

Research in Cultural Evolution

Spring 2025

Canvas: <https://canvas.harvard.edu/courses/143069>

Th 12:00-2:45pm, MCZ 539

Course description

Cultural evolution researchers leverage a rich set of interdisciplinary methods to answer questions about the nature of the human mind; the evolution of cultural practices; and the relationship between culture, psychology, and behavior. This seminar introduces students to a broad range of cultural evolution research methods, drawing from anthropology, psychology, economics, and other quantitative social sciences. Each week, we tackle a different method, including ethnography, surveys, experiments, secondary data, text analysis, and formal modeling. In class, students build their understanding and skills as evolutionary social scientists through a combination of empirical paper discussions and hands-on activities. The culminating assignment is a research proposal which challenges students to design a study to test a cultural evolutionary hypothesis.

Instructor

Dr. Cammie Curtin is a Lecturer in the Department of Human Evolutionary Biology. She received her BA in Neuroscience from Middlebury College and her PhD in Human Evolutionary Biology from Harvard University. Dr. Curtin studies cultural evolution—how cultural traits arise, spread, and shape psychology and behavior. Her recent work examines how social norms and other cultural practices sustain cooperation in indigenous Zapotec communities of Oaxaca, Mexico. Her research combines qualitative and quantitative methods from anthropology, psychology, and economics. During her time at Harvard, Dr. Curtin has served as a lecturer and teaching fellow at Harvard College, and instructor in the Harvard Pre-College Program, teaching courses in the Program for General Education, Human Evolutionary Biology, and Psychology. She holds a Bok Teaching Certificate from the Bok Center for Teaching and Learning at Harvard.

Email: cameron_curtin@g.harvard.edu | website: www.cameron-m-curtin.com

Office hours: By appointment

Course goals

By the end of the semester, you will be able to:

- Implement a variety of qualitative and quantitative research methods
- Critically evaluate the strengths and weaknesses of different methodological approaches to cultural evolution
- Design a study to test a cultural evolutionary hypothesis
- Write an effective research proposal

Course Structure

This is a small, hands-on seminar. Each week, we will focus on a different methodological approach that researchers in cultural evolution leverage. A typical class meeting will start with a brief orientation to the method of the week, followed by an in-depth discussion of the assigned readings. During the second part of our meeting, we will typically do an activity where you will gain hands-on experience with the methodological approach of the week.

Course policies

Attendance & engagement: Your engagement is critical to making this seminar a successful and enjoyable learning experience for all. You are expected to attend all class meetings and be mentally present, attentive, and engaged during discussions and activities. You are also expected to refrain from engaging in non-class activities on the computer, phone, or other devices while participating in this seminar.

Class preparation: You will have assigned readings for each class meeting. Since a large portion of our seminar is discussion, it is essential that you read all assigned papers closely and come ready to discuss them. Readings will be linked to in the Modules section of the Canvas site.

Late policy: You will have a bank of 24 “grace period” hours that you may use over the course of the semester to extend a deadline for any reason. You may use these 24 hours to extend a deadline for homework assignments or research proposal assignments (or, you may break the 24 hours up, e.g. to extend two deadlines by 12 hours each). Grace period hours cannot be applied to readings, in-class check-ins, or your final presentation. You must reach out to me when you plan to use your grace period hours. After the 24 hours have been used up, late assignments will be subject to a penalty of 10 percentage points per day. Extensions without penalty may also be granted for excused reasons on a case-by-case basis (e.g. documented illness, family emergency); documentation will be required.

Respectful discourse: Our exploration of the cultural evolution literature will take us through topics and themes related to war, religion, economic outcomes, gender norms, psychological diversity, and much more. An exploration of these topics may make some students uncomfortable, and may provoke strong opinions and emotions. Any students that choose to take this course should be prepared to engage scientifically on potentially controversial topics. Our seminar is intended to be a place for

vigorous but civil academic discussion. At the same time, we will strive to have a classroom that is inclusive and respectful. Disagreement is allowed; disrespect is not. If you do feel uncomfortable, please discuss your concerns with me.

Academic integrity: Academic integrity is central to the University's mission. All students will be expected to conduct themselves in accordance with the [Honor Code](#). All work, whether involving tests, examinations or writing, must be the student's own work. For exams, all answers must come from your own head, and not from smartphones, cheat sheets, neighbors, friends or other sources. In all students' writing for this course, the copying of any portion of someone's else writing or oration material without appropriate attribution, including the use of quotation marks or other indicators, is plagiarism. Claiming to have accidentally incorporated copied materials from notes or study materials is not an excuse or mitigating factor. You must take the necessary step to prevent such accidental plagiarism. For more guidance, visit [Harvard's Guide to Using Sources](#).

Generative AI: I expect that all work you submit for this course will be your own. I specifically forbid the use of ChatGPT or any other generative artificial intelligence (AI) tools at all stages of the work process for homework assignments, the research proposal, and presentation, including preliminary ones. The *one* area where students are permitted to use generative AI is to assist with coding tasks in R. Violations of this policy will be considered academic misconduct. I draw your attention to the fact that different classes at Harvard could implement different AI policies, and it is the student's responsibility to conform to expectations for each course.

Accessibility: Harvard University values inclusive excellence and providing equal educational opportunities for all students. Our goal is to remove barriers for disabled students related to inaccessible elements of instruction or design in this course. If reasonable accommodations are necessary to provide access, please contact the [Disability Access Office \(DAO\)](#). Accommodations do not alter fundamental requirements of the course and are not retroactive. Students should request accommodations as early as possible, since they may take time to implement. Students should notify DAO at any time during the semester if adjustments to their communicated accommodation plan are needed.

Assignments and grading

Assignment	Weight	Due date
Class participation Top marks for participation can be earned by making meaningful contributions to discussions of empirical papers and actively engaging in all in-class activities/ workshops.	20%	Ongoing
Homework assignments To enhance your mastery of the methods we're tackling in class, you will complete 5 homework assignments over the course of the semester.	30%	Ongoing
Research proposal Research proposal on a cultural evolution-related topic. Over the course of the semester, you will submit and receive feedback on your topic (2.5%), five methods you could use to approach your topic (2.5%), a research plan (5%), and a full proposal draft (10%). You will submit the final proposal (20%) during Reading Period.	40%	
<i>Topic selection</i>	2.5%	Feb. 27
<i>Methods brainstorm</i>	2.5%	Mar. 6
<i>Finalize research plan and briefly share with class</i>	5%	Mar. 27
<i>Draft proposal</i>	10%	Apr. 10
<i>Final proposal</i>	20%	May 7
Final presentation During our final meeting of the semester, you will present your research proposal to the class.	10%	Apr. 24

Number-to-Letter grade conversion:

A	94.0 - 100.0
A-	90.0 - 93.9
B+	87.0 - 89.9
B	84.0 - 86.9
B-	80.0 - 83.9
C+	77.0 - 79.9

C	74.0 - 76.9
C-	70.0 - 73.9
D+	67.0 - 69.9
D	64.0 - 66.9
D-	60.0 - 63.9
E	Below 60

Course outline

Subject to change. For the most up-to-date information, see Canvas Modules section.

Unit 0. Course Introduction

Thurs Jan 30 **Course Introduction**

We'll begin with an orientation to the course, including an introduction to topics we'll cover this semester, a review of syllabus, and an introduction the research proposal assignment you'll be working on throughout the semester.

Readings due:

- Henrich (2020). *The WEIRDest People in the World*. Chapter 2: Making a Cultural Species.
- Optional (but recommended if you are new to cultural evolution):
 - About cultural evolution: <https://culturalevolutionsociety.org/about-cultural-evolution/>
 - What is cultural evolution? <https://culturalevolutionsociety.org/about-cultural-evolution/what-is-cultural-evolution/>

Unit 1. Ethnographic methods

To study psychological and behavioral variation, many cultural evolutionary researchers do fieldwork in non-Western, Educated, Industrialized, Rich, and Democratic (WEIRD) settings. While fieldwork typically involves collection of quantitative data using the methods that we will explore in Unit 2, many researchers also leverage ethnographic methods. Ethnography allows the researcher to gain a rich understanding of local cultural practices, social norms, and daily life—providing important context for interpreting quantitative data. In this unit, we discuss and practice qualitative and quantitative ethnographic methods, including participant observation, interviewing, vignettes, and pile sorts.

Thurs Feb 6 **Qualitative ethnography**

Participant observation, ethnographic interviews, and fieldnotes.

In-class training on research ethics and working with human subjects.

Readings due:

- Malinowski (1922). *Argonauts of the Western Pacific*: Forward (p.16-19) & Introduction (p. 28-64).
- Bernard (2011): Chapter 8: Interviewing (p.156-166 & 176-183); Chapter 12: Participant Observation (p.256-260, 265-267, & 284-288); Chapter 13: Fieldnotes (p. 291-304)
- Singh *et al.* (2021). Small gods, ritual, and cooperation: The Mentawai water spirit Sikameinan. *Evolution and Human Behavior* 42, 61-72.

Homework 1 (due next class): Qualitative Ethnography (fieldnotes or ethnographic interview)

Thurs Feb 13 **Quantitative ethnography**

Structured interviews and quantitative ethnographic tasks (e.g. pile sorts, ranking, social norm vignettes).

Research deadline:

- Identify a general topic of interest for your research proposal, based on brainstorming and skimming the literature. Be ready to briefly discuss in class.

Readings due:

- Bernard (2011): Chapter 10: Cultural Domains (p. 223-228, 230-231, 233, 235-237)
- Henrich & Henrich (2010). The evolution of cultural adaptations: Fijian food taboos protect against dangerous marine toxins. *Proceedings of the Royal Society B* 277, 3715–3724.
- Mathew & Boyd (2011). Punishment sustains large-scale cooperation in prestate warfare. *PNAS* 108(28), 11375-11380.
 - Supplement section 4: “Vignette Study” (Supplement pages 16-22)
- Talhelm *et al* (2014). Large-Scale Psychological Differences Within China Explained by Rice Versus Wheat Agriculture. *Science* 334(May), 603-608.
 - Take a look at the Triad Task: “Triad Task Full 20 Items” and “Triad Coding Scheme”
 - Take a look at the Sociogram Task: “Sociogram Task” and “Sociogram Coding Scheme”

Homework 2 (due next class): Quantitative Ethnography Task

Unit 2. Behavioral and psychological methods

In Unit 2, we turn our attention to quantitative methods for studying human psychology and behavior. Over the course of three weeks, we tackle (1) experiments and experimental design, (2) survey and psychometric methods, and (3) behavioral economics games.

Thurs Feb 20 **Experiments**

Experimental design and avoiding bias. Transmission chains, priming, and other experimental approaches used in cultural evolution research.

Suggested research progress:

- Find and read 3 recent papers (1 recent review + at least 2 empirical papers) to help start thinking more deeply about your research topic/question.

Readings:

- Gray & Bjorklund. *Psychology* (Chapter 2, Methods: p. 110-31 & 141-156)
- Chudek *et al* (2012). Prestige-biased cultural learning: bystander's differential attention to potential models influences children's learning. *Evolution and Human Behavior* 33, 46-56.
- Derex *et al* (2013) Experimental evidence for the influence of group size on cultural complexity. *Nature* 503, 389-391.
 - Be sure to read the Methods section (at the very end, after the References)
- Muthukrishna *et al* (2014). Sociality influences cultural complexity. *Proceedings of the Royal Society B: Biological Sciences* 281, 20132511.

Thurs Feb 27 **Surveys and psychometric scales**

Building scales to measure psychological constructs, survey methods.

Research deadline:

- Proposal topic ("broad question") due.

Readings:

-
- Gelfand *et al* (2011). Differences Between Tight and Loose Cultures: A 33-Nation Study. *Science* 332(May), 1100-1104.
 - In the Supplement, read the following sections: Materials & Methods, Instruments, and Tightness Looseness Scale: Strength of Social Norms and Tolerance of Deviance (p. 1-3)
- Thomson *et al* (2018). Relational mobility predicts social behaviors in 39 countries and is tied to historical farming and threat. *PNAS* 115(29), 7521-7526.
 - In the Supplement:
 - Read sections 1.1: Participants and Recruitment and 1.1.2: Relational mobility scale.
 - Look at Figures S1, S2, S3 (Recruitment and survey interface), and Table S1 (Relational Mobility Scale Items).
- Liu *et al.* (2019). Ingroup vigilance in collectivistic cultures. *PNAS* 116(29), 14538-14546.

Homework 3 (due next class): Survey Methods

Thurs Mar 6 **Behavioral economics games**

Behavioral economics games aim to model real-world decisions-making contexts in a controlled, experimental setting. In a survey, a participant might say they'd be willing to donate money to their needy neighbor... but is it just cheap talk? We'll discuss games such as the Dictator Game, Public Goods Game, Ultimatum Game, and Random Allocation Game.

Research deadline:

- Submit five specific ways that you could approach your broad research question. Your five ways should feature at least 3 different types of methods. Be ready to briefly discuss in class.

Readings:

- Henrich *et al* (2006). Costly punishment across human societies. *Science* 312(5781), 1767-1770.
 - In the Supplementary Game Scripts, read the script for the DG.
- Shariff & Norenzayan (2007). God is watching you: Priming God Concepts Increases Prosocial Behavior in an Anonymous Economic Game. *Psychological Science* 18(9), 803-809.
- Purzycki *et al* (2016). Moralistic gods, supernatural punishment and the expansion of human sociality. *Nature* 530(7590), 327-330.
 - In the Supplement, read section S2: Materials and Methods (p.4-10).

Homework 4 (due next class): Public Goods Game

Unit 3: Leveraging secondary and text data

In addition to collecting new data, cultural evolutionary researchers often combine existing data (secondary data) to build new data sets and test novel hypotheses. This unit first introduces students to the process of building a secondary data set. We explore secondary data resources such as the World Values Survey and Ethnographic Atlas; discuss challenges associated with combining data from different sources; and practice merging data. We also discuss ethnographic resources. We examine how written ethnography can be coded and quantified, allowing for systematic analysis of ethnographic data. We also explore how researchers can extract psychological information from text—opening the door to the study of “dead minds”. Finally, the last week of this unit provides an overview of econometric methods for establishing causality from correlational secondary data.

Thurs Mar 13 **Working with secondary data**

How to find and merge datasets from a variety of sources.

Readings:

- Shariff & Rhemtulla (2012). Divergent effects of beliefs in heaven and hell on national crime rates. *PLoS ONE* 7(6), 1-5.

- Schulz *et al.* (2019). The Church, intensive kinship, and global psychological variation. *Science* 366(6466), eaau5141.
 - In Supplement, read S1.1 Kinship Intensity Index

Homework 5 (due next class): Secondary Data Manipulation in R

Thurs Mar 20 **Spring break! (No class)**

Thurs Mar 27 **Quantifying written ethnography**

Transforming qualitative ethnography from secondary sources into data that can be analyzed quantitatively.

Readings:

- Singh (2021). Magic, explanations, & evil: The origins and design of witches and sorcerers. *Current Anthropology* 62(1), 2-29.
- To better understand the Survey of Mystical Harm:
 - Read page S1-S2 of the Supplemental Materials
 - Look through the Survey of Mystica Harm dataset (starting in column N, you can read the questions that coders judged in row 3).
- Jackson *et al* (2020). A global analysis of cultural tightness in non-industrial societies. *Proceedings of the Royal Society B: Biological Sciences* 287, 20201036.
 - To better understand how the authors coded "tightness-looseness" from the ethnographic record, skim through their Coding Manual

Research deadline:

- Finalize an approach for your research proposal, including: specific question(s), hypotheses (alternatives), study logic, and basic methods. Be ready to briefly tell the class about your proposal idea.

Thurs Apr 3 **Text analysis**

Methods for analyzing data from text.

Readings:

- Atari, M. & Henrich, J. (2023). Historical Psychology. *Current Directions in Psychological Science* 32(2).
- Choi, V., et al. (2022). When danger strikes: A linguistic tool for tracking America's collective response to threats. *PNAS* 119(4).
- Enke, B. (2020). Moral values and voting. *Journal of Political Economy* 128(10)

Thurs Apr 10 **Estimating causal effects from correlation data**

Taking a cue from econometrics, we explore statistical methods that can help establish causality from correlational data, such as natural experiments, difference-in-differences, regression discontinuity, and instrumental variable analysis.

Readings:

- Henrich et al (2019). War increases religiosity. *Nature Human Behavior* 3(2), 129-135.
- “The plough and the now.” (2011). *The Economist*.
- Becker (2024). On the Economic Origins of Concerns Over Women’s Chastity. *Review of Economic Studies*, rdae084.

Research deadline:

- Proposal draft due

Unit 4: Formal modeling

The earliest work in cultural evolution was based on formal mathematical modeling. Modeling allows us to probe the evolutionary dynamics of traits, asking, for example: can a cognitive bias to learn from successful group members genetically evolve? What forces can stabilize cooperation in a group? Through reading and discussion, we close the semester by exploring formal modeling as a method for understanding how culture evolves.

Thurs Apr 17 **Formal modeling**

- Readings TBD

Unit 5: Finishing up

Thurs Apr 24 **Closing discussion and presentations**

Research deadline:

- Research proposal presentation due

Wed May 7 **Final proposal due**
(Reading week)