

Cultural Evolution
Human Evolutionary Biology 1290
Extension SSCI E-127
Fall 2019

Course ID: 159565

Lecture: Mondays and Wednesdays 9:00-10:15 am

Lab: Tuesday 3:45-5pm and Friday 10:30-11:45am (FAS students must attend one per week)

Location: MCZ 529 (Museum of Comparative Zoology)

Instructors and Teaching Fellows

<p style="text-align: center;">Joe Henrich Department of Human Evolutionary Biology 24-26 Oxford Street MCZ 533D henrich@fas.harvard.edu Office Hours: Mon 10:15- 11:15am</p>	<p style="text-align: center;">Teaching Fellow Tommy Flint 24-26 Oxford Street MCZ 533E tommyflint@g.harvard.edu Office Hours: Tues 5-6pm, Friday 11:45am-12:45pm</p>	<p style="text-align: center;">Extension Teaching Fellow Tommy Flint tommyflint@g.harvard.edu Online Office Hours: Weds 3:30- 4:30pm, Thursday 9-10am</p>
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Course Description

Humans are a cultural species. Unlike other species, we are heavily reliant on learning from others to acquire many important aspects of our behavior, and this capacity for cultural transmission has given rise to a second system of inheritance that not only explains much of our contemporary behavior but has driven our species' genetic evolution over hundreds of thousands or even millions of years. Humans are products of culture-gene coevolution. In addition to having shaped our species' anatomy and physiology, cultural evolution has important implications for understanding human nature, and for tackling basic problems and questions in psychology, economics and anthropology. The first half of this course will develop the basic principles and lines of empirical inquiry in the field of cultural evolution, while the remainder will apply, hone and refine them by examining the origins of global inequality, the emergence of modern institutions, and nature of psychological differences among populations.

This syllabus outlines both HEB 1290 and the extension course SSCI E-127. The basic content of the two course is the same, but there are two differences. First, HEB 1290 students have a lab as part of the course. In lab, the Teaching Fellow will walk students through the assigned journal articles to help them learn to read such scientific publications. For SSCI E-127 student, the journal articles are optional. This is made clear in the course schedule below. Second, the student evaluations are different in the two courses. HEB 1290 will write a variety of evaluations, including in-class, in-lab, and take-home tests. SSCI E-127 students will have only take-home essay for evaluation.

Course Materials and Resources

This course aims to integrate online resources, novel teaching technologies, broadly accessible texts, state-of-the-art research papers, multimedia class lectures, films, and contemporary popular media on relevant issues.

Course texts

Henrich, Joseph (2015) *The Secret of Our Success: How Culture Is Driving Human Evolution*,

Domesticating Our Species, and Making Us Smarter. Princeton: Princeton University Press

You should purchase this text. A limited number of copies will be placed on reserve in Lamont.

Henrich, Joseph (forthcoming) *The WEIRD People in the World: How Westerners became psychologically peculiarly and particularly prosperous*. New York: Farrar, Straus and Giroux

This will be available in PDF on the course website.

Articles used in this course

Derex, M., Bonnefon, J., Boyd, R., & Mesoudi, A. (n.d.). Causal understanding is not necessary for the improvement of culturally evolving technology, 1–20.

Francois, P., Fujiwara, T., & van Ypersele, T. (2018). The origins of human prosociality: Cultural group selection in the workplace and the laboratory. *Science Advances*, 4(9), eaat2201.

Henrich, J., & Gil-White, F. J. (2001). The evolution of prestige: Freely conferred deference as a mechanism for enhancing the benefits of cultural transmission. *Evolution and Human Behavior*, 22(3), 165–196.

Herrmann, E., Call, J., Hernández-Lloreda, M. V., Hare, B., & Tomasello, M. (2007). Humans have evolved specialized skills of social cognition: the cultural intelligence hypothesis. *Science (New York, N. Y.)*, 317(5843), 1360–6.

Laland, K. N., Odling-Smee, J., & Myles, S. (2010). How culture shaped the human genome: bringing genetics and the human sciences together. *Nature Reviews Genetics*, 11(2), 137–148.

Purzycki, B. G., Apicella, C. L., Atkinson, Q. D., Cohen, E., McNamara, R. A., Willard, A. K., ... Henrich, J. (2016). Moralistic gods, supernatural punishment and the expansion of human sociality. *Nature*, 530(7590), 327–330.

Raviv, L., Meyer, A., & Lev-Ari, S. (2019). Larger communities create more systematic languages. *Proceedings of the Royal Society B: Biological Sciences*, 286(1907), 20191262.

Richerson, P. J., Baldini, R., Bell, A., Demps, K., Frost, K., Hillis, V., ... Zefferman, M. R. (2016). Cultural group selection plays an essential role in explaining human cooperation: A sketch of the evidence. *Behavioral and Brain Sciences*, 39, 1–46.

Wrangham, R., & Carmody, R. (2010). Human Adaptation to the Control of Fire. *Evolutionary Anthropology*, 19(5), 187–199.

Course requirements and grading

HEB 1290 students only:

Your course grade will be based on six different components. The relative weighting in grading breaks down as in Table 1.

1. Lecture Participation: Students will be graded based on their class participation, which will include both the quantity and quality of their engagement in the lectures and class discussions. Comments that demonstrate an understanding of the assigned readings will be important.

Table 1: Grading Instruments		Percentage contribution
1	Lecture Participation	15%
2	Test in class	25%
3	Quiz 1 in lab	10%
4	Quiz 2 in lab	10%
5	Quiz 3 in lab	10%
6	Final Essay take home	30%

2. *Test*: The course is designed around the usual attention cycle of students. For the first month, there will be no evaluations until our in-class test. This test will involve a series of short and medium answer questions with at least one calling for a brief essay. These questions will not only test students' mastery of the material, but also their abilities to creatively apply it to new problems or questions.

3. *Quizzes*: We will have three short quizzes during the second half of the course and will arrive roughly every two weeks. This will keep students focused just as their attention might flag. The format of the quizzes will be similar to Test 1, but will take no longer than 20 minutes. They will be administered during the weekly lab.

4. *Final Exam*: This final examination will be available on the last day of class. The examination is open book and open notes but each student must write their own final examination without input from others. The examination will be due during finals (exact date TBA)

Extension School students only:

Extension students will be evaluated on four essay assignments and a final examination. The four essay assignments will focus on comprehension and integration of the materials in the lectures and readings. The 4 essays will be worth between 10% to 20% of your grade. The final will be worth 25% of your final grade. The scheduling of the evaluations are embedded in the schedule. Graduate-credit students will receive more rigorous grading on their essays and final.

Extension school students should complete a brief (10-20 min) diagnostic quiz to assess their preparedness for the course. The quiz and submission instructions will be available on the Canvas course website.

Schedule

Class #	Day and Date	Topics and Assignments
Class 1	Wednesday 9/4	Introduction: Review of Syllabus and major topics. Discussion of grading and requirements.
Class 2	Monday 9/9	<p>The puzzle of our species</p> <p><i>Reading: The Secret of Our Success (SoS) Chapters 1, 2 and 3.</i></p> <p>Film: The Human Spark: http://www.pbs.org/wnet/humanspark/category/episodes/ Watch <i>Brain Matters</i> and <i>So Human, So Chimp</i> Alternate links: https://www.youtube.com/watch?v=CmAZqC49LTY https://www.youtube.com/watch?v=smODYrjeVms</p> <p>FAS journal reading (optional extension): Herrmann et al. (2007)</p> <p>Optional reading for students who desire an introduction to evolutionary thinking: Wilson, <i>Evolution for Everyone</i>, Chs 3-10</p>
Class 3	Wednesday 9/11	<p>Making a cultural species and why we have big brain</p> <p><i>Reading: SoS Chapters 4-5</i></p> <p>FAS journal reading (optional extension): Wrangham and Carmody (2010)</p>
FAS Lab 1	Tuesday 9/10 & Friday 9/13	<p>Introductions</p> <p>Review how natural selection works</p> <p>Discuss Wrangham and Carmody and <i>The Human Spark</i></p>
Class 4	Monday 9/16	<p>Culture-driven genetic evolution</p> <p><i>Reading: SoS Chapter 6</i></p> <p>FAS journal reading (optional extension): Laland et al. (2010)</p>
Class 5	Wednesday 9/18	<p>The origins of faith</p> <p><i>Reading: SoS Chapter 7</i></p> <p>Extension: Assignment 1 assigned, due on 9/25</p>
FAS LAB 2	Tuesday 9/17 & Friday 9/20	<p>Discuss Laland et al.</p> <p>Practice Exam Questions</p>

Class 6	Monday 9/23	Prestige, dominance and menopause <i>Reading:</i> SoS Chapter 8 FAS journal reading (optional extension): Henrich and Gil-White (2001)
Class 7	Wednesday 9/25	Social norms <i>Reading:</i> SoS Chapter 9 Extension Essay 1 DUE
FAS Lab 3	Tuesday 9/24 & Friday 9/27	Review Henrich and Gil-White Public Goods Game in teams
Class 8	Monday 9/30	Intergroup competition <i>Reading:</i> SoS Chapters 10
Class 9	Wed 10/2	Self-domestication <i>Reading:</i> SoS Chapter 11 and Wrangham (2018) Chapters 2 and 4 (Chapter 3 is optional) Class led by TF Tommy Flint (instructor is away)
FAS Lab 4	Tuesday 10/1 & Friday 10/4	Review for Exam Discuss Wrangham
Class 10	Monday 10/7	HEB 1290 Exam, in class Extension: Assignment 2 assigned. Due on 10/14 Exam administered by TF Tommy Flint
Class 11	Wednesday 10/9	Guest Lecture: Helen Davis Institutions and Cognition <i>Reading:</i> Questions about Exam led by TF Tommy Flint
FAS Lab 5	Tuesday 10/8 & Friday 10/11	Review Test and discuss Dr. Davis's lecture. Do spatial tasks
Class 12	Monday 10/14	No class, University Holiday Extension Essay 2 DUE
Class 13	Wednesday 10/16	Collective Brains <i>Reading:</i> SoS Chapters 12 FAS journal reading (optional extension): Derex et. al. (Derex, Bonnefon,

		Boyd, & Mesoudi, n.d.)
FAS Lab 6	Tues 10/15 & Friday 10/18	How does this change your view of innovation? Discuss Derex et. al. Reading Practice Quiz
Class 14	Monday 10/21	Language and Enculturated Brains and Evolutionary History <i>Readings: SoS Chapters 13-14</i> FAS journal reading (optional extension): Raviv et. al. (2019)
Class 15	Wednesday 10/23	Human Evolutionary History <i>Readings: SoS Chapters 15-17</i> Extension: Assignment 3 assigned. Due on 10/30
FAS Lab 7	Tues 10/22 & Friday 10/25	FAS Quiz 1 When did cumulative cultural evolution begin and what would that look like? What are the practical implications of this view (Chapter 17)?
Class 16	Monday 10/28	The WEIRDest People in the World <i>Reading: WEIRD People Chapter 1</i>
Class 17	Wednesday 10/30	Making Societies Big is NOT easy <i>Reading: WEIRD People Chapter 3</i> Extension Essay 3 DUE
FAS Lab 8	Tues 10/29 & Friday 11/1	Review and Discuss Quiz 1 How can you get causality from correlation? Review for Quiz 2
Class 18	Monday 11/4	The Origins of Religion and BIG GODs <i>Reading: WEIRD People Chapter 4</i> FAS journal reading (extension optional): Purzycki et. al. (2016)
Class 19	Wednesday 11/6	Kinship, the Church, and the Origins of WEIRD Psychology <i>Reading: WEIRD People Chapters 5-7</i> Extension: Review Essay 4 Assigned
FAS Lab 9	Tues 11/5 & Friday 11/8	Discuss Purzycki et. al. Quiz 2

Class 20	Monday 11/11	WEIRD Monogamous Marriage <i>Reading: WEIRD People, Chapter 8</i>
Class 21	Wednesday 11/13	Markets and impersonal prosociality <i>Reading: WEIRD People, Chapter 9</i> Extension: Assignment 4 assigned. Due on 11/20
FAS Lab 10	Tues 11/12 & Friday 11/15	Discuss Quiz 2 Review for Quiz 3
Class 22	Monday 11/18	Domesticating Intergroup Competition <i>Reading: WEIRD People Chapter 10</i> <i>FAS journal reading: Francois (2018)</i>
Class 23	Wednesday 11/20	Market Mentalities <i>Reading: WEIRD People Chapter 11</i>
FAS Lab 11	Tues 11/19 & Friday 11/22	What is personality? Quiz 3
Class 24	Monday 11/25	Law, Democracy, Religion and Innovation <i>Reading: WEIRD People Chapter 12-13</i>
Class 25	Wednesday 11/27	Thanksgiving Holiday
FAS Lab 12	Tues 11/26	Review Quiz 3 Final Exam prep (no section on Friday)
Class 26	Monday 12/2	Review and discussion <i>Reading: WEIRD People Chapter 14</i> FAS and Extension Final Examinations Assigned

Buckle Up

The goal of this course is to apply a broad evolutionary framework to understanding human behavior, psychology and diversity both across history and into the modern world. This investigation will take us through topics and themes related to human nature, genetic evolution, genetic differences among populations, war, religion, psychological diversity, sex differences, economic outcomes and much more. An exploration of these topics may make some students uncomfortable. Any students that choose to take this course should be prepared to engage scientifically on potentially controversial topics. If you do feel

uncomfortable, you are invited to discuss any concerns with Professor Henrich or the Teaching Fellow.

Academic Dishonesty

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. In testing situations (unless otherwise specified), all answers must come from your own head, and not from smart phones, cheat sheets, neighbors, friends or other sources. In writing, copying any portion someone's else writing or oral 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.

Accessibility (Extension School)

The Extension School is committed to providing an accessible academic community. The Accessibility Office offers a variety of accommodations and services to students with documented disabilities. Please visit <https://www.extension.harvard.edu/resources-policies/resources/disability-services-accessibility> for more information.