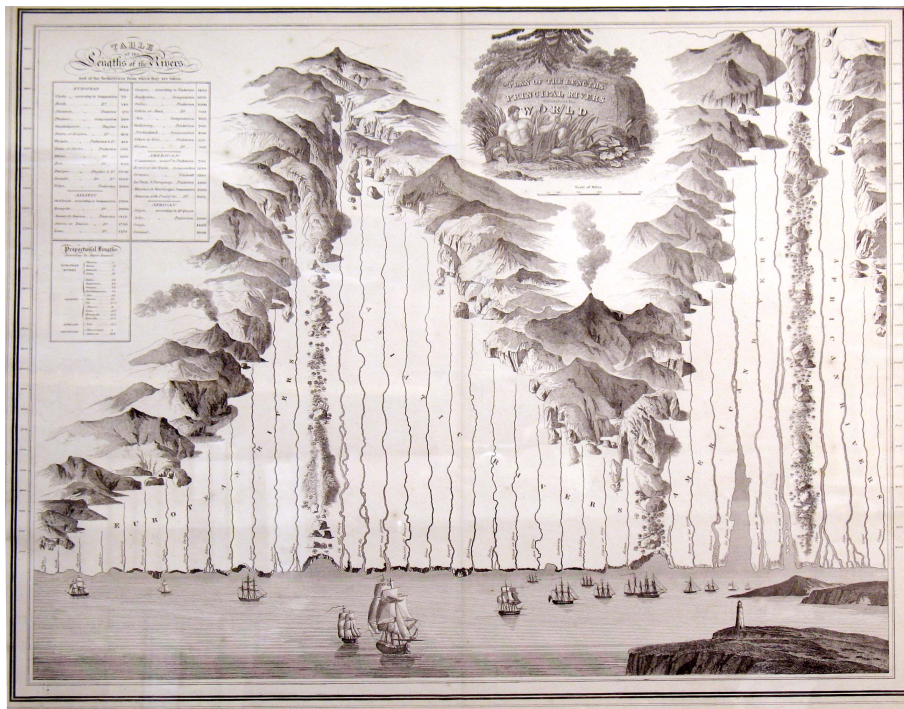


History 506
Graduate Seminar:
Topics in the History of Science and Technology
Spring 2019

Professor Michael S. Reidy
2-170 Wilson Hall
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Office Hours: Mon 1-3 or by appointment

Course Overview:

The aim of this course is to familiarize graduate students with a number of the central themes in the history of science. We will begin with a history of the discipline itself, including an analysis of the main shifts in scholarship in the past thirty years. We will then focus on particularly illuminating case studies in the history of science. We will end the course with the presentation of our work in front of an informed audience of our peers. One major theme throughout the course will be the interplay of social, cultural, intellectual, political, and geographical forces that have coalesced to produce our modern scientific and technological culture.



Course Dynamics:

The course will meet once a week to discuss and analyze topical readings. This is a course heavy on reading and discussion; **THUS, IT IS IMPERATIVE THAT YOU ATTEND CLASS.** Students should come to class well-prepared, having read the material closely and critically.

Assignments

Journal Article Review: Students will search journals in the history of science, chronologically backward from the most recent issue, to create a bibliography of the most recent work in their chosen subject matter. Students will write a 1,000-word essay, outlining approaches and themes found in the articles.

Book Review Essay: Student will write a 3,000-word publication-style essay review (based on the essay review guidelines in *HSNS*) of three books focused on a specific topic or theme. The books must have been published in the last five years, unless this isn't helpful for the student's research.

Research Paper: students will write a research paper of between 8,000 words, focusing on a topic of your choice, though it must be a new project, based on primary sources, and related to the overall themes of the course. You are encouraged to meet with me early in the semester to map out your topic and to discuss sources.

Peer Review: Every student will be required to critique other students' assignments throughout the course.

Research Presentations: The last two weeks of the course are dedicated to the presentation of your research in front of the class.

Required Readings:

Books:

Thomas Kuhn, *The Structure of Scientific Revolutions* (U. of Chicago P., 2012)

Bruno Latour, *Science in Action* (Harvard U. P., 1988)

Peter J. Bowler, *Evolution: the History of an Idea* (U. of California P., 2009)

Conevery Valencius, *The Lost History of the New Madrid Earthquakes* (U. of Chicago P., 2015)

Peter Galison, *Einstein's Clocks, Poincaré's Maps: Empires of Time* (W. W. Norton, 2004)

Readings on my website (mountainsandminds.org):

In addition to the above texts, all other readings will be place on my website.

Grades:

Class Participation: 20%

Journal Article Essay: 20%

Book Review Essay: 20%

Peer Review: 10%

Research Paper: 30%

TENTATIVE SCHEDULE OF TOPICS, READINGS, AND ASSIGNMENTS

WEEK ONE

January 14: Introduction; Syllabus; the Historiography of the History of Science

WEEK TWO

January 21: **Martin Luther King Day**

WEEK THREE

January 28: The Origins of the Field

Readings: Thomas Kuhn, *The Structure of Scientific Revolutions* (1974 [2012])

Chapter Presentations

WEEK FOUR

February 4: Social Construction of Scientific Knowledge

Readings: Bruno Latour, *Science in Action* (1988)
Reidy, *Tides of History* (2008), "Tides of Empire," pp.

WEEK FIVE

February 11: The Darwinian Revolution: From Biology to the Modern Synthesis

Readings: Peter J. Bowler, *Evolution: the History of an Idea* (2009), pp.

WEEK SIX

February 18: The New Synthesis

Readings: E. O. Wilson, *Sociobiology: The New Synthesis* (1975), "Man: From Sociobiology to Sociology," pp. 271-301.
Richard Lewontin, *Biology as Ideology* (1991), "Causes and their Effects," pp. 41-57, and "A Story in Textbooks," pp. 87-104.
Stephen J. Gould, "Sociobiology: The Art of Storytelling," *New Scientists*, (November 1978), pp. 530-533.
Julia Thomas, "History and Biology in the Anthropocene: Problems of Scale, Problems of Value," *The American Historical Review*, 119 (2014), pp. 1587-1607.

WEEK SEVEN

February 25: **President's Day**

WEEK EIGHT

March 4: **NO CLASS – Individual Meetings**

Journal Article Review due

WEEK NINE

March 11: History of Science and Environmental History

Readings: Conevery Valencius, *The Lost History of the New Madrid Earthquakes* (2015)

WEEK TEN

March 18: **NO CLASS – Spring Break**

WEEK ELEVEN

March 25: Physics and Technology

Readings: Peter Galison, *Einstein's Clocks, Poincaré's Maps: Empires of Time* (W. W. Norton, 2004)

WEEK TWELVE

April 1: **April 1: NO CLASS – Morocco**

WEEK THIRTEEN

April 8:

Readings:

WEEK FOURTEEN

April 15: Agnotology and the History of Science

Book Review Essay Due

Readings: Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Harvard U. P., 2004). Selections

Naomi Oreskes and Eric Conway, *Merchants of Doubt*. Selections

Josh Howe, "The Stories We Tell," *HSNS*, Vol. 42, no. 3 (2012): pp. 244-254.

Paige Madison, "The Paleontological Imagination," *HSNS*, Vol. 47, no. 2 (2017), pp. 255-262.

Reidy, "The Most Recent Orogeny: Verticality and Why Mountains Matter," *HSNS*, Vol. 47, no. 4 (2017), pp. 578-587.

Will Wright, "Geological Semantics and the Naming of the Anthropocene," *HSNS*, Vol. 48, No. 1 (2018), pp. 110-122.

Birdie Kushner, "The Question Concerning Reproductive Technology," *HSNS*, Vol. 48, No. 4 (2018), pp. 526-535.

WEEK FIFTEEN

April 22: **Individual Research Presentations**

WEEK SIXTEEN

April 29: **Individual Research Presentations**

Research Projects Due