

## Women and Science in the Long Eighteenth Century

The long eighteenth century saw the rise of technologies such as the microscope, of taxonomic systems, and of a burst of natural historical ‘discoveries’ made possible through European expansion and imperialism. These changes redefined beliefs about the physical world, sowing the seeds for modern ‘science’ and the discoveries of nineteenth century naturalists like Lyell and Darwin. Women were mostly discouraged from practicing these sciences, but they were allowed to learn and write about them. How did women grapple with these revolutionary changes? How did scientific ideas and theories shape literature throughout the period and vice versa?

In this course we will examine the relationship between literature, science, and gender in the long eighteenth century, considering how women participated in and revised emerging literary forms, such as the novel, and scientific norms, through botany, chemistry and natural history. We will think particularly about the ways science and literature shape understandings of gender in the long eighteenth century and the way gender itself becomes an object of study and debate in this period. In the first part of the course we will situate our contemporary ideas about scientific practice, human understanding, reason, and gender within an eighteenth century framework, reading such important writers as John Locke and Mary Shelley. We will then transition to thinking about the entanglement of science and British imperialism and empire through the lens of post-colonial theory. In the third part of the course we will dig deep into the history of female education through the work of Mary Wollstonecraft and her contemporaries. The final section of the course will turn to natural history and the female body as it has been studied, regulated and erased in different spaces. As a whole, the course seeks to make visible the historical connections between the construction of gender, the structures of knowledge production, and writing.

### Course Goals:

- Consider how literature, science and gender influenced each other in producing their modern forms
- Become familiar with women authors of the eighteenth century and the debates they engaged in
- Practice analyzing and engaging in conversation with literary criticism
- Write a 25 page research paper

### Readings:

John Locke, *Essay Concerning Human Understanding*\*

Margaret Cavendish, *The Blazing World*, Penguin Classics

Maria Sibylla Merian, paintings (at Houghton)

Aphra Behn, *Oroonoko*, Oxford World’s Classics

Mary Wollstonecraft, *Vindication of the Rights of Woman*, Penguin Classics

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Erasmus Darwin, *The Loves of the Plants*\*

Maria Edgeworth, *Belinda*, Oxford World's Classics

Mary Shelley, *Frankenstein* OR *The Last Man*, (both Oxford World's Classics)

Anna Letitia Barbauld, assorted poems\*

\*On canvas

### **Assignments**

Participation — As a discussion based class, it is important that you are on time, present and prepared each week. There will also be two short assignments throughout the semester that contribute to your participation grade.

1. Discussion starter — A one page (300 word) response that links one of our critical readings to the primary text.
2. Critical Summary — One time, each student will be required to find a critical article relating to the day's readings and present that article to the class, outlining the argument and its relation to the primary text for that day.

Short Paper — A 5 page paper due in week 3 of the semester which makes an argument about one of the texts, philosophical or literary, that we have read so far.

Annotated Bibliography — An annotated bibliography of 8-10 sources. Your annotation should reproduce in a few sentences the main argument of the work and should also include, in a few sentences, how you plan on engaging with the thesis of the work you have summarized.

Prospectus — A two-page (500 word) document outlining your proposed research topic. A good prospectus should include a brief introduction of your text, its significance or interest to a larger critical conversation, the method or critical theory with which you plan to approach the text and a sketch of your proposed argument.

Draft Workshop — In week 11 of the semester we will have a mandatory workshop of your research paper drafts. The goals of this workshop are to give you useful feedback on your paper and to practice giving feedback to your peers. As such, you will be required to submit a 20 page draft to the whole class the Sunday before our workshop meeting and to bring to our meeting a one page (300 words) response to each of the other papers.

Research Paper — The culminating assignment of the course, the junior essay, is a 20-25 page critical research paper that considers some topic related to gender, science, the long eighteenth century, or all three. The final paper should engage productively with the critical conversation around your text and the theoretical field in which you are working.

Junior Tutorial Meetings and Conference — The junior tutorial program includes three required meetings during the semester and a final conference at which students from all the tutorials will present on their research papers.

### **Grading**

Attendance/Participation — 20%

Short Paper — 10%

Annotated Bibliography — 5%

Prospectus — 10%

Draft Workshop — 15%

Research Paper — 40%

### Part I: Empiricism and Inquiry

Week 0: What is the junior essay? “Speed dating” with primary texts

Week 1 — Why think about science in literature? Or in the eighteenth century?

Primary Reading TBD: In the fall tutorial students will vote on whether they would prefer to read Mary Shelley’s *Frankenstein* or *The Last Man* for the first week of tutorial.

Evelyn Fox Keller, *Reflections on Gender and Science*, Introduction

Maurice Hindle, “Vital Matters: Mary Shelley’s *Frankenstein* and Romantic science,” *Critical Survey*, 1990

Suparna Banerjee, “Home is Where Mamma is: Reframing the science question in *Frankenstein*,” *Women’s Studies*, 2010

Week 2 — What is the eighteenth century mind? Is it gendered?

John Locke, *Essay Concerning Human Understanding* (excerpts)

Naomi Oreskes, “Objectivity or Heroism? On the Invisibility of Women in Science,” *Osiris*, vol. 11, 1996

Donna Haraway, “Modest\_Witness@Second\_Millennium,”  
*Modest\_Witness@Second\_Millennium.FemaleMan\_Meets\_OncoMouse*

### **Short Paper Due**

### Part II: Science and Empire

Week 3 — How do race and gender affect the production of knowledge? How is imperialism tied up in the scientific project?

Aphra Behn, *Oroonoko*

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Vernon Guy Dickson, "Truth, Wonder and Exemplarity in Aphra Behn's *Oroonoko*," *Studies in English Literature*, 2007

James Delbourgo, "Keeping the Species from Being Lost," *Collecting the World: Hans Sloane and the Origins of the British Museum*

### **Library Visit**

Week 4 — How did women imagine their participation in scientific collecting and empire?  
Margaret Cavendish, *The Description of a New World Called the Blazing World*

Sujata, Iyengar, "Royalist, Romancist, Racialist: Rank, Gender, and Race in the Science and Fiction of Margaret Cavendish." *ELH*, vol. 69, no. 3, 2002

Marina Leslie, "Mind the Map: Fancy, Matter, and World Construction in Margaret Cavendish's 'Blazing World.'" *Renaissance and Reformation / Renaissance Et Réforme*, vol. 35, no. 1, 2012

### Part III: The Science of Education

Week 5 — How is science leveraged in the battle for equal rights? How did revolutionary experiments alter thinking about gender?

Mary Wollstonecraft, *Vindication of the Rights of Woman*

Patricia Fara, "Educating Mary: women and scientific literature in the early nineteenth century," *Frankenstein's Science: Experimentation and Discovery in Romantic Culture 1780-1830*

Tom Furniss, "Nasty Tricks and Tropes: Sexuality and Language in Mary Wollstonecraft's 'Rights of Woman,'" *Studies in Romanticism*, vol. 32, no. 2, 1993

Week 6 — What versions of education are available to women? How do the structures of philosophy influence the lived experiences of women?

Maria Edgeworth, *Belinda*, p 1-250

Maria Edgeworth, excerpts from *Practical Education*

Helen Longino, "Science and Ideology," *Science as Social Knowledge*

### **Prospectus Due**

Week 7 — Who is in charge of education? What roles do society and family play in educating children?

Maria Edgeworth, *Belinda*, p 250-end

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James Chandler, "Edgeworth and the Lunar Enlightenment," *Eighteenth-Century Studies*, vol. 45, no. 1, 2011

Sharon Smith, "Juba's 'Black Face' / Lady Delacour's 'Mask': Plotting Domesticity in Maria Edgeworth's 'Belinda,'" *The Eighteenth Century*, vol. 54, no. 1, 2013

Week 8 — Spring Break

#### Part IV: Gendered Natures

Week 9 — Is it dangerous to think about plants having sex? How did women and botany become so deeply entwined?

Erasmus Darwin, *The Loves of the Plants*

Theresa Kelley, "Botanizing Women," *Clandestine Marriage: Botany and Romantic Culture*

Amy King, "Imaginative Literature and the Politics of Botany," *Bloom: The Botanical Vernacular in the English Novel*

Week 10 — What is the relation of discovery to the everyday? How did women participate in changing conceptions of the physical world?

Anna Letitia Barbauld, "Washing Day," "The Mouse's Petition," "The Caterpillar," "To a Little Invisible Being," "The Rights of Woman"

Elizabeth Kraft, "Anna Barbauld's Washing Day and the Montgolfier Balloon," *Literature and History*, Fall 1995

Sonia Hofkosh, "Materiality, Affect, Event: Barbauld's Poetics of the Everyday," *Anna Letitia Barbauld, New Perspectives*

Week 11 — Full Draft Workshop

Week 12 — How were women's bodies studied? How do medical practices interact with beliefs about gender?

Frances Burney, description of her mastectomy

Laurel Thatcher Ulrich, "'The Living Mother of a Living Child': Midwifery and Mortality in Post-Revolutionary New England," *The William and Mary Quarterly*, vol. 46, no. 1, 1989

Nancy Tuana, "Coming to understand — Orgasm and the epistemology of ignorance," *Agnotology, the making and unmaking of ignorance*

Josephine Reece  
Junior Tutorial 2019-2020

Week 13 — What are the consequences of racialized and gendered scientific practice? How does “Bloodchild” update or respond to the narratives of women, gender, and science that we have read this semester?

Octavia Butler, “Bloodchild,” *Bloodchild and Other Stories*

Elyce Rae Helford, ““Would You Really Rather Die than Bear My Young?": The Construction of Gender, Race, and Species in Octavia E. Butler's ‘Bloodchild,’” *African American Review*, vol. 28, no. 2, 1994

Maria Aline Ferreira, “Symbiotic Bodies and Evolutionary Tropes in the Work of Octavia Butler,” *Science Fiction Studies*, vol. 37, no. 3, 2010