

## **Introduction to Science Studies**

Cathy Gere; Tuesdays, 9.30 a.m.-12:20 p.m.

### **Overview and Objectives:**

Science Studies is an interdisciplinary field that uses the approaches and methods of the humanities and social sciences to investigate meta-scientific questions such as epistemology and ethics, as well as the political economies of science and material practice. The aim of this introductory course is to acquaint students with the field's distinctive lexicon – *paradigm, paradigm shift, incommensurability, scientific revolution, scientific realism, scientific relativism, social constructivism, actor-network theory, agnotology* – through a historical exploration of the discipline, from the late 1950s to the present. We will start with the problem of the *decolonization* of knowledge, analyzing when, how (or whether) Science Studies' critiques of scientism challenged the supremacy of Euro-American ways of knowing the world. In week 7, we will explore the field's self-criticism during a period when anti-scientism moved from the left to the right of the political spectrum. The last three weeks will be devoted to surveying some more recent approaches to the politics, ethics, and economics of the sciences.

### **Readings, by week:**

#### **1. 10/3 Medicine and Colonialism**

Frantz Fanon. "Preface" and "Medicine and Colonialism" in *A Dying Colonialism*, Trans. Haakon Chevalier, New York, Grove Press, 1965; first published in French in 1959.

#### **2. 10/10 Scientific Revolutions**

Thomas S. Kuhn. *The Structure of Scientific Revolutions*. 3rd ed. Chicago: Univ. of Chicago Press, 1996; first published 1962.

#### **3. 10/17 Knowledge and the Social Order**

Steven Shapin and Simon Schaffer. *Leviathan and the Air Pump*. Princeton:

Princeton Univ. Press, first published 1985. Chapters I, II, IV, VII.

Donna Haraway. [Modest Witness@Second Millennium](#), Part 2, Section 1.

#### 4. 10/24 Islam and the Scientific Revolution

Sabra, A. 1987. "The Appropriation and Subsequent Naturalization of Greek Science in Medieval Islam." *History of Science* 25, pp. 223-43.

Sabra, A. 1996. "Situating Arabic Science: Locality *versus* Essence," *Isis*, 87, pp. 654-670 (reprinted in Michael H. Shank, ed., *The Scientific Enterprise in Antiquity and the Middle Ages*. Chicago: University of Chicago Press, 2000, pp. 215-31

#### 5. 10/31 Laboratory Ethnography

Bruno Latour. *Science in Action: How to Follow Scientists and Engineers through Society*. Cambridge, MA: Harvard Univ. Press, 1987.

#### 6. 11/7 Historical Epistemology

Lorraine Daston and Peter Galison, '[The Image of Objectivity](#),' *Representations*, 1992, 40:81-128.

#### 7. 11/14 Why Trust Science?

Bruno Latour, "[Why Has Critique Run Out of Steam? From Matters of Fact to Matters of Concern](#)," *Critical Inquiry*, 30, Winter 2004.

Naomi Oreskes [Why Trust Science?](#) Princeton: Princeton University Press, 2019, pp. 15-69.

Meera Nanda "Epistemic Charity," in *Prophets Facing Backwards*, Delhi: Permanent Black, 2004, pp. 125-159.

#### 8. 11/21 Neoliberal Science

Kaushik Sunder Rajan *Biocapital: The Constitution of Postgenomic Life*, Durham: Duke University Press, 2006.

### 9. 11/28 Technology and Race

Ruha Benjamin: *Race After Technology: Abolitionist Tools for the New Jim Code*, New York: Polity, 2019.

### 10. 12/5 Science Studies for a Warming World

Kyle Whyte. 2018. 'Indigenous Science (Fiction) for the Anthropocene: Ancestral Dystopias and Fantasies of Climate Change Crises.' *Environment and Planning E: Nature and Space*, 1: 224-242, 201

Cathy Gere 'The Commons and the Climate Crisis,' *Historical Studies in the Natural Sciences*, Vol. 51, Number 4, pp. 542-552, September 2021

### **Requirements**

Students will lead each week's discussion, choosing excerpts for us to read together, presenting short reviews of the readings in class and raising questions for discussion. These presentations will be taken into consideration in your final grade.

An optional five-page essay (double-spaced) will be due in class in Week 8, constituting a history of your engagement with the readings, including both areas of surprise and areas of difficulty. This assignment will not be graded.

The Final Essay/Project may take the form of a longer and fuller version of the mid-course essay, covering all the readings, or it may have a more pointed focus. If you take the second option, please include a short proposal in your mid-course essay or check with the instructor.