University of Wisconsin-Madison
History of Science 720:
Proseminar in Historiography and Methods
Fall 2020
Wednesdays 8:50-11:50 a.m.
Curti Lounge, Humanities Building

Professor Lynn K. Nyhart
lknyhart@wisc.edu
5117 Mosse Humanities Building
Virtual Office hours: Tuesdays 3-5 pm and by appointment

This course provides an introduction for graduate students to the history of science, medicine, and technology (HSMT). It gives a brief overview the field’s major themes and issues, both historical and current, as well as introducing you to the range of approaches scholars have used to address their questions.

Course Learning Outcomes:
Graduate students completing this course will:
• practice a variety of reading strategies
• gain familiarity with classic texts, topics, and approaches in History of Science, Medicine, and Technology (HSMT)
• become acquainted with current research issues in the field
• be able to articulate, critique, or elaborate a range of theories, research methods, and approaches to inquiry in HSMT (HSMT MA Learning Goal #1)
• Recognize and apply established principles of ethical and professional conduct, (HSMT MA Learning Goal #8), especially through appropriate citation practices.

Course Requirements:
A. Reading: Each week, we will read several articles, chapters, or a book in common. You are each responsible for reading and thinking about all of these. In addition, for most weeks through Nov. 11, there is a list of “supplementary readings.” These include both additional articles or book chapters on the subject at hand and also whole books (or “the rest of the book” when we’ve read just a small portion of it). I expect you to read and report on at least one of these books – which one is your choice (see requirements B and C.3 below). We will practice several different approaches to reading over the semester, as you’ll see from the course details.

B. Class Attendance and Participation (25% of your final grade, including oral contributions about the book you’re reviewing independently). In a seminar that meets only once a week, there is little luxury for missing classes. I need to hear a good reason why you must miss a seminar session. Your mere presence, however, does not suffice: you need to come to the discussion prepared to add your thoughtful comments. This means giving yourself enough time to think about the readings as well as pass your eyes over them, and to think about how they play off one another. What do they have in common? Do they conflict? What different angles on similar issues, or similar angles on quite different topics, do they offer? What questions do these readings raise for how to do HSMT?
C. Writing:

1. **Due September 2** (first class; required but ungraded): a 1-page reflection (300-500 words) on what you find exciting or inspiring about HSMT. This is not intended to duplicate the “statement of purpose” you submitted in your graduate school application. Rather, it is supposed to tell me what about the field grabs you. Is there some idea that just blows you away? Some historical writing you know that you want to emulate? Something about teaching that you are passionate about? Tell me why this field matters to you. Please submit to Canvas assignment “About me.”

2. Ten reading responses (total = 30%) for different weeks with assigned readings (this means you get a few opportunities to pass on doing a reading response, which you can take whenever best suits your needs, except Oct. 7, which is required for everyone). The primary aim of the reading responses is to get you thinking about what you’d like to talk about in advance of class, and we’ll use the reading responses to help set the agenda for each discussion session.

These reflections should be 300-500 words long and can be informal in nature, but should use full sentences with correct grammar and American-English spelling and punctuation. They may touch on issues such as: common themes or arguments in the readings; contrasts among the readings; the purpose or value of the readings and/or approaches; things that you didn’t understand in the readings; or questions that you would like to discuss in class. You might also reflect on your experience practicing a certain kind of reading. Please post your reading responses to the Canvas discussion forum for the week by **noon on Tuesday** to allow time for your classmates and me to read them.

3. A book review (10%) of 700-900 words on a “supplementary” book of your choice—the length of a typical Isis book review. I recommend you study a bunch of these reviews in advance for possible models. Your review should summarize the main arguments and sources of evidence of the book and very briefly discuss what you see as especially praiseworthy or problematic. Since most of the books you are choosing from have all been out for a while, it would be artificial to review it as if it were a fresh, new book, but I don’t expect you to do a big literature search to see what others have said or what its impact on the field has been. Rather, the point is to provide a summary of the argument and reflection on issues for your fellow grad students, so they can benefit from your reading. **Due in Canvas by the class meeting when the book is listed.** All book reviews must be completed by **Nov. 11.** If you wish to report on a book listed later in the semester, please nevertheless have the review submitted by Nov. 11.

4. Reflections on reading academically (5%), 750-1000 words. What have you learned about reading strategies and styles? What do you find yourself good at? What did you improve on over the semester? **Due in Canvas by noon, Tuesday Dec. 8.**

5. Final review essay (30%). This will be a historiographical essay that reflects on a particular historical question, topic area, or methodological approach. You can reflect either on texts and issues that we have discussed in class or on a body of literature in history of science, technology, and/or medicine (perhaps relating to your research interests) that we did not cover in class. Keep in mind that this is not intended to be a research paper; extensive primary source work should not be necessary. It may incorporate the book you reviewed individually—you will be treating it differently here. Note that this essay review combines the skills of book reviewing and comparison/contrast you’ll already have practiced in this course through the book review and reading responses. Models: The journal Historical
**Studies in the Natural Sciences** has longer, thematic reviews that provide good models. Your paper should be about 4200-4500 words long.

A standard way to write such a review would be:

I. Overview of the works you are studying: what do they cover? What do they say about their topic? What is THEIR agenda? To what historiographic conversations do they seek to contribute? This is the same information you would provide in an individual review.

II. Putting the works in conversation with one another. What makes them different from one another? What is their common ground? Do these show historiographic change over time? Do they analyze the same or similar events/topics from different perspectives? (Can you imagine a thought experiment of applying the methods/approaches/insights of one to the topic of another?)

III. How do these works speak to YOUR agenda/interests? (Could be a conclusion.)

Due dates: (1) **first 3 weeks of October**: come talk to me about your proposed topic area and possible books.

(2) **Oct. 23, by 5 pm in Canvas**: one-paragraph proposal about interest area and books (why these books? How do they work together?), with books listed in Chicago Bibliography style.

(3) “**First-final**” draft due in Canvas by 5 pm Friday, Dec. 4. I will return it with comments and a provisional grade by Dec. 10. If you are satisfied with the grade, you can leave it as is; if not, your “**final-final**” version is due Dec. 16.

**Books**: College Library is no longer placing physical books on reserve. The first two books on the list below are not available online at UW-Madison, and as of early August, ILL is not yet providing physical copies of books, so I suggest you buy these and/or share copies, if you are comfortable doing that (consider ordering them through a local bookstore such as A Room of One’s Own Books). The rest are available as electronic books through the UW library system, but you might find it more convenient (and easier on the eyes!) to buy them. All other items—book sections or articles are uploaded or linked to our Canvas course.

Books to consider purchasing:


I am committed to accessibility and fairness for all students. If you have any conflicts due to religious holidays or need disability accommodations, please let me know within the first two weeks of the course so we can work out accommodations.
Note: This 3-credit course has 3 hours of group meetings per week (each 50 minute segment of seminar counts as one hour according to UW-Madison's credit hour policy). The course also carries the expectation that you will spend an average of at least 2 hours outside of class for every hour in the classroom. In other words, in addition to class time, plan to allot an average of at least 6 hours per week for reading, writing, and preparing for discussions for this class.

Course Overview:

I. Introducing the History of Science, Technology, and Medicine

(1) Sept. 2: Reading Historiographically in the History of Science
(2) Sept. 9: History of Science and Its Traditional Neighbors

II. Landmark Moments in the History of the History of Science

(3) Sept. 16: HSTM: Apolitical or Political?
(4) Sept. 23: T. S. Kuhn, *The Structure of Scientific Revolutions*
   Consult with me during the first 3 weeks of October about final paper
(6) Oct. 7: Social Constructionism II: Systems of Knowledge Production
(7) Oct. 14: Globalizing the History of Science, Medicine, and Technology

III. Systems of Power/Knowledge

(8) Oct. 21: Fascist Nation, Empire, and STM: Tiago Saraiva’s *Fascist Pigs*
   Final Paper proposal due Oct. 23 by 5 pm in Canvas
(9) Oct. 28: Postcolonial Politics, Governance, and STM
(10) Nov. 4: Technoscientific Systems, Infrastructure and Maintenance
(11) Nov. 11: Race as a Knowledge/Power System: Rana Hogarth, *Medicalizing Blackness*

IV. People Power

(12) Nov. 18: Science beyond Boundaries: Britt Rusert, *Fugitive Science*
(14) Dec. 2: Community STM

“First-final” Paper due Friday, Dec. 4
(15) Dec. 9: Wrap-Up
Reading Reflections Paper due by noon, Tuesday Dec. 8 in Canvas

“Final-final” paper due Dec. 16
I. Introducing the History of Science, Technology, and Medicine

Sept. 2: Reading Historiographically in the History of Science
At this session we will introduce ourselves and our interests in history of science, technology, and medicine. We will have a first taste at an historiographic overview, and we will talk about different types of reading.

Required Readings:
"What is historiography and why is it important?"
  n.d.: https://www.reddit.com/r/AskHistorians/comments/3ew9t8/what_is_historiography_and_why_is_it_important/

“Historiography” at http://qcpages.qc.cuny.edu/writing/history/critical/historiography.html (For a structured example of an historiographic essay, please click on “How to write a historiographic essay” at the end of this post.)


Optional:

Paul Edwards, “How to Read a Book, v5.0.” pdf

(2) Sept. 9: History of Science and its Traditional Neighbors

Reading Strategy: In addition to reading for “content,” here you should practice reading for context: in what sort of publication does this work appear? How is this reflected in the piece of writing itself? What presentation and narrative choices do you see the author making that might be shaped by its publication context? What can you learn (quickly) about the author online? To gain a better sense of this context, you might look online at the larger work itself, whether a journal issue or a handbook. (Some ways you can look up the work are via the library catalogue, the publisher’s website, Google Books (preview) or amazon.com. Not all ways are likely to work equally well.)


Supplementary:
II. Landmark Moments in the History of the History of Science

(3) Sept. 16: HSTM: Apolitical or Political?
Under what circumstances have science and history been tied to the ideal of political “neutrality”? How might we understand this very ideal itself as political?

Reading Strategy: Please read texts especially for key terms. What do these authors mean by “Marxist critique,” “normative structure,” “scientific ethos,” and “objectivity”? What made these powerful terms shaping the history of science in the first half of the twentieth century?


Supplementary:
Peter Novick, That Noble Dream: The AObjectivity Question@ and the American Historical Profession (NY: Cambridge University Press, 1988).


(4) Sept. 23: T. S. Kuhn, The Structure of Scientific Revolutions
What has made this book a foundational one? Why did it excite so many people from different disciplines, but especially history of science?

Reading Strategy: first “gut,” then read through more closely for Kuhn’s argument. Then read the other texts to get a sense of the book’s varied impact.


Michael Gordin and Erika Milam, “A Repository for More than Anecdote: Fifty Years of The Structure of Scientific Revolutions,” Historical Studies in the Natural Sciences, 2012, 42(5): 476-478. Use this as a launching-point to browse the articles in the same issue, through p. 580. Available only online (via UW Library), one article at a time (!).

What is social about social constructionism? What is constructed? What was the point and why was it controversial?

**Reading Strategy:** Reading for structure. Golinski’s book is a synthesis. How does he organize an enormous amount of information into chapters and sub-sections within his chapters?


**Supplementary:**


(6) Oct. 7: Social Construction II: Systems of Knowledge Production

This week we are using more Golinski as a launching-point, and then examining how some of the analytical categories and approaches he discusses have been pursued in new directions.

**Reading Strategy:** Summary, analysis, connection. Although I invite you to read all of the readings, for reading response purposes you will be splitting up these “new directions” to report on to one another. Your job here is to identify what are the prime historical objects and modes of analysis in these authors’ presentations of the dynamics of knowledge production, and to connect them (via comparison/contrast) to at least one of the approaches or themes that Golinski has set out (either this week or previously).

Everyone read: Golinski, *Making Natural Knowledge*, chs. 3, 5

Primary Responsibility to be divided up:


Supplementary Reading:

(7) Oct. 14: Globalizing the History of Science, Medicine, and Technology
This week we have four shorter historiographic pieces, with a fair amount of overlap but also making some quite distinct points, and two historical articles. The aim of our seminar discussion will be to see how we might put the historical articles in conversation with an issue or issues raised in the historiographic articles. What might the former exemplify, develop, contradict, or expand upon in the latter? How does it bring historical flesh to the historiographic issues at hand? Feel free to try out answering these questions using one of the historical articles in your reading response.

Historiographic writings:

Historical articles:

Supplementary Reading:


### III. Systems of Knowledge/Power

**8 Oct. 21: Fascist Nation, Empire, and STM**

*Reading Strategy:* For the first time in a long time, you will be reading a single book! Here the exercise is to read with special attention to argument, structure, and evidence. What is Saraiva’s argument? How does he organize it? What sorts of sources does he use? How does he marshal them as evidence for his argument?


**Supplementary Reading:**


**9 Oct. 28: Postcolonial Politics, Governance, and STM**

*How do these authors represent the relationship of the state to STM? How do they understand relations of space to governance and power?*

*Reading Strategy:* Double-reading: reading an article for its own argument/perspective, and putting it into conversation with other approaches within the same theme.


**Supplementary Reading:**


Noémi Tousignant. *Edges of Exposure: Toxicology and the Problem of Capacity in...*
(10) Nov. 4: Technoscientific Systems, Infrastructure and Maintenance

Much of the history of STM is focused on change. But the modern world has systems, often hidden, that need to be maintained. Infrastructure and maintenance have become hot topics recently, as historians have explored how technologies, organisms, and even bodily parts need maintenance if they are to remain useful to science and the world. How does our view of STM change if we focus more on sustaining systems than on making new ones?

**Reading Strategy:** Double-reading (see above).


**Supplementary:**

(11) Nov. 11: Race as a Knowledge/Power System

How were science and medicine deployed in the emergence of systemic racism?

**Reading Strategy:** Reading for argument, evidence, and structure.


**Supplementary:**
Jenny Reardon, *Race to the Finish: Identity and Governance in an Age of Genomics*
IV. People Power

(12) Nov. 18: Science beyond Boundaries
How does our understanding of the process of scientific and technical knowledge-making change when we look beyond the “usual suspects”—professional scientists? How does this invite us to think differently about the purview (and purpose) of HSTM?

Reading Strategy: Reading for argument, evidence, and structure.


Supplementary Reading:

(13) Nov. 25: Woman Power
How have women made a difference in the history of STM? In its historiography? (See supplementary readings.)

Supplementary:

(14) Dec. 2: Community STM

Supplementary:

(15) Dec. 9: Wrap-up.