

**Science and Empire**  
**HIST 3390 Special Topics, Spring 2025**  
**Tues./Thurs. 12:00-1:20 pm**  
**Liberal Arts Building, Room 205**

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Office hours: Mon. 12:30-1:30 pm, Tues. 1:30-2:30 pm  
and by appointment

This class will explore the relationship between science and European imperialism from the sixteenth century onwards. In practical and ideological ways, scientific knowledge facilitated and promoted European expansion overseas. It provided both tools and justifications for conquering and “civilizing” other peoples. At the same time, overseas expansion helped diffuse science throughout the world, while also shaping the sciences back in Europe. Expansion opened up vast new areas for scientific research and for the possibility of doing science in new ways and in new locations, sometimes through the appropriation of local or indigenous forms of knowledge. Science could even turn out to be a voice against empire. The history of science thus offers a fascinating way of learning about European imperialism, cross-cultural encounters, and the global creation of scientific knowledge. This class will be mainly discussion-based rather than lecture.

Readings will be available electronically on Blackboard or through the UTEP Library. Reading each week will usually come to around 50-75 pages.

**Course Requirements**

Attendance and participation (25%)

Informal responses to reading (10%): On either Tuesday or Thursday of every week, post a response (150 words unless otherwise indicated) to the day’s reading at least 30 minutes before class begins.

Five-page essay (20%): on class readings, due mid-Feb. Details TBA.

Five-page essay (20%): on class readings, due later March. Details TBA.

Presentation (5%): on a topic based on two outside articles or book chapters

Six-page paper (20%): on topic of your choice using your outside reading, a primary source, and some of the class reading

**Class Schedule and Reading Assignments**

1/21 Introduction

**What is science and where did it come from?**

1/23 George Basalla, “The Spread of Western Science,” *Science* 156, no. 3775 (1967): 611-622.

1/28 Jorge Cañizares-Esguerra, *Nature, Empire, and Nation: Explorations of the History of Science in the Iberian World* (Stanford University Press, 2006), intro and ch. 1 (1-13)

**Tools of expansion: shipbuilding and navigation**

1/30 Daniel R. Headrick, *Power over Peoples: Technology, Environments, and Western*

*Imperialism, 1400 to the Present* (2010), intro (pp. 1-9) and ch. 1 (11-51)

### **Science and material culture as a measure of people**

2/4 Michael Adas, *Machines as the Measure of Men: Science, Technology, and Ideologies of Western Dominance* (Ithaca: Cornell University Press, 1989), intro. and ch. 1 (selection)

### **Spanish Empire and the new science**

2/6 Cañizares-Esguerra, *Nature, Empire, and Nation*, ch. 2 (14-45)

2/11 Antonio Barrera-Osorio, *Experiencing Nature: The Spanish American Empire and the Early Scientific Revolution* (Austin: Univ. of Texas Press, 2006), intro. & chs. 1-2 (1-55)

2/13 Barrera-Osorio, *Experiencing Nature*, chs. 4-5 and conclusion (81-134)

### **Consumption, Plants, and Empire**

2/18 Harold J. Cook, *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age* (Yale, 2007), ch. 1 (1-41)

2/20 Schiebinger, Londa and Claudia Swan, eds., *Colonial Botany: Science, Commerce, and Politics in the Early Modern World* (Univ. of Penn. Press, 2005), intro. (1-16)  
Neil Safier, "Fruitless Botany: Joseph de Jussieu's South American Odyssey," in *Science and Empire in the Atlantic World*, ed. James Delbourgo and Nicholas Dew (Routledge, 2008), 203-224

2/25 Matthew James Crawford, *The Andean Wonder Drug: Cinchona Bark and Imperial Science in the Spanish Atlantic, 1630-1800* (Univ. of Pittsburgh, 2016), intro. (3-20)  
Daniela Bleichmar, "Atlantic Competitions: Botany in the Eighteenth-Century Spanish Empire," in *Science and Empire in the Atlantic World*, 225-252

### **Science and material culture as a measure of people: 18<sup>th</sup> century**

2/27 Michael Adas, *Machines as the Measure of Men*, ch. 2 (selection)

### **Scientific Travel, the Pacific, and Ethnography**

3/4 Harry Liebersohn, *The Travelers' World: Europe to the Pacific* (Harvard University Press, 2006), intro and ch. 1 (1-76)

3/6 Liebersohn, *The Travelers' World*, 77-155

3/18 Liebersohn, *The Travelers' World*, 155-224

3/20 Liebersohn, *The Travelers' World*, 224-305

### **3/25 Humboldt**

Mary Louise Pratt, *Imperial Eyes: Travel Writing and Transculturation* (Routledge, 1992), 109-140

### **3/27 Mapping India**

Matthew H. Edney, *Mapping An Empire: The Geographical Construction of British India, 1765-1843* (Univ. of Chicago Press, 1990), ch. 1 (1-36)

- 4/1 **Science and technology as a measure of people: 19<sup>th</sup> century**  
Adas, *Machines as the Measure of Men*, ch. 3 (selection)
- 4/3 **Steamboat Imperialism**  
Headrick, *Power over Peoples*, ch. 5  
Recommended: Headrick, *Power over Peoples*, ch. 7
- 4/8 **Archaeology and (Informal) Empire**  
Robert D. Aguirre, "'Open for Inspections': Mexico at the Egyptian Hall in 1824," in *Informal Empire: Mexico and Central America in Victorian Culture* (Univ. Minnesota Press, 2005), 61-101
- 4/10 **Collecting Latin America**  
Pascal Riviale, "Europe Rediscovered Latin America: Collecting Artifacts and Views in the First Decades of the Nineteenth Century," in *Collecting Across Cultures: Material Exchanges in the Early Modern Atlantic World*, ed. Daniela Bleichmar and Peter C. Mancall (University of Pennsylvania Press, 2011), 254-268  
Camilo Quintero, "Trading in Birds: Imperial Power, National Pride, and the Place of Nature in U.S.-Colombia Relations," *Isis* 102, no. 3 (Sept. 2011): 421-445
- 4/15 **Health, Medicine, and the New Imperialism**  
Headrick, *Power over Peoples*, ch. 6  
Michael A. Osborne, "Acclimatizing the World: A History of the Paradigmatic Colonial Science," *Osiris* 2<sup>nd</sup> series, 15 (2000): 135-151
- 4/17 **China and Japan**  
Fa-Ti Fan, "Victorian Naturalists in China: Science and Informal Empire." *The British Journal for the History of Science* 36, 1 (2003): 1-26.  
Recommended: Michael Adas, *Dominance by Design*, intro. (1-32)
- 4/22 **Orientalism**  
Dane Kennedy, *The Highly Civilized Man: Richard Burton and the Victorian World* (Harvard University Press, 2007), introduction (1-9), ch. 2 (26-57)
- 4/24 **Exploring Africa**  
Kennedy, *The Highly Civilized Man*, ch. 4 (93-130)
- 4/29 **Civilizing Mission**  
Alice Conklin, *A Mission to Civilize*, selection  
Christophe Bonneuil, "Science and State Building in Late Colonial and Postcolonial Africa, 1930-1970," *Osiris* 2<sup>nd</sup> series, 15 (2000): 258-281
- 5/1 Student Presentations
- Tools of Empire: 20<sup>th</sup> century**
- 5/6 Headrick, *Power over Peoples*, ch. 8 (age of air control)
- 5/8 Headrick, *Power over Peoples*, ch. 9 (decline of air control)