

Science and Narrative


Course Outline

Course Description

This seminar considers productive collaborations and exchanges between literature and the sciences since the middle of the 20th century. Through readings in science fiction (broadly conceived), popular science writing, and the history and philosophy of science, we explore strategies and theories for thinking and writing across the "two cultures." Topics include the science of writing and the writing of science; the mediating narratives of Enlightenment science; scientific biography; the narrative science of probability; feminist biology; Afrofuturism; and quantification. Scientists, writers, historians, engineers, literary scholars, and others are all welcome.

Week	Assigned Reading
1	<p>Memory, the Science of Writing, and the Writing of Science</p> <ul style="list-style-type: none"> •Freud "A Note on the Mystic Writing Pad •Camwell & Solms <i>From Neurology to Psychoanalysis: Sigmund Freud's Neurological Drawings and Diagrams of the Mind</i> (2006) •Show and Tell: Bring an object to class that helps you when you write. It can be anything from a favorite pencil to a piece of music. Be ready to explain why it helps you, and whether you can draw any connections to how Freud thought about the science of the mind through a writing device.
2	<p>Scientific Biography and "Being Human in STEM"</p> <ul style="list-style-type: none"> •Apostolos Doxiadis and Christos Papadimitriou, <i>Logicomix: an Epic Search for Truth</i>, 11-39, 77-90, 164-172, 315-316. •Evelyn Fox Keller, Preface and "A Different Language," in <i>A Feeling for the Organism: the Life and Work of Barbara McClintock</i> •Banu Subramaniam, "Aliens of the World Unite! A Meditation on Belonging in a Multispecies World" •(optional) John Durham Peters, "Levi's 'Carbon'" •(optional) Steven Shapin, "The Invisible Technician" •Show and Tell: Select a scientist whose life interests you. If you were writing their biography, what form would it take? You might consider one of the following questions: <ul style="list-style-type: none"> •Why did you select this person? What elements of their life story would you want to emphasize? •What medium and genre would you use (book-length biography, documentary film, web series, podcast, etc.)? •How would the biography begin: with the scientist's birth and early life, with their best known accomplishments, or something else? Why?

	<ul style="list-style-type: none"> •If you were pitching the biography to a publisher, agent, or investor, how would you sell it?
3	<p>Fact, Fiction, Forecast, and Memory</p> <ul style="list-style-type: none"> •Nelson Goodman, <i>Fact, Fiction, & Forecast</i> (1955) •Video: "The Man with the Seven Second Memory" <p>•Show and tell: Think of something you use to help you remember things. It could be something you use (or do) to help you remember small tasks, information for school, significant dates, or even important life commitments or moments. Be ready to explain how your memory object works, and also why it works for you. Finally, what do you think this says about yourself?</p>
4	<p>Myths of Gender and Feminist Biology</p> <ul style="list-style-type: none"> •Erika L. Milam, "Beauty and the Beast: Darwin, Wallace, and the Animal-Human Boundary," in <i>Looking for a Few Good Males: Female Choice in Evolutionary Biology</i> •Emily Martin, "The Egg and the Sperm: How Science Has Constructed a Romance Based on Stereotypical Male-Female Roles" •James Tiptree Jr. (aka Alice Bradley Sheldon), "The Screwfly Solution" •Eric Hayot, <i>The Elements of Academic Style</i> <ul style="list-style-type: none"> •Uneven U excerpt <p>•Show and Tell: Watch a short video (2-3 minutes) from one of the following playlists: Green Porno, Seduce Me, and Mammas (all created by and starring Isabella Rossellini). How would you characterize the style and genre of the video? What implicit or explicit positions does the film take on human-animal differences and biology, sex, and gender? Be ready to describe your response to the video, and draw connections with this week's texts. (Content warning: some of the videos in "Green Porno" and "Seduce Me" include depictions of sexual violence.)</p>
5	<p>The Narrative Science of Paradigms</p> <ul style="list-style-type: none"> •Thomas Kuhn, <i>The Structure of Scientific Revolutions</i>, pp. 1-91 •Philip K. Dick, <i>Ubik</i> •Jorges Luis Borges <i>Funes the Memorious</i> (1944) <p>•Show and Tell: think of a time in your life when you noticed an *anomaly* that led to a kind of *paradigm shift* in your thinking. What was it? How did it change your experience? Was it liberating? Terrifying? How did your sense of self change in the process?</p>
6	<p>Time After Time & The Idea of Progress</p>

	<ul style="list-style-type: none"> •Norbert Wiener, “Newtonian and Bergsonian Time” •Ted Chiang, “Exhalation” •Tom Stoppard, <i>Arcadia</i> <p>•Show and tell: Prepare either a discussion question or a talking point; identify a moment in one of the texts that's especially useful, interesting, surprising, puzzling, or important, and that you'd like to discuss.</p>
7	The Narrative Science of Probability <ul style="list-style-type: none"> •G. Spencer Brown, <i>Probability and Scientific Inference</i> •Jorges Luis Borges, “The Library of Babel”
8	Calculating Life in Numbers, Narratives, Stories, Stats <ul style="list-style-type: none"> •Lydia Davis, stories •Gary Becker, "The Economic Approach to Human Behavior" •Wendy Brown, <i>Undoing the Demos</i>, pp. 17-28 •Philip Mirowski and Edward Nik-Khah, <i>The Knowledge We Have Lost in Information: The History of Information in Modern Economics</i>, pp. 1-14 <p>•Show and Tell: Do you agree or disagree with Gary Becker's claim that "the economic approach is a comprehensive one that is applicable to all human behavior"? Can you think of a surprising or unexpected application of economics to your life? Or an example of something in your life to which an economic approach can't be applied?</p>
9	Narrative and The Science of Communication <ul style="list-style-type: none"> •Thomas Pynchon, <i>The Crying of Lot 49</i> •McLuhan, "The Gadget Lover: Narcissus as Narcosis" (ch 4 of <i>Understanding Media</i>) •Short Video: "Order & Disorder: The Story of Information -Maxwells Demon"
10	Afrofuturism <ul style="list-style-type: none"> •Short interview: Alondra Nelson, “Coronavirus Crisis and Afrofuturism: a Way to Envision What’s Possible Despite Injustice and Hardship” •Story: Octavia E. Butler, “Bloodchild” •Poem: Gil Scott-Heron, "Whitey on the Moon" •Film (45m): John Akomfrah, <i>The Last Angel of History</i> •Book chapter: James Gleick, "Drums That Talk" from <i>The Information: A History, A Theory, A Flood</i>
11	The Destructive Narratives of Scientific Racism <ul style="list-style-type: none"> • Short video: Safiya Umoja Noble, <i>Algorithms of Oppression: How Search Engines Reinforce Racism</i> 

	<ul style="list-style-type: none"> • Priscilla Wald, "Cells, Genes, and Stories: HeLa's Journey from Labs to Literature"
12	Class Presentations