

Cultural Evolution: An Interdisciplinary Approach

Human Evolutionary Biology 1290/ Extension SSCI E-127
Fall 2016

Course ID: 159565

Time: Mondays and Wednesdays 2:00-3:30 pm

Location: MCZ 529 (Museum of Comparative Zoology)

Instructors and Teaching Fellows

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Course Description

Unlike other species, humans are heavily reliant on learning from others to acquire many important aspects of their behavior, and this cultural transmission has created a second system of inheritance that has driven much of our species' genetic evolution. In addition to having shaped our species' anatomy and physiology, cultural evolution has important implications for understanding human nature, and for how to tackle basic problems in psychology, economics and anthropology. The first two-thirds of this course will develop the basic principles and lines of empirical inquiry, while the remainder will apply, hone and refine them by exploring economic development, the history of modern institutions, and global inequality.

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.

Articles used in this course

- Bettencourt, L. M. A., Lobo, J., & Strumsky, D. (2007). Invention in the city: Increasing returns to patenting as a scaling function of metropolitan size. *Research Policy*, 36(1), 107-120.
- Henrich, J., Ensminger, J., McElreath, R., Barr, A., Barrett, C., Bolyanatz, A., . . . Ziker, J. (2010). Market, religion, community size and the evolution of fairness and punishment. *Science*, 327, 1480-1484.
- Henrich, J., & Gil-White, F. (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., Hernandez-Lloreda, M. V., Hare, B., & Tomasello, M. (2007). Humans have evolved specialized skills of social cognition: The cultural intelligence hypothesis. *Science*, 317(5843), 1360-1366.
 - Kline, M. A., & Boyd, R. (2010). Population size predicts technological complexity in Oceania. *Proceedings of the Royal Society B-Biological Sciences*, 277(1693), 2559-2564.
 - 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.
 - Muthukrishna, M., & Henrich, J. (2016). Innovation in the collective brain. *Philosophical Transactions of the Royal Society B-Biological Sciences*, 371(1690).
 - Norenzayan, A., Shariff, A. F., Gervais, W. M., Willard, A. K., McNamara, R. A., Slingerland, E., & Henrich, J. (2016). The cultural evolution of prosocial religions. *Behavioral and Brain Sciences*, 39, 1-+.
 - Purzycki, B. G., Apicella, C., 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.
 - Richerson, P., Baldini, R., Bell, A., Demps, K., Frost, K., Hillis, V., . . . Newson, L. (2015). Cultural Group Selection Plays an Essential Role in Explaining Human Cooperation: A Sketch of the Evidence. *Behavioral and Brain Sciences*, 1-71.
 - 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 five 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 assignment readings will be important.

2. *Take-home Tests*: We will have two take-home tests. These will occur around Class 5 and Class 9 during the semester. These tests will involve a series of opened essay or short answers that test not only student mastery of the material, but also their abilities to creativity apply it to new problems or questions. They will be open everything (book, internet, etc.), although students' written responses must be entirely their own.

3. *Final Exam*: This in-class examination will occur on the assigned finals day. The precise format will be announced part way through the course.

Table 1: Grading Instruments		Percentage contribution
1	Lecture Participation	15%
2	Test 1	20%
	Test 2	30%
3	Final exam	35%

Extension School students only:

For Harvard extension students the evaluation will be focused on comprehension of the lectures and reading materials. This will be tested by four short (5 page) review essays the deadlines for which are embedded in the syllabus below

Schedule

Class #	Day and Date	Topics and Assignments
Class 1	Wednesday 8/31	Introduction: Review of Syllabus and major topics. Discussion of grading and requirements.
Class 2	Wednesday 9/7	The puzzle of our species <i>Reading:</i> SoS Chapters 1, 2 and 3, and Herrmann et al. (2007) <i>Film:</i> The Human Spark: http://www.pbs.org/wnet/humanspark/category/episodes/ Watch <i>Brain Matters</i> and <i>So Human, So Chimp</i>
Class 3	Monday 9/12	Making a cultural species <i>Reading:</i> SoS Chapter 4
Class 4	Wednesday 9/14	How culture stole our guts <i>Reading:</i> SoS Chapter 5 and Wrangham and Carmody (2010)
Class 5	Monday 9/19	Why some people have blue eyes <i>Reading:</i> SoS Chapter 6 and Laland et al. (2010)
Class 6	Wednesday 9/21	The origins of faith <i>Reading:</i> SoS Chapter 7 Extension: Review Essay Assigned
Class 7	Monday 9/26	Prestige, dominance and menopause <i>Reading:</i> SoS Chapter 8 and Henrich and Gil-White (2001)
Class 8	Wednesday 9/28	Social norms <i>Reading:</i> SoS Chapter 9 http://www.pbs.org/frontlineworld/rough/2005/07/introduction_to.html#
Class 9	Monday 10/3	Guest lecture: culture and economics FAS: Test 1 assigned
Class 10	Wednesday 10/5	Intergroup competition <i>Reading</i> SoS Chapter 10 and Richerson et al. (2015) Test 1 due in to Joseph Dexter by 2pm (start of class)

Class 11	Wednesday 10/12	Self Domestication <i>Reading:</i> SoS Chapter 11
Class 12	Monday 10/17	Collective Brains <i>Reading:</i> SoS Chapter 12 and Kline and Boyd (2010) Extension: Review Essay Assigned
Class 13	Wednesday 10/19	Language <i>Reading:</i> SoS Chapter 13
Class 14	Monday 10/24	Enculturated Brains and Evolutionary History <i>Readings:</i> SoS Chapters 14, 15, 16 and 17
Class 15	Wed 10/26	The WEIRDest People in the World <i>Reading:</i> The Weirdest People in the World
Class 16	Monday 10/31	Making Societies Big is NOT easy <i>Reading:</i> None (Start reading for Class 17)
Class 17	Wednesday 11/2	How god became moral and powerful <i>Reading:</i> Norenzayan et al. (2016) and Purzycki (2016)
Class 18	Monday 11/7	Guest lecture: Joseph Dexter Test 2 Assigned Extension: Review Essay Assigned
Class 19	Wednesday 11/9	Religion continued Test 2 due in to Joseph Dexter by 2pm
Class 20	Monday 11/14	WEIRD Families <i>Reading:</i> Draft chapters
Class 21	Wednesday 11/16	WEIRD Marriage <i>Reading:</i> Henrich, J, Boyd, R and Richerson, P, (2012)
Class 22	Monday 11/21	Markets and impersonal prosociality Economic Markets and Human Fairness: http://www.beinghuman.org/article/economic-markets-and-human-fairness
Class 23	Monday 11/28	Domesticating Intergroup Competition <i>Reading:</i> http://www.voxeu.org/article/markets-and-values-competition-builds-trust

Class 24	Wednesday Wed 11/30	Review and discussion Reading: Muthukrishna and Henrich (2016), Bettencourt et al. (2007) Extension: Review Essay Assigned
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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.