

HISTSCI 130. Heredity & Reproduction

Fall 2020, Tuesday/Thursday, 9 am-10:15 am EST, Zoom

Professor Sarah S. Richardson

Office hours: by appointment ([DM on Slack to arrange](#))

Course site: <https://canvas.harvard.edu/courses/78746>

Slack: <https://app.slack.com/client/T018H3HMXT9/C018Y20H6JX>

Course overview

This seminar has two aims. First, it offers a long view of the intellectual history of the Western sciences of human heredity and reproduction from Aristotle to the mid-twentieth century. Participants will gain a broad understanding of the history of thought and scientific discovery at the nexus of heredity and reproduction. Class discussion will take up themes of the nature of scientific claims to knowledge; conceptions of gender, race, class, and sexuality in the sciences of heredity and reproduction; and interactions between biology, politics, and culture.

Second, the course offers a practicum in working with primary source historical texts. Participants will read foundational historical texts in direct encounter. Our discussions of classic philosophical, scientific, and literary sources will engage their substantive content as well as broad questions of methodology in the history of science and the pleasures and challenges of reading and interpreting such texts. We will also consider how the availability of digitized online versions of rare historical primary source texts is changing norms and practices of reading, teaching, and scholarly research in the history of science.

Texts

Note: *The professor will provide digital versions of all readings; however, in several cases (marked with an *) the professor recommends that you obtain a hard copy.*

- Aristotle, *Generation of Animals*, 4th C BCE *
- Ambroise Paré, *On Monsters and Marvels*, 1573 *
- Nicholas Malebranche, *Treatise Concerning the Search After Truth*, 1694.
- Jane Sharp, *The Midwife's Book*, 1671.
- William Harvey, *Anatomical Exercises on the Generation of Animals*, 1651
- Jan Swammerdam, *The book of nature, or, The history of insects*. London, 1758
- Anthony Leeuwenhoek, "An Abstract of a Letter from Mr. Anthony Leeuwenhoek of Delft about Generation by an Animalcule of the Male Seed, 1683
- Pierre Maupertuis, *Vénus Physique*, 1745/1756
- William Osmer, *A dissertation on horses*, 1756
- William Paley, *Natural theology*, 1802
- Thomas Malthus, *An essay on the principle of population, as it affects the future improvement of society*, 1798 *
- Montesquieu, *Spirit of Laws*, 1748

- Samuel Stanhope Smith, *An essay on the causes of the variety of complexion and figure in the human species*, 1787
- Jean-Baptiste Lamarck, *Zoological philosophy: an exposition with regard to the natural history of animals*, 1809 *
- August Weismann, *Essays Upon Heredity*, 1891-1892
- Walker, Alexander. *Intermarriage*, 1839
- Hester Pendleton, *The Parents' Guide; Or, Human Development through Pre-Natal Influences and Inherited Tendencies*, 1876
- Charles Darwin, "Provisional Hypothesis of Pangenesis" in *The Variation of Animals and Plants Under Domestication*, 1868
- Orson Squire Fowler, *Creative and Sexual Science*, 1870
- Francis Galton, *Hereditary genius: an inquiry into its laws and consequences*, 1870
- William Keith Brooks, *The Law of Heredity*, 1883.
- Max Nordau, *Degeneration*, 1895
- Karl Pearson, *National life from the standpoint of science*, 1905
- Charlotte Perkins Gilman, *Women and economics*, 1898 *
- Havelock Ellis, *Sex in relation to society*, 1910
- James Weir, Jr., "The Effect of Female Suffrage on Posterity," 1895
- Aldous Huxley, *Brave New World*, 1931 *
- Shulamith Firestone, *The Dialectic of Sex*, 1970 *

Course requirements

- Attendance, participation, and evidence of close reading and preparation (10%)
- 10-minute class presentation (10%)
- Weekly reflection of 250-500 words, due each Wednesday – *you can skip 2* (20%)
- 3 papers or multimedia projects, 1500-2000 words (~6-8 pp) or equivalent deliverable with professor's approval (60%)

Class format

This class is fully synchronous and will meet live from 9-10:15 am EST on Tuesdays and Thursdays throughout the semester on Zoom.

This seminar is primarily designed for undergraduate students, but it is open to graduate students with closely allied interests. Class size is restricted to 10.

On Tuesdays, we will examine one or more primary source texts selected from the list above. One student will start our discussion with a 10-minute presentation. On Thursdays, we will continue our discussion of that text, with one additional short text assigned by the professor following Tuesday's discussion. We will often also take time on Thursdays for small-group work on your papers and projects.

Texts, and reading selections from those texts, will be selected based on the composition of the class, including student background, stage of study, and areas of interest. Additional readings assigned for Thursday will be selected by the professor based on the direction of our Tuesday discussion.

Workload/workflow

Each week, you should be prepared to discuss a book-length body of historical material on Tuesday, deliver a critical reflection on the week's reading and Tuesday's class discussion by Wednesday evening, and read one further shorter piece before Thursday's meeting. Often, you'll also be expected to have some elements of one of your essays-in-progress ready to share in a working group on Thursday.

Please carefully consider whether this schedule of deliverables and workflow will work for you this semester under conditions of remote education.

Flexibility

Considerable flexibility is offered to help you tailor this course to your interests and circumstances under conditions of remote learning.

There are three essay assignments for this class, detailed below. You can choose the order in which you complete them.

You can skip any two Wednesday reflections, no permission or notice required, with no consequence for your final grade.

Students working on senior theses or dissertations who wish to pursue a single topic in a longer research paper can work with the professor to develop a project in lieu of the three essays.

Group projects are a possibility; the professor will work with the group to develop expectations equivalent to the essay and a plan for fair assessment of individual contributions.

When making selections for each week's readings, the professor will take into consideration student interests and emerging themes organic to our class discussions.

Deadlines are firm, as is the requirement to attend seminar live on Tuesdays and Thursdays.

Remote community

We will experiment with several approaches to sustain our community of inquiry over the course of the semester.

1. **Slack:** We'll use Slack as a hub all course communication, including our Wednesday discussion posts and informal sharing of related materials and news items, sudden jolts of insight, and questions of any sort. (Individual questions to the professor, including requests for meetings, should be submitted as DMs on Slack, not by email.) Download Slack to your computer and phone and stay engaged with the flow of ideas there.
2. **Shared note-taking in a Google doc:** During seminar, we'll build a record of our conversation, our discoveries, and our open questions in a shared Google document. At the conclusion of the course, you'll be able to take these materials with you for your future endeavors.
3. **Small working groups:** Depending on course size and dynamics, you'll be assigned to a small working group to support your writing and study. This group will meet regularly inside and outside of course time to talk through assignments and readings and reflect on your course experience. One possibility is that your working group may consider doing a group project together.

We will learn together how to effectively learn and grow through remote teaching. The professor will be regularly surveying the class to learn more about what's working and what could be improved in our experiment in remote learning.

Assignment guidelines

1. Participation (10%)

Vigorous, attentive, and constructive participation in class discussion and respectful listening; demonstration of deep reading and thoughtful, engaged approach to course readings and concepts; 100% attendance expected except for illness; more than 2 absences for any reason, including illness, may result in being dropped from the class.

Ways to show participation beyond class discussion:

- attending office hours
- forming a study group
- taking class notes and sharing notes on our Google doc
- referring to a classmate's Wednesday reflection in class discussion
- writing a response paper after attending a course-related talk or event
- discovering a course-related Harvard archive or collection and sharing it with the class
- reading beyond the required text selection and providing a summary or outline on the course website
- sharing news or other media directly related to class discussions on Slack, and offering some analysis or perspective that might provoke thought and further discussion
- writing down something a classmate said in class and reflecting on it on Slack later
- peer-reviewing rough drafts of papers

- writing a self-assessment of your class performance so far and sharing with the professor
- meeting with your working group outside of class to plan a paper and/or to write a paper
- tweeting or blogging about the class
- designing a quiz that your class actually has to take about the reading for that day & going over the answers to the quiz with the classmates
- compiling a list of online resources related to a class topic
- sharing tips for accessing, reading, and taking notes on digitized historical texts
- hosting a virtual film viewing, museum excursion, or other outing related to course themes
- other ideas?

2. In-class Presentation (10%)

Each session will begin with an informal student-led introduction to the text(s) under discussion. Please speak for ~5 minutes and screenshare a 1-page handout with key concepts, page references to key passages, and discussion questions to facilitate our session. The presenter will play an active role, alongside the professor, in facilitating the discussion that day. Advance meeting with the professor is recommended.

3. Weekly writing: Wednesday reflection , 250-500 words (20%)

Due: 12 noon Wednesdays, posted to Slack

Wednesday reflections provide an opportunity for you to formulate questions and responses to our weekly readings and discussions in the space between our two weekly meetings. You have considerable freedom in how to structure these reflections, however, your contribution should connect in concrete ways to our text and our class dialogue about that text. Below are two prompts to guide your reflection-writing.

Prompt: Select a passage from the reading, cite it word for word, identify exactly where it occurs (e.g., page number), then ask a question about any aspect of the passage. Explain why you ask that question. Then, try to answer it in 250-500 words.

Prompt: Refer to a disagreement, debate, or open question in our class discussion. Charitably reconstruct each side or aspect of the question, as you see it. Then take a position, referring directly to the text as much as possible in your discussion.

Reflections will be assessed based on the perceptiveness of your questions and the creativity of your proposed answers – not whether they are “correct.” We will refer to your reflections in class discussion.

Requirements:

- Post at least one reflection in the Slack thread for the week by 12 noon on Wednesdays
- 250-500 words
- You may skip 2 posts with no consequences for your grade. There is no need to ask for permission.
- Be active in the Slack discussion and respond to others' posts. These additional postings need not conform to length/content requirements of the required posts.

4. Written or Multimedia Essays (20% each)

Three 1500-2000 word (~6-8 pp) written *or* multimedia essays (podcast, short film, cartoon strip, or other – see professor for guidelines) are required for this class. These are analytical essays allowing considerable creative freedom as long as you advance a well-structured argument using the materials provided by this course. There are three paper assignments. You can complete them in any order.

1. Two texts in dialogue

Pick any two primary source historical texts included in the required or recommended readings for this course. Charitably explicate the aims of each text and craft a creative analytical essay comparing and contrasting them. You might consider their methodologies, argumentative strategies, rhetoric, substantive arguments and conclusions, and/or intended audiences. A successful essay will evince how, when placed in dialogue, these two texts can help illuminate each other.

2. “How to read this text”

One of the objectives of this course is to appreciate the challenges of reading difficult primary source texts in the history of science from periods other than our own. Pick any one of the primary source historical texts included in the required or recommended readings for this course. Research the text and its author. Produce a guide to the text for a generally educated but naïve reader. Your essay should include background on the author and the material history of the book, information about the impact of the text in its time and today, an overview of the structure and content of the book’s argument, discussion of key concepts or terms unique to the text, and an annotated bibliography (one descriptive sentence for each source) of a minimum of 4 scholarly secondary sources on the text. A successful essay will offer a clear, engaging, and accessible guide to an esoteric text for a naïve reader.

3. Current science in context

Many areas of present-day research in genomics, reproductive biology, and the brain and behavioral sciences resonate with the topics and themes taken up by the historical authors we are reading in this course. Pick a well-defined area of present day scientific research of interest to you and briefly explicate its central claims, citing popular and/or

scientific sources. Use one or more of our historical texts to place the new findings in the context of the deep intellectual history of the science of heredity and reproduction. Explain one or more larger historical debates to which the new research contributes. You might consider questions such as: How did historical authors anticipate scientific findings today? Can they offer conceptual resources for understanding the implications of new research? What are the similarities and dissimilarities with claims made in earlier eras? A successful essay will demonstrate, through a focused inquiry, how the history of science can offer clarifying context for understanding new scientific claims today.

Writing guidelines:

- An excellent essay will be persuasive, creative, elegantly written, and show proficiency with central course concepts and methods of analysis
- Advance an original argument or analysis using only your own ideas
- State your thesis clearly
- Use specific examples, quotations, and details to support your argument
- Clean grammar and spelling

Formatting guidelines:

- 1500-2000 words of main text
- MS Word .doc or .docx format
- Include complete citations in a consistent, recognized academic citation style of your choice
- References, footnotes, and endnotes are not included in page count and should be placed at the end of the document
- Double-spaced
- 12 pt Times New Roman font
- 1 inch margins
- Name and page number on the upper right header of each page
- Upload to Dropbox on the course iSite

Multimedia essays:

- *Equivalent* of 1500-2000 words of main text (3 minute film, 3-5 minute podcast, 8-10 frame cartoon -- confirm with professor)
- 1-2 page (double-spaced) descriptive summary/caption
- Include a *storyboard* detailing your planning and aesthetic choices
- Include complete citations in a consistent, recognized academic citation style of your choice.
- Grading: 65% content; 35% execution; one revision and regrade permitted

Course policies

Course website:

Slack and the course website are the primary tools for this course. Set up notifications, download to your phone, and check frequently.

Class announcements:

Announcements will be posted on Slack. You are responsible for checking Slack regularly.

Class attendance:

On-time attendance, preparation, and full participation are expected. Because this is a small class, multiple absences or late arrivals are grounds for dismissal from the course and failure to pass.

Required reading:

This course requires a moderate amount of reading. However, the reading is often challenging and will go slowly. Plan accordingly.

Late policy:

Deadlines are firm. Late assignments incur a 10% penalty for the first day and 5% after that. The professor reserves the right not to provide written feedback on late work. Extensions are granted only with advance notice and usually only in cases of documented illness.

Office hours:

I encourage you to visit me in “office hours” during the semester. I will largely do these by phone because we are all Zoomed out. The most convenient time for me is immediately following class on Tuesday and Thursday. DM me on Slack to set up a time.

Email/corresponding with the professor:

Do not use email. Please message me on Slack. It is best to visit me in office hours if you have detailed questions about the assignments or readings.

Technology:

Distraction is a major issue with remote learning. Do your best to release yourself from social media, email, and other messaging functions by disabling them during class time. Find a set-up that will allow you to view course materials, your notes, and the Zoom screen simultaneously. Please bring hard copies of texts and hand notes to class whenever possible.

Statement on disabilities:

If you have a documented physical, psychological, or learning disability, please notify me within the first two weeks of the semester regarding reasonable and appropriate academic accommodations to help you succeed in this course.

Statement on academic honesty:

Academic dishonesty (cheating, fabrication, plagiarism, facilitating dishonesty) is prohibited and will lead to dismissal from the course and referral to College disciplinary procedures.

Statement on collaboration:

Discussion and the exchange of ideas are essential to academic work. For assignments in this course, you are encouraged to consult with your classmates on the choice of paper topics and to share sources. You may find it useful to discuss your chosen topic with your peers, particularly if you are working on the same topic as a classmate. However, you should ensure that any written work you submit for evaluation is the result of your own research and writing and that it reflects your own approach to the topic. You must also adhere to standard citation practices and properly cite any books, articles, websites, lectures, etc. that have helped you with your work. If you received any help with your writing (feedback on drafts, etc), you must also acknowledge this assistance.