

HIST 294-08 / ENVI 294-02

Technology and the Environment in the Pre-Modern World

Macalester College, Fall 2017

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Class Location: Old Main 002
Class Time: M 7:00-10:00 pm
Office Hours: M, 4:45-6:45
(or by appointment)

Course Description

From volcanic activity to viral pandemics, from flooding rivers to invasive fauna, every human society has had to face material, ecological, climatic, and other such challenges particular to its environment. In this interdisciplinary course, we will investigate how human societies in the pre-modern world developed different sorts of technologies to confront and adapt to the challenges presented by their environments. Drawing upon a diverse array of sources, including glacial ice core data and saints' lives, we will explore how human technologies changed local environments in both intended and unintended ways. Environmental consequences presented new challenges that required further technological adaptation, fundamentally shaping trajectories of societal development from classical China to medieval Europe, from ancient Oceania to the Americas. In studying the formative relationship between technology and the environment in pre-modern global contexts, we will arrive at a more informed understanding of the emergence of the modern world. For our purposes in this course, "technology" will include not only physical tools but also political-cultural ideologies, systems of government, religions, scientific theories, and techniques of domestication. "Environment" will similarly be defined broadly: climate, physical geography, biosphere, and urban settlements.

This course seeks to develop your analytical and expository skills. Lectures and classroom discussion will enhance your ability to interpret primary sources in their historical contexts, while writing assignments will hone your proficiency in crafting clear, reasoned, and well-evidenced arguments. You are encouraged to think about this course as an investigation that rewards curiosity and serious thinking.

Themes of the Course

In order to help organize the material presented in this course, as well as to help you apprehend that material most effectively, the course will be structured around the following three themes:

1. Continuity and change in the beliefs, practices, and relationships which have shaped human experiences over time and in different environmental contexts.
2. The dialectic of civilization and the environment.
3. The possibilities and challenges of different kinds of historical evidence.

Course Materials

You will be required to purchase the texts which are listed below. You can find these texts at the university bookstore. However, if you choose to purchase these items through another merchant-retailer, it is your responsibility to ensure that you have acquired the editions specified here, as

pagination may vary considerably between editions. Both reading assignments as well as in-class exercises will assume that everyone is literally on the same page.

1. Richard Bulliet et al., *The Earth and Its Peoples: A Global History, Volume I: To 1550*, 6th ed. (Boston: Wadsworth Publishing, 2014).
 - ISBN-13: 978-1285436913
 - ISBN-10: 1285436911
2. *The Epic of Gilgamesh*, trans. Andrew George (London: Penguin, 2003).
 - ISBN-13: 978-0140449198
 - ISBN-10: 0140449191
3. Ellen F. Arnold, *Negotiating the Landscape: Environment and Monastic Identity in the Medieval Ardennes* (Philadelphia: University of Pennsylvania Press, 2012).
 - ISBN-13: 978-0812244632
 - ISBN-10: 081224463X
4. Bruce M.S. Campbell, *The Great Transition: Climate, Disease and Society in the Late-Medieval World* (Cambridge: Cambridge University Press, 2016).
 - ISBN-13: 978-0521144438
 - ISBN-10: 0521144434
5. Alan Mikhail, *Under Osman's Tree: The Ottoman Empire, Egypt, and Environmental History* (Chicago: University of Chicago Press, 2017).
 - ISBN-13: 978-0226427171
 - ISBN-10: 022642717X

Course Calendar

Descriptions of the course topics and reading assignments follow below. Course materials that are designated with an **[O]** can be found on the Moodle site for this course. You must complete all relevant assignments before arriving for class. Please bring assigned texts with you, as we will frequently be undertaking close analyses of particular passages. Additionally, unless otherwise noted, you must provide two discussion questions at the **beginning** of every class session. The guidelines for these questions are outlined in the Course Assignments section of this syllabus.

All session topics and reading assignments are subject to revision and augmentation. Therefore, please refer to the Moodle site for the most up-to-date version of the course calendar.

Part I: From the Dawn of Humanity until the Axial Age (500 BCE)

Week 1 – Sept. 11 Toward the Cognitive Revolution

- Introductory Remarks: Historical Paradigms and Periodizations, or Human vs World
- Archaeology, Genetics, and the Ecological Marginality of Archaic Humans

Week 2 – Sept. 18 The Triumph of Sapiens

- The Diversity of/at Origins: The Genus *Homo* on the Move
- Remapping Human Social Networks: Boats, Dogs, and the Agricultural Revolution

Readings:

Bulliet et al., *Earth and Its Peoples*, Ch. 1, pp. 4-25

[O] Nicholas Wade, *Before the Dawn: Recovering the Lost History of Our Ancestors*, Ch. 8
 “Sociality,” pp. 139-180

[O] R.A. Hill and R.I.M. Dunbar, “Social Network Size in Humans,” *Human Nature* 14, 1
 (2003), pp. 53-72.

Week 3 – Sept. 25 The River Valley Civilizations

- Irrigation and Urbanization: Egypt and Mesopotamia
- Geography and Eschatology: India and China

Readings:

Bulliet et al., *Earth and Its Peoples*, Ch. 2, pp. 26-51

[O] Code of Hammurabi

[O] Thomas R. Trautmann, *Elephants and Kings: An Environmental History*, Chapter 2 “War Elephants,” pp. 50-106

Week 4 – Oct. 2 Unintended Consequences

- Metallurgical Consequences and the Advent of Writing
- The Axes of Migration: Flora and Fauna in Comparative Contexts

Readings:

Bulliet et al., *Earth and Its Peoples*, Ch. 3, pp. 52-71

The Epic of Gilgamesh, Tablets I-VII, pp. 1-62

[O] Collected Excerpts: Origins of Writing

Part II: The (Not-So) Ancient World, 500 BCE – 500 CE

Week 5 – Oct. 9 Peoples of the Sea, Peoples of the Land

- Phoenicians and Austronesians in World Systems
- Ethnogenesis and Climatological Orientations: The Celts and Olmecs

Readings:

Bulliet et al., *Earth and Its Peoples*, Chs. 3 and 4, pp. 71-109

The Epic of Gilgamesh, Tablets VIII-XI, pp. 62-99

[O] “Shipwrecked Sailor,” in *Middle Egyptian Narrative Tales*, pp. 45-53

[O] Homer’s *Odyssey*, Book XIV

Week 6 – Oct. 16 The Technology of Classical Empires, I

- Persia: Cosmopolitanism and Imperialism
- Innovation at the Periphery: The Greek City-States and Alexander the Great

Readings:

Bulliet et al., *Earth and Its Peoples*, Ch. 5, pp. 112-141

[O] Collected Excerpts: Xenophon’s *Anabasis*

Week 7 – Oct. 23 The Technology of Classical Empires, II

- Multicultural Entrepots along the Silk Road: India and China
- *Imperium sine fine*: Rome's Mediterranean Habitus and the Enemy Within/Without

Readings:

Bulliet et al., *Earth and Its Peoples*, Chs. 6 and 7, pp.142-191

[O] Collected Excerpts: Ghost Stories from the Ancient World

[O] Selections from Tacitus' *Germania*

Part III: Transformations and Renewal in the Post-Classical Age, 500-1200 CE**Week 8 – Oct. 30 A Global Crisis in the Twilight of the Classical Era**

Midterm Examination

- Salvation through Faith: Christianity and Buddhism
- Europe and the Industrial Revolution of the Twelfth Century

Readings:

Bulliet et al., *Earth and Its Peoples*, Chs. 9 and 11, pp. 222-241 and 266-289

[O] Collected Excerpts: Buddhist Suttas and Christian Gospels

Week 9 – Nov. 6 The Environment in the Cultural Imaginary

- Discussion of Monograph I: Ellen F. Arnold, *Negotiating the Landscape: Environment and Monastic Identity in the Medieval Ardennes*

Readings:

Arnold, *Negotiating the Landscape*, read all

Week 10 – Nov. 13 Saddles, Camels, Paper, and Silk: Rerouting Civilizational Conduits in Eurasia

- The Venture of Islam: Religion and Empire
- Holy Wars and Heretics between East and West

Readings:

Bulliet et al., *Earth and Its Peoples*, Chs. 10 and 12, pp. 242-265 and 290-309

[O] Theodosian Code and The Pact of Umar

Part IV: The Age of Explorations, 1200-1600 CE**Week 11 – Nov. 20 Innovation, Expansion, and Crisis**

- Strong of Bow and Stirrup: The Mongol Conquests
- Global Africa

Readings:

Bulliet et al., *Earth and Its Peoples*, Chs. 13 and 15, pp. 312-337 and 360-379

[O] Selections from Ibn Battuta and Marco Polo

Week 12 – Nov. 27 Climatic Oscillations and Recursive Pandemics: Toward the Great Divergence

- Discussion of Monograph II: Bruce M.S. Campbell, *The Great Transition: Climate, Disease, and Society in the Late Medieval World*
- The Black Death and Its Global Impact in the Little Ice Age

Readings:

Campbell, *The Great Transition*, selections TBD

Bulliet et al., *Earth and Its Peoples*, Ch. 14, pp. 338-359

[O] Cultural Responses to the Black Death: Jean de Venette and Ibn al-Wardi

Week 13 – Dec. 4 Gunpowder, Galleons, Geography, and Germs: A Global Age of Discoveries

- The Columbian Encounter
- Exploration as a Global Phenomenon: New Worlds for All

Readings:

Bulliet et al., *Earth and Its Peoples*, Chs. 8 and 16, pp. 192-219, 386-411

[O] Selections from Bernal Diaz del Castillo, *Conquest of Mexico*

[O] Edmund Russell, *Evolutionary History: Uniting History and Biology to Understand Life on Earth*, Ch. 9 “Evolution of the Industrial Revolution,” pp. 103-131

Week 14 – Dec. 11 Modernity and Environmental Management

- Discussion of Monograph III: Alan Mikhail, *Under Osman’s Tree: The Ottoman Empire, Egypt, and Environmental History*
 - Concluding Remarks: New World Systems?
- *** Comparative Environmental History Paper DUE *****

Readings:

Mikhail, *Under Osman’s Tree*, read all

***** Dec. 16, 7:30pm-9:30pm: Final Examination *****

Assignments and Grade Values

Descriptions of this course's areas of assessment and their assigned grade values are as follows:

1. *Classroom Participation (20%)*. Continuous engagement with the ideas of the course is vital for getting the most out of this class. Before arriving for each session, you are expected to have thought deeply about the assigned readings, especially in relation to both previous readings and preceding course lectures. For each class session, you will also be expected to produce two discussion questions that reflect thoughtfully upon any or all of the day's assigned readings. These questions must be submitted in hardcopy at the beginning of class. Please note that these questions may **not** be queries directed at the Bulliet et al. textbook; focus your reflections upon the other readings for the day. This assignment will constitute 25% of your participation score. The remaining 75% will be determined by the frequency and quality of your participation in classroom discussion, as well as any in-class writing assignments.
2. *Reading Responses (20%)*. On five occasions (to be determined) during the term, you will be expected to submit a typed two-paragraph response to a prompt that I have provided one week in advance. The nature of these prompts will vary, e.g. illuminating points of convergence and/or divergence between similar/different technological responses to similar/different environmental challenges. The objective of these reading responses is to cultivate your ability to grapple with the dialectic between technology and the environment as it is mediated through surviving pre-modern sources, which present their own unique challenges of interpretation.
3. *Comparative Environmental History Paper (25%)*. The three monographs that we will be reading in this course feature somewhat different approaches to 'doing' environmental history. In this paper, which should be six to eight pages in length, you will assess the strengths and weakness of these approaches. What are the possibilities, limitations, and perils of historical argumentation as undertaken in these three monographs? Which aspects of the relationship(s) between technology and the environment find themselves obscured or enhanced based on the decisions that these historians have made in structuring their analyses? You will receive more details concerning this assignment before we read Arnold's monograph for 6 November. This paper will be due at the beginning of the final day of class on **11 December**, when we will be discussing the Mikhail monograph with such comparative concerns in mind.
4. *Midterm Examination (15%)*. You will be given a mid-term examination which will consist of short answer and essay questions. This exam is to be completed without the aid of notes or other materials. All lecture and reading material that you encounter during the first half of this course is subject to appear on the exam. Although you will not be provided with a study guide, we will have a review session in advance of the examination.
5. *Final Examination (20%)*. You will be given a comprehensive final on 16 December at 7:30-9:30 pm. This in-class examination will consist of short answer and essay questions. As with the mid-term, this exam is to be completed without the aid of notes or other materials, and no study guide will be provided in advance of the exam. The final examination will cover the lectures and reading material you encounter during both halves of this course.

Policy on Late Assignments

Late submissions of writing assignments will be penalized one full letter grade for each calendar day of tardiness. A late submission of the final examination will be penalized one full letter grade in total. In extraordinary circumstances, I may grant a limited extension without penalty, but the extension must be requested before the final examination is due. Since grades are due on 28 December, any late assignments that I have not received by 27 December will temporarily result in an Incomplete (I) for the course. Receiving an Incomplete may have an impact upon your various academic honors, e.g. eligibility for sports teams, graduation timeline, continued reception of a scholarship.

Policy on Absences

Because all course assignments and examinations assume a thorough understanding of both the lecture and reading materials as presented in class, attendance is essential. You are allowed **one** unexcused absence without penalty. However, every unexcused absence after the first will result in a reduction of 5% to your final course grade. Absences will only be excused due to 1) a contagious illness, 2) an overnight stay in a hospital, 3) your required presence at a university-sponsored event, 4) recognized religious holidays, or 5) the death of an immediate family member. To have your absence excused under the first three circumstances, you will need to provide me with evidence of the circumstance. Please note that, regardless of whether your absence is excused, you remain responsible for the material covered in class.

Class Conduct

Several guidelines must be observed during class. First, although disagreements and passionate discussions over interpretive issues are encouraged, I will not tolerate uncivil behavior, such as personal attacks, insults, the use of stereotypes, or otherwise offensive remarks. The classroom is a place where all are free to voice their opinions in a respectful setting. Toward this end, please turn off your cell phone and all other electronic devices during class. The use of such devices is disrespectful to both me and your fellow students. Laptops/tablets may be used for note-taking purposes. Please note that, if you choose to violate the prohibition on the aforementioned electronic devices, I will not disturb the class in order to ask you to put away the device. Instead, you will receive a zero for your participation score on that day. Finally, allow me to say that there are no stupid questions, as the texts which we will be reading are quite difficult. Therefore, if you are confused about anything at all, I encourage you to voice your concerns. It is quite likely that some of your peers have the same questions.

Course Grading Scale

The grading scale for letter grades is as follows:

A	100% - 93%	B-	82% - 80%	D+	69% - 67%
A-	92% - 90%	C+	79% - 77%	D	66% - 63%
B+	89% - 87%	C	76% - 73%	D-	62% - 60%
B	86% - 83%	C-	72% - 70%	F	Below 60%

Students taking the course on an S/N basis must earn a satisfactory grade, defined as a C- or better, in order to earn a grade of S in the course.

Student Academic Integrity and Scholastic Dishonesty

Academic integrity is essential to a positive teaching and learning environment. All students enrolled in Macalester courses are expected to complete coursework responsibilities with fairness and

honesty. Failure to do so by seeking unfair advantage over others or misrepresenting someone else's work as your own can result in disciplinary action.

Within this course, a student responsible for scholastic dishonesty can be assigned a penalty up to and including an "F" for the course. Plagiarism, in particular, will automatically result in expulsion from the course with a failing grade. If you have any questions regarding the expectations for a specific assignment or what qualifies as scholastic dishonesty, please ask. Additionally, you may wish to consult Macalester's official description of scholastic dishonesty and its consequences at:

<https://www.macalester.edu/academicprograms/academicpolicies/academicintegrity/>

Miscellaneous

If you have a disability, are an athlete who will miss class due to sporting events, suffer from chronic illness, or have any other concerns that might warrant special consideration, please speak with me **early** in the semester so that we can make accommodations to enable you to excel in this course. Concerning these and all other matters, feel free to contact me during office hours or via email.