

History of Science 720  
Methods and Historiography in the History of Science, Medicine, and Technology

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**Meetings**

Wednesdays 1:20-3:15  
Mosse Humanities 5255

Box: <https://uwmadison.app.box.com/folder/281142412049>

This seminar introduces the methods and historiography of major areas of study in the history of science, medicine, and technology graduate program. It is structured in four thematic units. We start with an introduction to *historical methods* in the study of technical subjects, examining how a historical approach to the study of science, medicine, and technology came about, how these subjects relate to the rest of history, and how it is connected to the adjacent field of science and technology studies (STS). Unit two focuses on *science* of the three major domains explored in the program, touching on the origins of the history of science as a field, major historiographical developments from its past, and some recent developments. We then do the same for the history of *medicine* in unit three, and the history of *technology* in unit four. While these three units speak to the broad areas of interest of faculty members and graduate students in the program, many are interested in how these domains interact. As such, we will explore along the way how these fields interact and interact with adjacent social science and humanities disciplines.

Throughout the semester, students will be introduced to academic skills including 1) reading books and articles effectively (and quickly) 2) analyzing arguments for evidence and sources 3) organizing a corpus of primary and secondary sources 4) crafting a historiographical argument.

Readings are a critical component of this class, so please be prepared to discuss them. The “further readings” are not required and will not be discussed—they are suggested resources for you to explore the topic deeper, now or in the future.

**Outcomes:**

Upon successful completion of this course, students will

- Read historical, historiographical, and theoretical texts efficiently and effectively

- Gain familiarity with classic texts, topics, and approaches in History of Science, Medicine, and Technology (HSMT)
- Recognize current methodological and topical issues in these fields
- Articulate, compare, and critique a range of theories, research methods, and approaches to inquiry in HSMT (HSMT MA Learning Goal #1) in oral and written formats.
- Situate science, medicine, and technology in a range of historical, social, cultural, and global contexts (HSMT MA Learning Goal #3)
- Recognize and apply established principles of ethical and professional conduct, (HSMT MA Learning Goal #8), including through appropriate citation and interpersonal communication practices.

### **Grade Components:**

Weekly Reading Responses 25%

Oral Presentation of two Readings 15%

Historiographical Essay OR Grant Draft 40%

Participation in Seminar and Consultation Meetings 20%

### **Weekly Reading Response + Book Review (25%)\* Due by email to me by 11am Wednesday**

Beginning in week 2, I ask that you write a brief response paper (300-500 words) for the week's material. You should produce no fewer than 8 of these. (So you can skip a few weeks)

#### *What is a reading response*

A reading response is an exercise to rehearse arguments and synthesize work before we arrive in class, and to create a dialogue between me and you on course themes and your ideas over the course of the semester. To start, you should consider some (but not all) of the below ideas. A summary of the cases/historical episodes/arguments in the texts is not required, except to the extent it helps you clarify your response to it.

- What were the main arguments of the book/article (hint: historians often put these in the introduction, the conclusion, or both)? Did the author, in your opinion succeed in following through on those arguments?
- What materials, episodes, narratives, or cases do they use? What is the research method (synthesis of existing work, close analysis of primary published sources, ethnography, archival (of what)...)?
- What is at stake in the author's argument or methods (politically, methodologically, in the treatment of subject matter etc.)?
- How is the book/article "talking" to other parts of the literature in their own field or others? Is the author styling themselves as a particular type of historian (women's historian,

social historian, political historian, etc.) or theorist (Marxist, social constructivist, political theorist)? Who are their subjects?

- What questions did this text leave you with? What gaps does it leave open for further work?

*(adapted from Margaret O'Mara "How to write a reader response paper")*

**\*Book Review:**

At least **One** of the weekly responses should take the form of a book review on one of the books for class. It should try to resemble the style of a specific journal in one of the fields we are addressing (STS, HoS, HoT, HoM) or subfields (history of biology, computing, etc.), and indicate this in the submission.

Completing the book review should build from the work on the regular responses.

***Oral Presentation of a Reading (15%)***

Each student is responsible for preparing a ~10-12 minute oral presentation (15 minutes maximum; no slides needed or expected) introducing **one** of the books (either a full book or the chapters assigned) **or two articles assigned** for the week.

The goal of the assignment is **not to summarize the work**, but to practice situating scholarship in an ongoing intellectual conversation and professional context. The introduction you present would ideally provide only a very brief synopsis of the main ideas and arguments (which we will cover as a group), and focus on the *context* relevant for situating the work (the who, why, where of its publication). This could include:

- relevant background information on the author(s) (e.g. what (sub)field are they working in, their research interests; and how this work fits into it)
- a description of the genre/field of the work, cited/inspiring literature, and venue (e.g. describe the journal this article was published in; what sorts of things/fields are cited or interrogated, what publisher published the book, was it part of a series, what other books appeared in similar time)

***Historiographical Essay OR Grant Draft (40%)***

Students are responsible for one extended piece of writing. Due to the last week of class. This can take the form of either a historiographical essay drawing on a set of texts discussed with me, or a draft of a grant application for a funding opportunity—either an existing one, or a template. Both should be about 4-5k words in total, and **you should discuss your plans with me by the end of October.**

***Discussion, Preparation, and Consultation (20%)***

During the semester you are expected to attend and participate in the seminar, demonstrating preparation with assigned materials. Participation means both contributing by sharing views, asking questions and supporting the seminar as a whole by respectfully engaging and *giving space to others*. A general rubric for discussion participation is below

Additionally, you should meet with me **twice** for consultations during the semester to discuss your interests, progress in the class, your reading responses, and to make plans for the historiographical essay or draft grant application. Email me at [dbkennedy@wisc.edu](mailto:dbkennedy@wisc.edu) to schedule; either in-person or virtual is fine!

***General Discussion Participation Rubric***

Excellent (90-100)	Good (80-90)	Room to improve (70-80)	Significant work needed (<70)
Consistent, demonstrated preparation and regular involvement in discussion Explores ideas and texts rigorously and creatively Comes to class with questions and ideas Draws on and synthesizes material from other weeks in the course Consistently and respectfully builds on the conversation; engaging classmates, synthesizing ideas and giving credit to classmates work Makes space for other students to speak	Regular involvement in discussion Only minimally draws on course materials in responding to questions or adding to discussion Engages others respectfully and gives credit to other students' comments	Involved somewhat regularly in discussion with on-topic comments but does not demonstrate adequate preparation of readings each week	Uninvolved Disruptive or disrespectful to peers

## **Resources:**

### **Writing and Methods**

CV Guide from the UW-Madison Writing Center (With samples)

<https://writing.wisc.edu/handbook/cv/>

Grant Writing Guide from the UW-Madison Writing Center

<https://writing.wisc.edu/handbook/grants/>

Graff et al. *They Say, I Say: The Moves that Matter in Academic Writing*

Umberto Eco *How To Write a Thesis*

**Some Useful Tools:** Zotero, Endnote, Mendeley, Scanner Mini, Adobe Acrobat (for OCR–available through DoIT)

### **Scholarly Community and Sources**

Holtz Center for STS @ UW-Madison

Nelson Center for Environmental Studies @ UW-Madison

Main Societies: 4S (STS), SHoT (Tech), HSS (Sci), AAHM (Med)

The Isis Critical Bibliography: <https://Isiscb.org> (a searchable database of major journals in HSMT and STS)

H-SCI-MED-TECH: <https://networks.h-net.org/h-sci-med-tech>

STS Grad Listserv: <https://4sonline.org/community.php>

Consortium for the Hist of Sci, Med, & Tech: <https://www.chstm.org> (including working groups and listservs)

### **Journals**

#### *History of Science:*

Isis, Osiris, British Journal of the History of Science, History of Science

#### *STS*

Social Studies of Science, Science, Tech. & Human Values, Engaging STS (diamond open access), Science & Technology Studies (diamond open access), Science as Culture (places high value on accessible writing), EASTS (East Asian focus), Tapuya (Latin America focus), New Genetics and Society (genomics focus), BioSocieties (life science focus, also interdisciplinary STS/scientist scholarship welcomed)

#### *History of Technology*

Technology & Culture, Technology & History, Leonardo

#### *History of Medicine*

Journal of the History of Medicine and Allied Sciences, Bulletin of the History of Medicine, Medical History

### General Interest History/Humanities

Journal of the History of Ideas, Radical History Review, Past & Present, American Historical Review, Critical Inquiry, Representations, New Left Review, New York Review of Books, London Review of Books

### **Useful Historical, Historiographical and Methodological Introductions/Handbooks (Most are available through UW Library)**

Lukas M. Verburgt, *Debating Contemporary Approaches to the History of Science* (Bloomsbury Publishing, 2024).

Bernard Lightman, ed. *Companion to the History of Science* (John Wiley & Co, 2016) (available online through Library)

Mark Jackson ed. *Oxford Handbook of the History of Medicine* (Oxford, 2012) (available online through Library)

*Handbook of Science and Technology Studies* (sponsored by the Society for the Social Studies of Science) Note: The 2001 revised edition (Jasanoff et als. ed.) is available online through the library; the fourth and most recent (2017) version (edited by Felt et als.) is not yet

Daniel Kleinman and Kelly Moore ed. *Routledge Handbook of Science, Technology & Society* (Routledge, 2014) available online through the library

Sandra Harding ed. *Postcolonial Science Studies Reader* (Duke UP, 2011) available online through library

### **External Funding Sources for Travel, Research, and Writing**

History

<https://history.wisc.edu/our-graduate-program/current-students/funding-opportunities/>

HSMT

<https://history.wisc.edu/our-graduate-program/current-students/funding-opportunities/funding-for-history-of-science-medicine-and-technology/>

STS: <https://sts.wisc.edu/announcements-for-graduate-students/?repeat=w3tc#:~:text=The%20Holtz%20Center%20is%20currently,engaged%20in%20STS%2Drelated%20research.>

## Schedule of Meetings and Readings

### Unit 1 Historical Methods for Technical Subjects

#### September 4 | Why Study Technical Things?

##### Readings:

Langdon Winner, “Do Artifacts Have Politics?,” *Daedalus* 109, no. 1 (1980): 121–36.

Sandra Harding “Introduction - Beyond Postcolonial Theory: Two Undertheorized Perspectives on Science and Technology” in Harding ed. *The Postcolonial Science and Technology Studies Reader* (Duke UP 2011) pgs 1-31.

Donna Haraway, “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective,” *Feminist Studies* 14, no. 3 (1988): 575–99.

Sergio Sismondo “Science and Technology Studies and an Engaged Program” in *The Handbook of Science and Technology Studies* 3rd Edition (MIT Press, 2007)

##### Agenda:

*Introductions. Workload. Why are we interested in the study of technical subjects like science, medicine and technology? What motivates different kinds of scholars to this pursuit, and how might this map onto choices of subject, method, etc.? What has been the relationship between those who study science/med/tech and those practicing those fields?*

##### Further Reading

Donald MacKenzie “What’s in the Bottle? The Science Wars Revisited” *London Review of Books* May 9, 2002

Edward Woodhouse et al., “Science Studies and Activism: Possibilities and Problems for Reconstructivist Agendas,” *Social Studies of Science* 32, no. 2 (2002): 297–319.

Jurgen Habermas “Technology and Science as ‘Ideology’” 1968

Bruno Latour, “Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern,” *Critical Inquiry* 30, no. 2 (2004): 225–48, <https://doi.org/10.1086/421123>.

C.P. Snow *The Two Cultures* (1959)

James Delbourgo, “The Knowing World: A New Global History of Science,” *History of Science* 57, no. 3 (September 1, 2019): 373–99.

## **September 11 | What are Historical Methods?**

### **Readings:**

Bonnie G Smith *The Gender of History: Men, Women, and Historical Practice* “Chapter 3 “What is a Historian” and Chapter 4 “The Practices of Scientific History”

Michel Foucault, *The Archeology of Knowledge* Introduction and Part IV Chapter 1 “Archeology and the History of Ideas”

Ann Laura Stoler, *Along the Archival Grain*, Epistemic Anxieties and Colonial Common Sense (Princeton University Press, 2009), Introduction and Chapter 2 “The Pulse of the Archive,” 17–54.

Sujit Sivasundaram, “Sciences and the Global: On Methods, Questions, and Theory,” *Isis* 101, no. 1 (2010): 146–58.

Jo Guldi and David Armitage *The History Manifesto* (Cambridge UP 2014) Introduction and Chapter 2 “The short past: or, the retreat of the *longue durée*.”

### **Agenda:**

*Who is a historian? The archive in theory and as actual places. Differing scopes of analysis (short vs long, national, global, labor, social, discipline...) and their consequences.*

*Discontinuity and continuity. historical ontology and historical epistemology introduced. What counts as evidence? Does history have a perspective? How do methods align with our aims?*

***Decide on presentations***

### **Further Reading:**

Elizabeth Yale, “The History of Archives: The State of the Discipline” *Book History* Volume 18 (2015)

Hayden White *Metahistory: The Historical Imagination in Nineteenth-Century Europe* (1973)

Michel Foucault *The Order of Things* (1966)

Jacques Derrida *Archive Fever* (1995)



## **September 18 | [Why] Is HSMT Different from *History*?**

### **Readings:**

Thomas Kuhn, “The Relations between History and History of Science” *Daedalus* Vol. 100 No. 2 *The Historian and the World of the Twentieth Century* (spring 1971)

Lorraine Daston “The History of Science and the History of Knowledge” *KNOW* (2017)

Peter Dear, “What Is the History of Science the History *Of*?:Early Modern Roots of the Ideology of Modern Science,” *Isis* 96, no. 3 (2005): 390–406.

Steven Shapin and Simon Schaffer *Leviathan and the Air-Pump* (Princeton UP: 1985) Chapter 1 “Understanding Experiment” and Chapter 8 “The Polity of Science”

Victor L. Hilts, “History of Science at the University of Wisconsin,” *Isis* 75, no. 1 (1984): 63–94.

### **Agenda:**

*Practical dimensions of the distinction between HSMT and history. The historical origins of a distinction. Should the distinction persist? Finding colleagues in history (and other fields).*

*Planning the degree and the practical matters of scholarly identity in the job market: What do I say I am? And what will I be able to say I study and teach?*

### **Further Reading**

## September 25 | Intersecting HSMT with STS

### Readings:

Sergio Sismondo *An Introduction to Science and Technology Studies* (Routledge, 2004) “The Prehistory of STS” and “The Kuhnian Revolution”

Bruno Latour “Give me a Laboratory and I will raise the World” (1983)

Nicole Nelson, *Model Behavior* Introduction and Chapter 2 “Animal Behavior Genetics, the Past and the Future.”

Nicole C. Nelson et al., “Psychology Exceptionalism and the Multiple Discovery of the Replication Crisis,” *Review of General Psychology* 26, no. 2 (June 1, 2022): 184–98.

### Agenda:

*History of STS in relationship to the history of HPS, sociology, and HSMT. Historical methods vs. sociological methods; questions asked in STS vs. HSMT, and why historical methodology =/= a historical argument. Collaborative/interventionist sensibilities in STS. **Methodological discussion: publishing with collaborators in other fields, using mixed methods approaches.***

### Further Readings

Sergio Sismondo *An Introduction to Science and Technology Studies* (Routledge, 2004)

## Unit 2 The History of Science

### October 2 | Origin and Key Questions: Science or Knowledge? Universal or Local?

#### Readings:

Lukas M. Verburgt, “Introduction” in *Debating Contemporary Approaches to the History of Science* (Bloomsbury Publishing, 2024),

Marwa Elshakry, “When Science Became Western: Historiographical Reflections,” *Isis* 101, no. 1 (March 2010): 98–109, <https://doi.org/10.1086/652691>.

Suman Seth “Indigenous/Postcolonial History of Science and STS” in *Debating Contemporary Approaches to the History of Science*.

David Chambers and Richard Gillespie, “Locality in the History of Science: Colonial Science, Technoscience, and Indigenous Knowledge,” *Osiris* 15 (January 1, 2000): 221–40.

Naomi Oreskes, *Why Trust Science* Chapter 1: Perspectives from the History and Philosophy of Science

[we will also revisit the Dear piece from two weeks ago]

#### Agenda:

*The history of the history of science, ties between history of science and humanism and philosophy of science. Is science western and local, or universal? The professionalization of the fields. To what degree is the field (now or in the past) invested in the enterprise of science. Is science even the subject, or something else? Methodology Discussion: The Style of the Historiographical Essay*

#### Further Reading:

Lynn Nyhart. 2016. “Historiography of the History of Science.” In *A Companion to the History of Science*, edited by Bernard Lightman, 7–22. Chichester, UK: Wiley Blackwell

Paul Forman, “Independence, Not Transcendence, for the Historian of Science,” *Isis* 82, no. 1 (1991): 71–86.

Dian Zeng et al. “Compatible Humanists: Yuen Ren Chao Meets George Sarton” *Isis* 110 (2019)

Stephen G. Brush, “Scientists as Historians,” *Osiris* 10, no. 1 (January 1995): 214–31.

## **October 9 | Internalism-Externalism and Beyond**

### **Readings:**

Thomas Kuhn, *The Structure of Scientific Revolutions* (50<sup>th</sup> Anniversary Edition with Introduction by Ian Hacking)

Lorraine Daston and Peter Galison “The Image of Objectivity” *Representations* (Autumn, 1992), 81-128.

Steven Shapin, “Discipline and bounding: The history and sociology of science as seen through the externalism-internalism debate. *History of Science* 30: 333-369.

### **Agenda:**

*Kuhn’s model and evidence. Internalism vs. externalism. From intellectual history and discovery to practice and materiality. Parallel developments in sociology. The “strong programme” and the critique of whig history. Epistemic categories and scientific objects as historically emergent. Dividing up reading for 10/23*

### **Further Reading:**

Ian Hacking, *Historical Ontology* Especially Chapter 1 “Historical Ontology.” (Harvard UP, 2002)

Harry M. Collins, "Introduction: Stages in the empirical programme of relativism." *Social studies of science* (1981): 3-10.

Bruno Latour and Steve Woolgar, *Laboratory Life: The Construction of Scientific Facts* (Princeton University Press, 2013 [1979]).

Sharon Traweek, *Beamtimes and Lifetimes* (Harvard University Press, 2009).

Lorraine Daston, ed., *Biographies of Scientific Objects* (Chicago, IL: University of Chicago Press, 2000).

Léna Soler et al., *Science after the Practice Turn in the Philosophy, History, and Social Studies of Science* (Routledge, 2014).

Mario Biagioli, *Galileo, Courtier: The Practice of Science in the Culture of Absolutism*, Science and Its Conceptual Foundations Series (Chicago, IL: University of Chicago Press, 1994),

**October 16 | TBC: Information Practices**

**Readings:**

TBA

**Agenda:**

*TBC Methodology Discussion*

**Further Reading:**

TBA

## **October 23 | Globalizing the History of Science**

### **Readings:**

Margaret O'Mara "How to read a book in five minutes"

<http://faculty.washington.edu/momara/HOW%20TO%20READ%20A%20BOOK%20IN%20FIVE%20MINUTES.pdf>

Kapil Raj, "Beyond Postcolonialism ... and Postpositivism: Circulation and the Global History of Science," *Isis* 104, no. 2 (June 2013): 337–47.

Deborah R Coen *Climate in Motion: Science, Empire and the Problem of Scale* (2022)

**OR**

Elise K. Burton, *Genetic Crossroads: The Middle East and the Science of Human Heredity* (Stanford: Stanford University Press, 2021).

Read one (two if possible) review(s) of the book you read

### **Agenda:**

*Scale in history of science and its changes over time. Moving beyond western science: imperial, (post)colonial, global, transnational, indigenous, and their methodological/political/stylistic differences. Methodology Discussion: Analyzing and Situating a book in the literature; using book reviews to read effectively*

### **Further Reading**

James Poskett, *Horizons: The Global Origins of Modern Science* (HarperCollins, 2022).

Goss, Andrew "Introduction : An Imperial Turn in the History of Science," in *The Routledge Handbook of Science and Empire* (Routledge, 2021), 1–9.

Kim TallBear, "Genomic Articulations of Indigeneity," *Social Studies of Science* 43, no. 4 (August 1, 2013): 509–33, <https://doi.org/10.1177/0306312713483893>.

### **Unit 3 The History of Medicine**

#### **October 30 | Key Themes: Cures, Professions, Patients, and Power**

##### ***Readings:***

Paul Rabinow and Nikolas Rose, “Biopower Today,” *BioSocieties* 1, no. 2 (June 1, 2006): 195–217.

Ian Hacking, “Making up People” *London Review of Books* 17 August 2006

Charles E. Rosenberg, “The Therapeutic Revolution: Medicine, Meaning, and Social Change in Nineteenth-Century America,” in *Explaining Epidemics* (Cambridge: Cambridge University Press, 1992), 9–31.

Jennifer Klein, “Open Moments and Surprise Endings: Historical Agency and the Workings of Narrative in *The Social Transformation of American Medicine*,” *Journal of Health Politics, Policy and Law* 29, no. 4–5 (October 1, 2004): 621–42.

David S. Jones et al., “Making the Case for History in Medical Education,” *Journal of the History of Medicine and Allied Sciences* 70, no. 4 (October 1, 2015): 623–52,

##### **Agenda**

*Major topics in the history of medicine and their relation to different historical approaches. Social, institutional, professional, disciplinary, national and other emphases of history. Biopower and looping effects. The institutional location of the history of medicine within medical schools.*

##### **Further Reading**

Mark Jackson, “Introduction” in in *The Oxford Handbook of the History of Medicine* (Oxford UP: 2012) pgs. 1-18

Paul Starr, *The Social Transformation of American Medicine: The Rise of a Sovereign Profession and the Making of a Vast Industry* (Basic Books, 2017).

Stefan Muller-Witte “History of Science and Medicine” in *The Oxford Handbook of the History of Medicine* (Oxford UP: 2012) pgs. 469-483.

George Canguillhem *The Normal and the Pathological* (Zone Books, [1974]) and the introduction by Michel Foucault

Michel Foucault *The Birth of Biopolitics: Lectures at the Collège de France 1978-79*

## **November 6 | Environmental and Medical History**

*With Rick Keller*

### **Readings:**

Richard Keller, *Fatal Isolation: The Devastating Paris Heatwave of 2003* (Chicago UP 2015)

### **Agenda**

*Blending history of medicine with public health, environmental and colonial history. Addressing the history of the present. Other topics TBA*

### **Further Reading**

Naomi Oreskes and Erik M. Conway, *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming* (Bloomsbury Publishing USA, 2010).



## **November 13 | Medical Knowledge and the Experience of the Body**

### **Readings:**

Cooper Owens *Medical Bondage: Race, Gender and the Origins of American Gynecology* (University of Georgia Press, 2017)

Katharine Park *Secrets of Women: Gender, Generation and the Origins of Human Dissection* (Zone Books, 2010), Introduction and Chapter 2 “Secrets of Women.”

Mara C. Mills, Jaipreet Viridi-Dhesi, and Sarah F. Rose, “Disability, Epistemology, Sciencing,” *Osiris: A Research Journal Devoted to the History of Science and Its Cultural Influences* 39 (2024): 1–24. [introduction to special issue]

### **Agenda**

*Attention to the body in relation to the history of medical expertise, medical knowledge and race, gender and disability studies in the history of medicine.*

### **Further Reading**

Judith A. Houck, *Looking Through the Speculum: Examining the Women’s Health Movement* (University of Chicago Press, 2024).

David S. Jones et al., “Slavery and the Journal — Reckoning with History and Complicity,” *New England Journal of Medicine* 389, no. 23 (December 6, 2023): 2117–23, <https://doi.org/10.1056/NEJMp2307309>.

Shigehisa Kuriyama, *The Expressiveness of the Body and the Divergence of Greek and Chinese Medicine* (Zone Books, 1993).

Barbara Duden, *The Woman Beneath the Skin: A Doctor’s Patients in Eighteenth-Century Germany* (Harvard University Press, 1991).

## **November 20 | De-Centering Europe as the Location of Medical Knowledge**

*With Pablo Gomez*

### **Readings:**

Pablo F. Gómez, *The Experiential Caribbean: Creating Knowledge and Healing in the Early Modern Atlantic* (UNC Press Books, 2017).

Projit Mukharji “Historicizing Indian Systems of Knowledge”: Ayurveda, Exotic Foods and Contemporary Antihistorical Holisms” *Osiris* (2020)

Warwick Anderson, “Making Global Health History: The Postcolonial Worldliness of Biomedicine,” *Social History of Medicine* 27, no. 2 (May 1, 2014): 372–84.

### **Agenda**

*History of medicine or history of health and bodily practices? Models for global history—transnational, postcolonial, comparative. Parallel approaches in history of science and medicine.*

### **Further Reading:**

Projit Mukharji, *Doctoring Traditions: Ayurveda, Small Technologies, and Braided Sciences* (University of Chicago Press, 2016).

## Unit 4 The History of Technology

### November 27 | Key Themes: Capitalism and Political Economy

*Visit from Nicole Nelson to discuss grant writing*

#### Readings:

E.P. Thompson “Time, Work-Discipline and Industrial Capitalism” *Past and Present* 1967.

Donald MacKenzie, “Marx and the Machine,” *Technology and Culture* 25, no. 3 (1984): 473–502, <https://doi.org/10.2307/3104202>.

Ruth Schwartz Cowan, “The ‘Industrial Revolution’ in the Home” *Technology and Culture*, Vol. 17, No. 1 (Jan., 1976), pp. 1-23

Edward Jones-Imhotep, “The Ghost Factories: Histories of Automata and Artificial Life,” *History and Technology* 36, no. 1 (January 2, 2020): 3–29.

#### Agenda

*Ties between history of technology, economic and business history and labor history. History of technology in relation to business and Marxist historiography. What has counted as a technology? Technology and subjective experience. Cultural, social, intellectual, and economic emphases in the history of technology.*

#### Further Reading:

Leo Marx, “‘Technology’: The Emergence of a Hazardous Concept,” *Social Research* 64, no. 3 (1997): 965–88.

Seth Rockman, *Plantation Goods: A Material History of American Slavery* (Chicago, IL: University of Chicago Press, 2024),

<https://press.uchicago.edu/ucp/books/book/chicago/P/bo237040605.html>.

Angela Lakwete, *Inventing the Cotton Gin: Machine and Myth in Antebellum America*, Revised edition (Baltimore: JHUP, 2005).

David F. Noble, *Forces of Production: A Social History of Industrial Automation* (New York: Knopf, 1984).

Melvin Kranzberg “Technology and History: Kranzberg’s Laws” *Technology & Culture* 1986

Marianne De Laet and Annemarie Mol, “The Zimbabwe ‘Bush’ Pump: Mechanics of Fluid Technology,” *Social Studies of Science* 30 (2000): 225-263.

## **December 4 | Media, Subjectivity, and System**

### **Readings:**

Hughes et al. ed. *The Social Construction of Technology Systems* (MIT Press, 1987) General Introduction, Part 1

Sergio Sismondo, *Introduction to Science and Technology Studies Chapter 8 “Two Questions Concerning Technology”*

Friedrich Kittler *Gramophone, Film, Typewriter* (Stanford UP 1999[1986]) Translators’ Introduction by Geoffrey Winthrop-Young and Michael Wutz,  
o And Kittler’s Introduction

Paul N Edwards, “Y2K: Millennial Reflections on Computers as Infrastructure,” *History and Technology* 15 (1998): 7–29.

### **Agenda**

*From inventions to “sociotechnical systems.” Media theory and theories of technology and subjectivity. Constructivist vs. determinist accounts of technology. Are computers different?*

### **Further Reading**

Agatha C. Hughes and Thomas Parke Hughes, *Systems, Experts, and Computers : The Systems Approach in Management and Engineering, World War II and After*, Dibner Institute Studies in the History of Science and Technology (Cambridge, Mass: MIT Press, 2000).

Langdon Winner, “Upon Opening the Black Box and Finding It Empty: Social Constructivism and the Philosophy of Technology,” *Science, Technology, & Human Values* 18, no. 3 (1993): 362–78.

Jonathan Agar, *The Government Machine: A Revolutionary History of the Computer* (MIT Press, 2003)

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

Donald MacKenzie and Judy Wajcman, ed. *The social shaping of technology* (Open University Press, 1999)

## **December 11 | Disaster and Technology**

### **Readings:**

Megan Finn *Documenting Aftermath: Information Infrastructures in the Wake of Disasters* (MIT Press 2024)

Daniel Williford, **Seismic Politics: Risk and Reconstruction after the 1960 Earthquake in Agadir, Morocco,**” *Technology and Culture* 58, no. 4 (2017): 982–1016.

Devin Kennedy *Coding Capital: Computers and Economic Power in the United States* Chapter 8: “Non-stop: computer infrastructure and market failure” [pre-print]

Wendy Hui Kyong Chun, “Crisis, Crisis, Crisis, or Sovereignty and Networks,” *Theory, Culture & Society* 28, no. 6 (November 1, 2011): 91–112.

### **Agenda**

*Studying Technology when it breaks. The “risk society.” Environment and technology. Financial markets and technology.*

### **Further Reading**

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

Ulrich Beck, *Risk Society: Towards a New Modernity* (SAGE, 1992).

Caitlin Zaloom, *Out of the Pits: Traders and Technology from Chicago to London*, 1st edition (Chicago: University of Chicago Press, 2006).