

HISC 106 The Scientific Revolution
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Tuesdays and Thursdays 5:00-6:20pm
Room: YORK 4080A

Learning objectives

- Awareness of key historiographical perspectives and debates;
- A firm understanding of the spaces, conditions and actors of early modern science;
- Training in methodological skills with primary and secondary sources;
- Enhancement of historically based oral and written argumentative skills.

Assessment

Short essay: Working with the sources	30%	Due Friday, October 28
Round table	30%	Week 10 during class schedule
Reflection piece	40%	Due Friday, December 9

Weekly reflection: One critical paragraph conveying what you have learned, put into perspective, or interrogated through the week's readings and lectures is due in every Thursday before midnight. If you submit 5/8 reflections you may be able to increase your grade (B- > B+, etc.) No submission is needed for weeks 0, 7, and 10.

Rubrics

1. Short essay: Working with the sources

A short essay (3-5 pages double-spaced) discussing an item from the UCSD Special Collections. Students will describe the object's physical characteristics (including its format, structure, provenance, annotations, engravings, etc.) and locate it in a historical context (place and time of production, relationship printer-author-patrons, possible readership and spaces of circulation, its relationship with relevant cultural productions of its time, etc.). You may use any relevant secondary scholarship although the grade will be based on your ability to demonstrate your own analytic skills. The proposed structure is:

- Introduction: One paragraph presenting your object: 10%
- Physical description: 35%
- Discussion of the object in historical context: 35%
- Conclusion: how can you expand your discussion towards other pertinent questions? 20%

2. Round table

In week 7 the class will be divided into groups and questions for each will be handed out. Students will have two full weeks to prepare these questions with their group. The round tables will take place over week 10, with a designated time for each group during class hours. Note: this is not a debate in which someone is expected to win. I will grade the group's overall performance in the fostering of a common reflection.

- A designated moderator will briefly and efficiently present the questions.
- Each participant will make one initial pertinent remark.
- Discussants will demonstrate their ability to listen to different perspectives.
- Discussants will address these different perspectives with clear arguments and evidence.
- Each participant will give a short concluding remark.

3. Reflection piece

This is an 8-10 page essay in which you will use a primary source to develop a personal reflection on what you have learned in this course. First, I want you to reflect on the major conceptual and methodological takeaways. What were your expectations at the beginning of the journey and how did these evolve? Second, select a primary source (a digital or physical book or manuscript other than the one you've worked with before) that will allow you to expand and illustrate your reflection. Correct citation of primary and secondary sources is required.

By November 30th at the latest, you will have approached me to discuss your essay plan.

Suggested online resources:

- Annotated Books Online. A digital archive of Early Modern Books: <https://www.annotatedbooksonline.com/>
- The Archeology of reading: <https://archaeologyofreading.org/>
- Early Modern Letters Online: http://emlo-portal.bodleian.ox.ac.uk/collections/?page_id=907
- Republic of Letters: <http://republicofletters.stanford.edu/>

Academic integrity

The written work you submit for this course should be your own original work (which has not been submitted for another course previously). Please be sure to cite any words and/or ideas that

have been produced by other authors, in any context. If you are unsure of how to do this, please talk to me during office hours.

Themes and Readings

Part I Debates behind the metaphor

Welcome - Sept 22 Welcome

Roy Porter, “The scientific revolution: A spoke in the wheel?”, in R. Porter & M. Teich (eds.), *Revolution in History*, Cambridge: Cambridge University Press: 1986, pp. 290-316

Week 1 Sept 27 & Sept 29 What to do with the classics?

Herbert Butterfield, *The Origins of Modern Science. Revised Edition*, New York: The Free Press, 1965 [1st ed. 1957]: Please read the introduction - we will do some close reading in class.

Carla Nappi, “Paying Attention: Early Modern Science Beyond Genealogy”, *Journal of Early Modern History*, 21 (5), 2017, 459-470.

Optional yet recommended: Peter Dear, “What is the History of Science the History of? Early Modern Roots in the Ideology of Modern Science”, *Isis*, Vol 96, no. 3 (2005), 309-406

Week 2 Oct 4 & 6 A literary perspective

Cyrano de Bergerac, and Geoffrey Strachan. *Other Worlds : the Comical History of the States and Empires of the Moon and the Sun*. Trans. Geoffrey Strachan. London: Oxford University Press, 1965. (Selected sections are indicated in the PDF)

Part II Working with the sources in a digital era

Week 3 - Oct 11 & 13 Manuscripts on the move

Paula Findlen (ed.), *Networks of Knowledge. Scientific Networks in the Early Modern World*, London and New York: Routledge, 2019 [Introduction]

Dan Edelstein, Paula Findlen, Giovanna Ceserani, Caroline Winterer, Nicole Coleman, “Historical Research in a Digital Age: Reflections from the Mapping the Republic of Letters Project”, *The American Historical Review*, Volume 122, Issue 2, April 2017, 400–424,

Early Modern Letters Online:

http://emlo-portal.bodleian.ox.ac.uk/collections/?page_id=907

Republic of Letters:

<http://republicofletters.stanford.edu/>

Week 4 Oct 18 & 20 Knowledge in Print

Mid-term activity in UCSD Special Collections

Preparation reading:

Adrian Johns, *The Nature of the Book : Print and Knowledge in the Making*, Chicago: University of Chicago Press, 1998. Please read the Introduction.

Part III Spaces of knowledge

Week 5 Oct 25 & 27 The church, the court, and the university

Biagioli, Mario. *Galileo, Courtier : the Practice of Science in the Culture of Absolutism*. Chicago: University of Chicago Press, 1993 (Sections)

Galileo Galilei, *Sidereus Nuncius*, Venice, 1610 (You will inspect the digital copy in Latin and read indicated sections in the Van Helden translation posted on Canvas)

Carlos de Sigüenza y Góngora, *Libra Astronomica y philosophica*, Mexico, 1690 (This work was written in Spanish and there is no translation. You will inspect the digital copy of the book and to identify its main bibliographic components. You are not required to read the text.)

Week 6 Nov 1 & 3 The workshop

Pamela Smith, *The Body of the Artisan. Art and Experience in the Scientific Revolution*. Chicago: University of Chicago Press, 2004.

Please read Introduction, Chapter 2 and Chapter 3

Paracelsus, Of the Chemical Transmutation of Metals & the Genealogy and Generation of Minerals [...] London, 1657

https://www.google.com/books/edition/Paracelsus_of_the_Chymical_Transmutation/GjpH5vU1_VAC?hl=en&gbpv=1

William Newman and Lawrence Principe (eds.) *George Starkey, Alchemical Laboratory Notebooks and Correspondence*, Chicago: Chicago University Press, 2004. See letter I, p. 1

Week 7 Nov 8 & 10 The household

Alix Cooper, "Homes and Households" in Katherine Park and Lorraine Daston (eds.), *The Cambridge History of Science vol. 3 Early Modern Science*, Cambridge: Cambridge University Press, 2006, pp. 226-237

Clutterbuck, Ann. *Ann Clutterbuck Her Book, 1693*: https://search-library.ucsd.edu/permalink/01UCS_SD/qdfgul/alma991000019699706535

Week 8 Nov 16 & 17 Trading zones

Pamela O. Long, *Artisans/Practitioners and the Rise of the New Sciences, 1400-1600*, Corvallis: Oregon State University Press, 2011. Please read Introduction and chapter 4 “Trading Zones: Arenas of Production and Exchange”.

Anna Winterbottom, "Chapter 9 Science", In *The Corporation as a Protagonist in Global History, c. 1550–1750*. Leiden, The Netherlands: Brill, 2018). https://doi.org/10.1163/9789000438785_011

Philosophical Transactions: <https://royalsocietypublishing.org/toc/rstl/1/1>

Week 9 Nov 22 & 24 Societies and Academies

Steven Shapin, *The Scientific Revolution*, Chicago: The University of Chicago Press, 2018 [1996] Please read chapters 2 and 3.

Thomas Sprat, *History of the Royal Society*, London, 1665

Robert Hooke, *Micrographia*, London, 1665 (Please read The Preface)
https://ttp.royalsociety.org/ttp/ttp.html?id=a9c4863d-db77-42d1-b294-fe66c85958b3&type=book&_ga=2.74722641.27830110.1663638533-1542586124.1661585864

Royal Society Archives: <https://royalsociety.org/collections/turning-pages/>

Théophraste Renaudot and Eusèbe Renaudot, *A General Collection of Discourses of the Virtuosi of France, Upon Questions of All Sorts of Philosophy, and Other Natural Knowledg. : Made in the Assembly of the Beaux Esprits at Paris*, London: Printed for Thomas Dring and John Starkey, 1664.

Week 10 - Roundtables