

**History of Science 282**  
**Knowledge and Genre**  
Graduate Seminar  
**Topic for 2020: Universalisms**

Time TBD based on participant schedules, but possibly Tuesdays 9:45-11:45.

Science Center 458

Office hours: TBD but more or less by appointment

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<https://canvas.harvard.edu/courses/77033>

This semester, Genre and Knowledge will focus on genres, formats, and technologies that have been associated with claims to achieving universal knowledge. Shifting away from an exclusive focus on the category of genre, we seek to interrogate and understand historically how claims to totality have been undergirded by infrastructures, writing and publishing projects, and aesthetic commitments. By what means are boundaries drawn in order to legitimize a claim to totality? What is left out, or transformed into insignificance, by those claims? Have science and study of nature been privileged domains for such claims, and why? How have claims about universality been resisted or shown to be partial, local, or otherwise inaccurate?

Course Requirements:

Regular seminar participation

Kickstarters, Responses, and Found Objects

Final Paper (25-30 pages) or Project

Symposium Presentation of Final Paper/Project

Grading:

Participation (including Kickstarters, Responses, and Found Objects): 50%

Final paper (including symposium presentation): 50%

History of Science Graduate Degree Requirements:

This course satisfies the pre-1800 distribution requirement if the final paper/project focuses on a pre-1800 theme.

Zoom classes:

## HOW OUR WEEKLY SEMINAR WILL WORK

**Each week we will meet synchronously via Zoom for up to two hours.** In preparation for these meetings we will hold an online discussion of the week's topic and readings. During each week, each participant will either be a Kickstarter, Hunter, or Responder.

### Kickstarters

For each class, 1-2 students will be required to draw up a robust (but not too extensive) list of discussion questions about our assigned readings. These questions must be pre-circulated to the entire seminar **two days before our weekly meeting**. These questions should vary between the general and the specific. For example, you might ask us to compare two authors' arguments and you might ask us of what we think an author means in a specific sentence. You can connect the week's reading(s) to other readings we've done. Sometimes you might find yourself wanting to connect the readings to other texts that lie outside of this class.

During class, Kickstarters may help lead the seminar with me—we can consult on the best articles on which to focus during discussion and what order to proceed through the assigned material. I encourage the Kickstarters to make handouts for class: these could be passages you want to discuss in detail, analyses of themes we've encountered, etc.

### Responders

Everyone else should write a short **response** to the Kickstarters' questions that should be **around 200 words or so**. All of these should be circulated to the entire seminar (including me) **the evening before our meeting (by 7pm)**. Responses can vary in approach: you might focus on a single question posed by the Kickstarters, or write shorter responses to multiple questions. You might also include your own discussion questions. Your responses will not be graded individually; they will be taken as evidence of your close engagement with the texts we're covering. I may draw on your responses to prompt individual students to contribute to discussion.

### Hunters

One person will be assigned as **Hunter** for each session. The Hunter is responsible for bringing in **one or two objects** that relate to the discussion at hand beyond what is assigned on the syllabus. These could be any kind of media object or short (usually primary) text. (Film clips should be under 5 minutes.) You should be prepared to talk about your object or objects for five or so minutes and have a couple questions for us (you do not need to pre-circulate your object or your questions).

WE WILL WORK OUT THE PRECISE DETAILS OF HOW THIS WILL WORK  
ONCE WE KNOW HOW MANY OF US THERE WILL BE IN THE SEMINAR

### Academic Integrity and 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 in this discipline 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.

### University Policies and Regulations

We uphold University policies and regulations on the observation of religious holidays, sexual harassment, racial or ethnic discrimination, and assistance available to students with disability issues. Any students requiring special accommodations should let the instructor know as soon as possible. We also uphold University policy with respect to cases of plagiarism. Students should make themselves familiar with the respective University regulations and are encouraged to bring any questions or concerns to the attention of the course instructors or section leaders.

### Course Etiquette

Please join class with access to the readings in some form. (All readings will be made available electronically. You may prefer to buy or print paper copies of readings.) I hope that whenever possible we all use video during Zoom, but I also understand that in some cases technology or other limitations might make this inadvisable. In any case, I do expect that during our two hour meeting everyone will be engaged solely in our discussion and readings.

## SCHEDULE OF READINGS

This schedule is quite tentative and is also subject to revision depending on the interests of the participants. A list of alternate topics will be made available and students are encouraged to suggest their own weeks as well.

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### Week 1 (9/8). Framing

Lisa Gitelman, *Paper Knowledge: Toward a Media History of Documents* (Durham: Duke University Press, 2014), 1-10.

Lissa Roberts, "Situating Science in Global History: Local Exchanges and Networks of Circulation," *Itinerario* 33 (March 2009): 9–30.

John Tresch, "Cosmopragmatics and Petabytes," in Schaffer et al., eds., *Aesthetics of Universal Knowledge* (Cham, Switzerland: Palgrave Macmillan, 2017), 169-191.

Bruno Latour, "Gaia, or Knowledge without the Spheres," in Schaffer et al., eds., *Aesthetics of Universal Knowledge* (Cham, Switzerland: Palgrave Macmillan, 2017), 137-156.

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### Week 2 (9/15). Compilation

Elias Muhanna, *The World in a Book: Al-Nuwayri and the Islamic Encyclopedic Tradition* (Princeton: Princeton University Press, 2018), pp. 1-55, 83-104.

Dagmar Schäfer. *The Crafting of the 10,000 Things: Knowledge and Technology in Seventeenth-Century China* (Chicago, 2011), 127-174.

Ann M. Blair, *Too Much to Know: Managing Scholarly Information before the Modern Age* (New Haven: Yale University Press, 2010), 1-33, 173-229.

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### Week 3 (9/22). Travel, Narrative, and Empire

Neil Safier, *Measuring the New World: Enlightenment Science and South America* (Chicago: University of Chicago Press, 2008).

Daniela Bleichmar, *Visible Empire: Botanical Expeditions & Visual Culture in the Hispanic Enlightenment* (Chicago: University of Chicago Press, 2012).

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### WEEK 4 (9/29). Maps

*The Imperial Map: Cartography and the Mastery of Empire*, ed. James R. Akerman (Chicago: University of Chicago Press, 2009)

Surekha Davies, *Renaissance Ethnography and the Invention of the Human: New Worlds, Maps and Monsters* (Cambridge: Cambridge University Press, 2016).

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**Week 5 (10/6). Archives**

Ann Laura Stoler, *Along the Archival Grain*: (Princeton, 2009), pp. 1-102.

Nicholas Dirks, "Annals of the Archive: Ethnographic Notes on the Sources of History," in *From the Margins: Historical Anthropology and its Futures*, ed. Brian Axel (Durham, 2002), 47-65.

Durba Ghosh, "National Narratives and the Politics of Miscegenation: Britain and India," in *Archive Stories: Facts, Fictions, and the Writing of History*, ed. A. Burton (Durham, 2005), 27-44.

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**Week 6 (10/13). Scaling**

Deborah R. Coen, *Climate in Motion: Science, Empire, and the Problem of Scale* (Chicago: University of Chicago Press, 2018).

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**Week 7 (10/20). BREAK TO WORK ON PAPERS**

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**Week 8 (10/27). Translations**

Paul Ricoeur, "The Paradigm of Translation," in *On Translation* (London, 2006), 11-29.

Abdelmajid Hannoum, "Translation and the Colonial Imaginary: Ibn Khaldûn Orientalist," *History and Theory* 42 (2003): 61-81.

Marwa Elshakry, "Knowledge in Motion: The Cultural Politics of Modern Science Translations in Arabic," *Isis* 99 (2008): 701-730.

Michael Gordin, *Scientific Babel* (Chicago, 2015), 213-266.

Ahmed Ragab, "'In a Clear Arabic Tongue': Arabic and the Making of a Science-Language Regime," *Isis* 108 (2017): 612-620.

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**Week 9 (11/3). Infrastructures**

Paul N. Edwards, *A Vast Machine: Computer Models, Climate Data, and the Politics of Global Warming* (Cambridge: MIT Press, 2010).

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**Week 10 (11/10). History of Science**

Daston, Lorraine. 2006. The history of science as European self-portraiture. *European Review* 14 (4): 523–536.

Marwa Elshakry, "When Science Became Western: Historiographical Reflections," *Isis* 101 (2010): 98-109.

Geert J. Somsen, "A History of Universalism: Conceptions of the Internationality of Science from the Enlightenment to the Cold War," *Minerva* 46 (2008): 361–379

Projit Bihari Mukharji, "Parachemistries: Colonial Chemopolitics in a Zone of Contest," *History of Science* 54, no. 4 (2016): 362–382

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**Week 11 (11/17). Universal Histories**

Possibilities:

Nasser Zakariya, *A Final Story: Science, Myth, and Beginnings* (Chicago: University of Chicago Press, 2017).

Daniel Lord Smail, *On Deep History and the Brain* (Berkeley, 2008).

Kerwin Lee Klein, "In Search of Narrative Mastery: Postmodernism and the People Without History," *History and Theory* 34 (1995): 275-298.

Nasser Zakariya, "Is History Still a Fraud?," *Historical Studies in the Natural Sciences* 43 (2013): 631-641.

"AHR Roundtable: History Meets Biology." *American Historical Review* 119:5 (2014): 1492-1629.

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**WEEK 12 (11/24). Computing Networks**

Eden Medina, *Cybernetic Revolutionaries: Technology and Politics in Allende's Chile* (Cambridge, MA: MIT Press, 2011)

Anita Say Chan, *Networking Peripheries: Technological Futures and the Myth of Digital Universalism* (Cambridge, Massachusetts: MIT Press, 2013).

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**Week 13 (12/1). Search Engines**

Safiya Umoja Noble, *Algorithms of Oppression: How Search Engines Reinforce Racism* (New York: New York University Press, 2018)

**NOTE: ALTERNATIVE TOPICS ON FOLLOWING PAGE**

## ALTERNATIVE TOPICS INCLUDE BUT ARE NOT LIMITED TO:

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### WEEK X. International Coordination

For example:

Peter Galison and Lorraine Daston, "Scientific Coordination as Ethos and Epistemology," in Helmar Schramm, Ludger Schwarte and Jan Lazardig, eds., *Instruments in Art and Science: On the Architectonics of Cultural Boundaries in the 17th Century* (Berlin: De Gruyter, 2008), 296–333.

William Rankin, *After the Map: Cartography, Navigation, and the Transformation of Territory in the Twentieth Century* (Chicago: University of Chicago Press, 2016).

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### WEEK X. The Experimental Report

Steven Shapin, "Pump and Circumstance: Robert Boyle's Literary Technology," *Social Studies of Science* 14 (1984): 481–520.

Lorraine Daston, "The Language of Strange Facts in Early Modern Science," in *Inscribing Science: Scientific Texts and the Materiality of Communication*, ed. T. Lenoir (Stanford, 1998), 20–38.

Gianna Pomata, "Observation Rising: Birth of an Epistemic Genre, 1500–1650," in *Histories of Scientific Observation*, ed. L Daston & E. Lunbeck (Chicago, 2011), 45–80.

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### Week X. Enlightenment Universalism

Lorraine Daston, *Classical Probability in the Enlightenment* (Princeton, N.J.: Princeton University Press, 1988)

[Readings on the French *Encyclopédie*]

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### WEEK X. Global Indicators

Sally Engle Merry, *The Seductions of Quantification: Measuring Human Rights, Gender Violence, and Sex Trafficking* (Chicago: University of Chicago Press, 2016).

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### WEEK X. Academic Publishing

H. Vessuri, J.-C. Guedon and A. M. Cetto, "Excellence or Quality? Impact of the Current Competition Regime on Science and Scientific Publishing in Latin America and Its Implications for Development," *Current Sociology* 62 (2013): 647–665

Derek John de Solla Price, "Nations Can Publish or Perish," *Science and Technology* 70 (1967): 84–90

W. Wayt Gibbs, "Lost Science in the Third World," *Scientific American*, 1 August 1995.

Alex Csiszar, "Global Scientific Development and its Data" (draft)

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**Other topics: Expositions, the Anthropocene, Big History, Notebooks, Surveys**