

Science in Translation

SO302 Fall 2021

Seminar Leader: Dr. Qiao Yang 楊巧

Sessions: Fridays, 9:00-12:15

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Office Hours: Fridays, 13:00-15:00 or by appointment

Course Description

Arabic and Persian texts on Islamic astronomy, which mostly originated from Hellenistic traditions, existed in the Chinese imperial library in the mid-thirteenth century. It was only in the late fourteenth century that these texts were translated into Chinese. Chinese astronomers, however, encountered formidable difficulties in putting the texts into actual use. Almost three centuries later, in the mid-seventeenth century, a German Jesuit (re)introduced European astronomy into the Chinese world. However, he ended up in jail because Chinese and Muslim astronomers accused him of having miscalculated the funeral date and location of the emperor's concubine. How does science travel through and across languages? Does scientific translation weaken or reinforce cultural boundaries? What role do translators play in the transmission of scientific knowledge? This course explores the relation between science and languages from premodern times to the present. It tackles the above questions by combining fascinating historical records with recent scholarship in history and translation studies. We will think broadly about transmission of knowledge, influence, and how language and science are related to authority and power. We will meet translators in the eighth-century House of Wisdom in Baghdad, in Renaissance Europe, in Chinese imperial courts, and in Meiji Japan.

Learning Outcomes

- To problematize terms such as science and translation
- To gain awareness of the history of the non-Western science traditions, to think critically about how various traditions were connected to each other
- To critically analyse primary sources and secondary literature
- To develop and summarize arguments with concision and precision

Requirements

You are expected to bring to class the reading materials that have been assigned. Please arrive punctually and turn all phones to silent (not vibrate). The class will be conducted in a seminar style. This means that we are co-learning and active participating to the best of our ability. You will be evaluated on the basis of:

Academic Integrity

Bard College Berlin maintains the highest standards of academic integrity and expects students to adhere to these standards at all times. Instances in which students fail to meet the expected standards of academic integrity will be dealt with under the Code of Student Conduct, Section 14.3 (Academic Misconduct) in the Student Handbook.

Attendance

Attend all class sessions. If illness or an emergency prevents you from attending, please inform me as soon as possible. More than two absences (that is absences from two sessions of 90 minutes) in a semester will significantly affect the participation grade for the course. Please consult the Student Handbook for regulations governing periods of illness or leaves of absence.

SPECIAL CONSIDERATIONS FOR FALL 2021: Some students may need to begin the semester remotely due to travel restrictions caused by the pandemic. In addition, all students and instructors must refrain from in-person attendance if they are feeling ill. Instructors should make efforts to offer alternatives to in-person attendance where needed, including remote participation or asynchronous options.

Assessment

1. Class participation and preparation

Active, respectful participation informed by careful and thorough reading of the assigned texts is required. Some basic rules: arrive punctually, turn all phones to silent (not vibrate).

2. 5 reading responses

due Thursday morning at 9:00 am 24 hours before Friday's class emailed to me entitled LASTNAME-response-X.doc (filling in your last name and the reading response number). In about 300 words, it should respond to the readings we will discuss the next day in Friday's seminar. You could choose any five out of the weekly readings. These reading responses will be evaluated based on (1) their timely completion and (2) the thoughtful engagement with the readings which they demonstrate.

3. Presentation

in Week 12 and 13, on the topic and argument of your final essay.

4. Midterm essay

800 words, review what we have learned so far and write an essay; due 24 October 2021, 10 pm by email.

5. Final research essay

3000 words, reflecting on the sources, problems, and historical questions covered in the seminar. Successful papers will display originality of thought, careful attention to the types of sources and approaches discussed in the seminar, and will be expressed in clear, strong prose. Rely on at least 6 academic articles or book chapters that focus on your specific topic. You can use newspaper articles or web material but they won't count as academic articles. Due: 12 December 2021, 10 pm by email.

Essay Deadlines

Midterm: 24 October 2021, 10 pm by email.

Final research essay: 12 December 2021, 10 pm by email.

Policy on Late Submission of Papers

Essays that are up to 24 hours late can be downgraded up to one full grade (from B+ to C+, for example). Instructors are not obliged to accept essays that are more than 24 hours late. Where an instructor agrees to accept a late essay, it must be submitted within four weeks of the deadline. Thereafter, the student will receive a failing grade for the assignment.

Grade Breakdown

- Overall participation: 20%
- 5 reading responses: 15%
- Presentation: 10%
- Midterm: 25%
- Final research essay: 30%

Grading Scale:

A=100-94;	A-=93-91;
B+=90-88;	B=87-84;
B-=83-81;	C+=80-78;
C=77-74;	C-=73-71;
D+=70-68;	D=67-61;
F=60 and below	

Schedule

Fall classes start on Monday, August 30 and run until Friday, December 17 with fall break planned from October 18 – October 24. Completion week is from December 13 through December 17. Students are required to be on campus during completion week.

Week 1, September 3: Introduction – Rethinking Language and Translation

David Bellos, *Is That a Fish in Your Ear? Translation and the Meaning of Everything* (London: Penguin Books, 2011), chapters. 1 (pp. 4-6), 2 (7-20), 6 (pp. 57-66).

Johan Heilbron, "Towards a Sociology of Translation: Book Translations as a Cultural World System," *European Journal of Social Theory* 2 (1999): 429–444.

Martha Cheung, 'To Translate' Means 'To Exchange'? A New Interpretation of the Earliest Chinese Attempts to Define Translation ('fanyi')," *Target*, 17/1 (2005): 27-48.

Week 2, September 10: Rethinking Science

T.S. Kuhn, *The Structure of Scientific Revolutions*, 3rd ed. [earlier editions OK], chapters 1-2.

Bruno Latour, Steve Woolgar, *Laboratory Life: the Social Construction of Scientific Facts* (London: Sage Publications, 1979), Introduction and Chapter 2

Scott L. Montgomery, *Science in Translation: Movements of Knowledge Through Cultures and Time* (Chicago: University of Chicago Press, 2000), chapter 1.

Week 3, September 17: The Language of Science

Michael D. Gordin, *Scientific Babel: How Science was Done Before and After Global English* (Chicago and London: The University of Chicago Press, 2015), Introduction and Chapter 1.

Helen Verran, "Staying True to the Laughter in Nigerian Classrooms," *The Sociological Review*, 47/51(1999): 136-155.

Week 4, September 24: Text, People and Knowledge in Motion

David N. Livingstone, *Putting Science in its Place: Geographies of Scientific Knowledge* (Chicago and London: 2003), Introduction and Chapter 4.

Sonja Brentjes, *Teaching and Learning the Sciences in Islamicate Societies (800-1700)* (Belgium: Brepols, 2019), Introduction and 5.3 "Travel for the Sake of Knowledge."

Week 5, October 1: The Abbasid Translation Movement

D. Gutas, *Greek Thought, Arabic Culture: The Graeco-Arabic Translation Movement in Baghdad and Early 'Abbasid Society, 2nd-4th/8th-10th centuries* (London: Routledge, 1998), Introduction, chapters 1, 2.

Abdelhamid I. Sabra, "The Appropriation and Subsequent naturalization of Greek Science in Medieval Islam: A Preliminary Statement," *History of Science* 25/69 (1987): 223-243.

Week 6, October 8: Translating the World Empire in the 13th-14th Centuries

Thomas Allsen, *Culture and Conquest in Mongol Eurasia* (Cambridge: Cambridge University Press, 2001), chapters 16, 17.

Marianne O'Doherty, "'They are like beasts, for they have no law': Ethnography and Constructions of Human Difference in Late-Medieval Translations of Marco Polo's Book," in Kosta-Th  faine, Jean-Fran  ois (ed.) *Travels and Travelogues in the Middle Ages*. (New York: AMS Press), pp. 59-92.

Week 7, October 15: Translating Western Knowledge in China

"Wo Bozong," in An Anthology of Chinese Discourse on Translation, vol. 2,

Peter M. Engelfriet, *Euclid in China: The Genesis of the First Chinese Translation of Euclid's Elements Books I-VI* (Leiden: Brill, 1998) Introduction, Chapter 3.

No session October 22: Fall Break

Week 8, October 29: Ottoman Empire and Europe

Marwa S. Ishakry, "Knowledge in Motion: The Cultural Politics of Modern Science Translations in Arabic," *ISIS*, 99/4 (2008): 701-30.

Robert Morrison, "A Scholarly Intermediary Between the Ottoman Empire and Renaissance Europe," *ISIS*, 105/1 (2014), 32-57.

Week 9, November 5: Translators

Peter Burke, "Lost (and Found) in translation: A Cultural History of Translators and Translating in Early Modern Europe," *European Review*, 15/1 (2007): 83-94.

E. Natalie Rothman, "Interpreting Dragomans: Boundaries and Crossings in the Early Modern Mediterranean," *Comparative Studies in Society and History*, 51/4 (2009), 771-800.

Ibn al-Nadīm, *Fihrist*, trans. Bayard Dodge, 2 volumes continuously paginated (New York: Columbia University Press, 1970), 583-590, 613-626.

Week 10, November 12: Words and Dictionaries

D. Bellos, *Is That a Fish in Your Ear?* chapters 8-9 (pp. 81-93)

Carla Nappi, *Translating Early Modern China* (Oxford: Oxford University Press, 2021), Chapter 1.

P. B. Golden, ed., *The King's Dictionary: The Rasūlid Hexaglot – Fourteenth Century Vocabularies in Arabic, Persian, Turkic, Greek, Armenian and Mongol*, 2000, the section on verb.

Week 11, November 19: Translation Practices

Matthias M. Tischler, "Lost in Translation: Orality as a Tricky Filter of Memory in Arabo-Latin Processes of Transfer," *Medievalia* 16 (2013): 149-58.

Belén Bistué, *Collaborative Translation and Multi-Version Texts in Early Modern Europe* (Farnham: Ashgate, 2014), Introduction.

Felicity Henderson, "Faithful Interpreters? Translation Theory and Practice at the Early Royal Society," *Notes and Records of the Royal Society* 67 (2017): 101-122.

Week 12, November 26: Japanese Science in the Making

Montgomery, *Science in Translation*, chapters 5-6.

Yulia Frumer, "Translating Words, Building Worlds: Meteorology in Japanese, Chinese, and Dutch." *Isis*, 109/2 (2018): 1-7.

Student Presentations.

Week 13, December 3: Translating Darwin

C Acuña-Partal, "Notes on Charles Darwin's thoughts on translation and the publishing history of the European versions of *[On] The Origin of Species*," *Perspectives* 24 (2016): 7-21.

Marwa Elshakry, *Reading Darwin in Arabic 1860-1950* (Chicago: The University of Chicago Press, 2013), Introduction and Chapter 7.

Student Presentations.

Week 14, December 10: Beyond Word and Beyond Human

Benjamin Schmidt, "The Limits of Language and the Challenges of Exotica: Pictures, Words, and Global Knowledge in Early Modern Europe," in H. Cook and S. Dupré (ed.), *Translating Knowledge in the Early Modern Low Countries* (Berlin: Lit, 2013).

Castilho et. al., "Is Neural Machine Translation the New State of the Art?" *The Prague Bulletin of Mathematical Linguistics* 108 (2017), 109-120.

Yulia Frumer, "Before Words: Reading Western Astronomical Texts in Early 19th Century Japan," *Annals of Science*, 73/2 (2016): 170-94.

Conclusions

Final essay due: 12 December 2021, 10 pm.