

Evolutionary Psychology

Psychology 358

Fall 2008

Meeting Time: MWF 10am to 11am
Meeting Place: West Mall Swing Space 222

Instructor: Joe Henrich

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Teaching Assistants

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Final Examination Time and Date: see registrar

Course Description

This course introduces students to the rapidly expanding interdisciplinary area of evolutionary psychology. This approach applies the modern understanding of evolutionary processes to the study of human behavior and psychology. We will examine the evolutionary origins and underlying psychology of diverse phenomena, including altruism, incest, food preferences, kinship, ethnicity, xenophobia, reciprocity, parental investment, violence, homicide, war, honor, cultural learning, social norms, prestige, religion (supernatural beliefs), suicide, menopause, mating preferences, emotions (like jealousy, disgust, anger, love, and joy), and homosexuality. This course will emphasize a closely related set of theoretical approaches that allow us to transcend debates such as “nature vs. nurture” to examine human minds as joint products of three interactive processes: genetic evolution, cultural evolution (history), and ontogeny (development and learning). In studying these processes students will come to understand how both cultural and genetic evolution has shaped our feelings, motivations, psychological abilities and behavior, and how cultural evolution have shaped the course of human evolutionary history and altered the direction of genetic evolution.

Organizing Questions for this Course:

- 1) How can evolutionary theory assist us in understand human behavior, motivation, reasoning, illness, and psychology?
- 2) Why do parents love their children?
- 3) Why do we like sweet, fatty, foods more than vegetables?
- 4) Why are we disgusted by (1) incest and (2) feces?
- 5) How does the study of non-human animals change how we think about our species? Can other species reason? Do they have “cultures”? Do they have wars, homosexuality, menopause and emotions? Do primate mothers care about their offspring? What, if anything, is special about humans, or are we just another unique species?
- 6) How do individuals learn culture? What is learned, how is it learned, and from whom? Why does it evolve?
- 7) What does it mean to say that cultural evolution has altered the genetic evolutionary of our species? Can culture evolution drive genetic evolution?
- 8) If natural selection always favors selfishness, how can humans sometimes be so nice to each other? Are bees and mole rats also nice to each other?
- 9) Why do many people and all human societies believe in supernatural beings? How can we understand the resilience of god-beliefs in light of modern science?

- 10) What are the implications of an evolutionary understanding of our species for approaching such phenomena as child rearing, violence, ethnicity, medicine, social change and economic development of a cultural-psychological approach to human behavior?

Course Materials and Resources

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

Online, Vista

There is a course website on the new UBC **Vista** system. This system is the main vehicle for delivering (1) readings, beyond those in our two books, (2) copies of the in-class lectures, and (3) take-home portions of the examinations. Vista is at <https://www.elearning.ubc.ca/home/index.cfm>. Or log directly on at: <https://www.vista.ubc.ca/webct/logon/226906602011>.

There is also a forum for discussing the course and asking questions of your fellow classmates. I will not be regularly checking the site so all questions to me or the TAs should be emailed directly to us at the email addresses above.

Student Response System

This course will use the *iclicker* system for rapid student response. The system is now widely used in North America and in the Faculty of Science here at UBC. Each student needs to obtain (purchase at the bookstore) an iclicker (with the textbooks for course). *iclicker* is a response system that allows you to respond to questions posed during class in real time. Participation and occasional correct answers will contribute to your overall participation grade—see below. **Starting on September 10th all clicker entries will be recorded and counted toward your participation grade.** We will start using the clickers immediately, so it is best to get them soon in time to make sure everything is working. You can use your clicker before you register it.

Please register your clicker through the Vista course website. On the course Vista home page, you will find an i>Clicker Registration icon. Click on this icon to access the registration form. Enter your Remote ID into the box provided. The remote ID is the series of numbers and sometimes letters found on the bottom of the back of your i>clicker remote. i>clicker will be used most days in class, and you are responsible for bringing your remote daily. The Vista page provides excellent instructions.

The *iclicker* is a onetime purchase and can be used in other classes. It can also be sold after our course.

Texts

Our course will use two books: one is a popular book on applying evolutionary theory to humans, and the other focuses on the evolution of cooperation (altruism) and develops a general theory for considering the interaction of culture and genes in evolution. It also provides a specific in-depth case example. These are on reserve at the library for this course.

- Wilson, David Sloan (2007) *Evolution for Everyone*. Delta Press
- Henrich and Henrich (2007) *Why Humans Cooperate*. Oxford University Press.

Course requirements and weightings for final grade:

Your course grade is based on your class participation (via the *iclicker*), two mid-term examinations, and the final examination. The relative weighing in grading breaks down as in the Table.

Participation: We will be using the clickers in most classes. Throughout our classes, I will be asking a variety of questions, including practice examination questions. Each time a student clicks in a response this will be recorded. Participation grades will be assigned mostly according to effort (rather than correct

Grading Instrument	Percentage contribution
Participation	10%
Exam 1	25%
Exam 2	30%
Final Exam	35%

answers), but occasional giving a correct answer will count more than merely answering something.

If a student achieves greater than 75% of the total possible clicks for the class, at the end, he or she will receive 100% of their participation grade (i.e., 10% toward their final grade). If a student gets less than 75% of the total possible clicks, he or she gets that percentage for their participation grade. For example, if a student gets 70% of the clicks over the semester, they will get $0.70 \times 10\% = 7\%$ for their participation grade. Because students only need to achieve 75% of total clicks, there is no problem with missing class for sports, academic conferences, illness, etc. No adjustments will be made for these kinds of cases since all students from 75% to 100% end up with 100% for their participation grade.

Occasionally, written homework assignments will also contribute to the students' final participation grade. These will be primarily graded for effort. Typically, these will involve writing a few paragraphs laying out a process of evolutionary inference.

Mid-Term Examinations 1 and 2: These examinations will have two parts. The first part will occur in-class (see Schedule) and will involve a closed-book (closed notes) test consisting of a combination of multiple choice, true-false, fill-in-the-blank and similar types of questions. After this in-class portion, students will receive a set of essay and/or short answer questions. These will be due soon (e.g., beginning of the next class) after the in-class portion and will be open-book, open notes, and open-friends. While people can discuss these exam questions with fellow classmates or roommates, each student must do the actual writing of their exam entirely on their own—putting the answer 100% in their *own* words (Exams will be electronically compared to each other and to the internet via Turnit, see below). These must be submitted to the TA electronically (on Vista) in a word processed form. Precise length, margins, and font specifications will be provided on the examination form—which is provided after the in-class portion. Late examinations will be severely penalized.

Students should take the time to figure out how to submit their examinations on Vista prior to the examination. The “I could figure out how to submit my test” is not an acceptable excuse, after the examination.

Final Exam: The Final is cumulative over the entire semester. The structure of the final will mirror that of the mid-term examination, except that the written portion will be due at the start of the in-class portion. That is, students will receive the essay questions via Vista approximately three days before the final examination. Students must be available for the final examination, so do not schedule your departure until after our Final. Check the registrar for the date.

Extra Credit in Human Subjects Pool: Students can receive up to 3 extra credit points (new policy) by participating in the human subject pool in Psychology. See <http://www.psych.ubc.ca/resguide.psy> for all the information. The instructor does not know any of the detail about this so best to check the website and not ask the instructor.

Schedule

Class #	Day and Date	Topics and Assignments
Class 1	W 3 Sept	Introduction: Plan for the course, expectations, and outline. Buy and register your iclickers on Vista
Class 2	F 5 Sept	Natural Selection and Genetics: How does evolution and natural selection work? What's the evidence for evolution and how it works? What are genes? <i>Reading:</i> Boyd and Silk Chapters 1 and 2

Class 3	M 8 Sept	Natural Selection and Genetics Continued: Can natural selection really create complex structures like the eye, or the emotion of jealousy, via small random changes? If mutation rates are so low, how can evolution be fast enough? Is there evidence that humans are affected by natural selection? <i>Reading:</i> Wilson Chapters 1 to 5 (pp. 1-36)
Class 4	W 10 Sept	Meet the Cousins: Non-Human Primates: What can primates tell us about human psychology and human behavior? How similar are human to non-human primates? Do primates have cultures? Can primate reason? Do primates cooperate? Do primates care about other members of their groups? Are there males that have sex with other males and females with females? Do chimpanzees engage in hunt, make tools, live in caves and conduct warfare? Do chimpanzees build coalitions, fight for dominance, and play politics? <i>Reading:</i> Wilson Chapters 6 to 11 (pp.37-73) <u>MUST have iclicker by today. Participation grading commences.</u> <i>Optional reading:</i> Boyd and Silk Chapter 5
Class 5	F 12 Sept	Film and Discussion (Natural Selection) <i>Darwin's Dangerous Idea</i>
Class 6	M 15 Sept	Human Evolutionary History and Ancestral Human Environments: Central to understanding how natural selection may have shaped human behavior and psychology is assessing the ancient environment that our ancestors lived and died in. What kinds of environments did humans evolve in? How important was foraging and hunting? Was there a division of labor between males and females? How big were the groups? Where did they live? On what did survival depend? Where there infectious diseases? Are we designed to eat meat? What wasn't there in this EEA (Environment of Evolutionary Adaptiveness)? <i>Reading:</i> Wilson Chapters 12 to 16
Class 7	W 17 Sept	Evolutionary Health and Medicine: Why do we like fatty, sugary foods if they are bad for us? How can fevers be good for you? How can iron-poor blood be an adaptation? Is it a good idea to put ice on a swollen ankle? Why do we die at all? How can pregnancy sickness be an adaptation? How can evolution be used to predict what will disgust women during pregnancy, and when? <i>Reading:</i> Flaxman and Sherman 2000
Class 8	F 19 Sept	Film (non-human primates): <i>The people of the forest (chimpanzees)</i>
Class 9	M 22 Sept	Incest Aversion (and incest taboos): Why do close blood-relatives love each other so much yet are disgusted at the idea of having sex? <i>Reading:</i> Henrich and Henrich Chapter 1 and Chapter 3, pages 35 to 47
Class 10	W 24 Sept	Kin Selection and problem of altruism: Is blood thicker than water? How does understanding kinship help explain murder patterns? Do people really kill their relatives more frequently than non-relatives? <i>Reading:</i> Henrich and Henrich Chapter 5
Class 11	F 26 Sept	Film and Discussion (EEA): <i>Baka</i> Instructor is AWAY
Class	M 29 Sept	Parental Investment Theory: How can evolutionary theory ever explain

12		<p>infanticide? Why do maternal grandparents invest more in their grandchildren than paternal grandparents? What is the truth about Cinderella? Are step-mothers really wicked?</p> <p><i>Reading:</i> Barrett et. al. Chapter 7</p>
Class 13-14	W 1 Oct to F 3	<p>Cultural Evolution, Conformity, and the Evolution of Prestige: How can evolutionary theory be used to construct a theory of cultural evolution? Are “cultural” and “evolutionary” explanations really opposed? What is prestige? How did it evolve? Why do people pay deference to high skilled, knowledgeable or prestigious people? What is the difference between dominance and prestige? Do non-human primates have prestige? Why do people care what celebrities think and pay so much attention to their lives? How can conformism be adaptive?</p> <p><i>Reading:</i> Henrich & Henrich, Chapter 2</p> <p><i>Optional Readings:</i> Henrich & Gil-White 2001</p>
Class 15	M 6 Oct	Examination I Prep
Class 16	W 8 Oct	Examination I
Class 17	F 10 Oct	<p>Prepared to Learn: Why are some things easier to learn and remember than others? What makes a good story, or urban legend? Why might kids recall information about the dangerousness of animals more than other kinds of information? What kinds of things do people get phobias toward? Snakes, heights, spiders, enclosed spaces? Why those things? Why are there vegetarians but not meatitarians?</p>
NC	M 13 Oct	Thanksgiving, no class
Class 18	W 15 Oct	<p>Cultural Adaptations: Evolved mechanism of cultural transmission can give rise to true adaptations. Are kayaks an adaptation? Why are spices cultural adaptations? How are Fijian food taboos an adaptation?</p> <p><i>Reading:</i> Biling and Sherman 1999</p>
Class 19	F 17 Oct	<p>Examination I Review</p> <p>Cultural Maladaptations: Can adaptive cultural transmission mechanisms produce maladaptive behavioral patterns and beliefs? What is the demographic transition? How could evolutionary theory ever explain this? How can adaptive cultural learning explain it? Female circumcision. What does the Tasmania case illustrate? (mini-lecture)</p>
Class 20	M 20 Oct	<p>Four avenues to cooperation: kinship, reciprocity and reputation, social norms and ethnicity: How can evolutionary theory explain altruism? What is the difference between direct and indirect reciprocity? Can cultural beliefs about how babies are made influence parental investments?</p> <p><i>Reading:</i> Henrich and Henrich Chapter 3 (pp. 47 to74) and Chapter 6</p>
Class 21-22	W 22 Oct-F 24 Oct	<p>Culture-gene coevolution, norms, and the emergence of human sociality: What is cultural group selection and how might it influence the genetic evolution of human social norms and altruism? Is there evidence that culture</p>

		<p>can influence genes? <i>Readings:</i> Henrich and Henrich Chapter 7</p>
Class 23	M 27 Oct	<p>The Group Selection Debate: What is Group Selection? Why is there so much controversy about it? <i>Reading:</i> Wilson Chapter 17-22 (pp. 125-172)</p>
Class 24	W 29 Oct	<p>Sex and Mate Selection: What is it about the fundamentals of sexual reproduction that leads to such differences between males and females? Why are there sexes at all? Why do females often care relatively more than males about potential mates' wealth, status, and future prospects? When don't women care about these as much? Why are men attracted to relatively younger potential mates? Why do men like breasts at all? Are there certain body shapes that males prefer, universally? Can women smell how good a guy's immune system is? <i>Optional Reading: Barrett et. Chapter 5</i></p>
Class 25-26	F 31 Oct- M 3 Nov	<p>Mate Selection continued: How can you guess when a woman is ovulating? In what ways do women's mate preferences change over their mating cycle? The evolutionary functions of male orgasms are pretty obvious, but why do females sometimes orgasm (and sometimes not)? <i>Reading:</i> Wilson Chapters 23-27 (pp173-232)</p>
Class 27	W 5 Nov	<p>Why do we laugh? What makes something funny? Do other species have a sense of humor? Are their cross-cultural universals in humor? Guest Lecturer: Wanying Zhao <i>Optional Reading Gervais and Wilson</i></p>
Class 28	F 7 Nov	Film
Class 29	M 10 Nov	<p>Pair-bonding and marriage: Are humans naturally monogamous? Do all societies have marriage? Are there any societies in which the women can seek out extra sex partners? Are there societies in which two men share one wife? If societies lacked marriage (pair-bonding) who might we predict would take on the "fatherly role"? <i>Reading:</i> Wilson Chapters 28-30</p>
Class 30	W 12 Nov	Examination II
Class 31	F 14 Nov	<p>What are these Big Brains for, anyway? Evolution of Culture and Language: How did evolution make our brain so big and why? Why do we have such a long juvenile period? Is it getting longer? Where might culture fit into this? How can culture drive genetic evolution? <i>Reading:</i> Hermann et. al. Cultural Intelligence</p>
Class 32	M 17 Nov	<p>Emotions and Expression: How can evolution help us understanding emotions? How does an evolutionary approach flip the assumption that "passions" interfere with "reason" on its head? Are there universal expressions of emotion in our species? Do people in different societies "feel" different</p>

		emotions in different societies? Guest lecturer: Jessica Tracy <i>Optional Readings:</i> Tracy and Matasamoto 2007
Class 33	W 19 Nov	Origins of Religion I: Why do people believe in invisible beings with superpowers that do stuff for you if you say words inside of your head to them? How is it that they are so sure of that these beings exist? Are ghosts, gods, superheroes, aliens and other mythic creatures “easy to think” in some way. The evolved universal structure of religious thought. How is religion like a chili pepper? Guest lecturer: Maciek Chudek Instructor is AWAY <i>Optional Reading:</i> Boyer and Barrett
Class 34	F 21 Nov	Puzzles: The Evolution of Homosexuality: How could evolution explain homosexuality? Is homosexuality a cultural aberration in our society, or is it common in many societies and throughout the animal kingdom?
Class 35	M 24 Nov	Folkbiology: Are there human universals in how people categorize the natural world? What are our specialized mental capacities for thinking about living kinds? How is our cognitive ability a product of culture-gene coevolution? What has happened to our understanding of biology? Why do people to think about some human groups differently from other human groups? What is essentialism and how does it apply to thinking about human groups? How do people think about groups, and why ethnicity (and race) is salient? Folksociology: Why do people think about some human groups differently from other human groups? What is essentialism and how does it apply to thinking about human groups? How do people think about groups, and why is ethnicity (and race) salient? Reading: Henrich and Henrich Chapter 9
Class 36	W 26 Nov	Origins of Religion II: How do religious institutions evolve? Might they evolve by cultural group selection? Does religious freedom cause more religious fundamentalism? Sociality in Broad Spectrum: Does human sociality vary across populations? How different are peoples in their notions of fairness, punishment, and altruism? Are people self interested? Are chimps self-interested? Does a society’s market integration predict more or less altruism? <i>Readings:</i> Henrich et. al. 2006 Optional Reading: Henrich and Henrich Chapter 8 Optional Reading: Henig NYtimes and Boyer’s readings
Class 37	F 28 Nov	Review, Discussion and Wrap-up

Psychology Department’s Policy on Grade Distributions and Scaling

I would like to give everyone A’s who delivers their best effort. However: grades will be scaled in order to maintain equity among courses and to conform to University, Faculty, or Department norms. This is not my choice, but department policy.

The primary function of grades is to inform you (and other people) as to your performance *relative* to other students taking the course. In order for grades to serve this function, it's important that average performance is reflected in an average grade (something in the C range), that better-than-average-but-not-great performance is reflected in a better-than-average-but-not-great grade (something in the B range), and so forth. The Faculty of Arts is very concerned about "grade inflation" and has set guidelines for the appropriate distributions of grades in courses at all levels. This is something we really pay attention to in the Psychology Department. So, for this course, the expectation is that the average final grade will be around 68-70. I will scale each exam and the overall final grade in such a way to ensure that the distribution of final grades in this class meets these guidelines. The Departmental Chair, however, reserves the right to change any grades, so you don't know your final grade until you hear from the University.

HSP extra credit points are added to your final grade after the scaling. This means that if I scaled to 70 (likely) and everyone obtains the full 3 points from HSP, the course mean will be 73.

Psychology Department's Position on Academic Misconduct

Cheating, plagiarism, and other forms of academic misconduct are very serious concerns of the University, and the Department of Psychology has taken steps to alleviate them. In the first place, the Department has implemented software that can reliably detect cheating on multiple-choice exams by analyzing the patterns of students' responses. In addition, the Department subscribes to *TurnItIn*--a service designed to detect and deter plagiarism. All materials (term papers, lab reports, etc.) that students submit for grading will be scanned and compared to over 5 billion pages of content located on the Internet or in TurnItIn's own proprietary databases. The results of these comparisons are compiled into customized "Originality Reports" containing several, sensitive measures of plagiarism; instructors receive copies of these reports for every student in their class.

In all cases of suspected academic misconduct, the parties involved will be pursued to the fullest extent dictated by the guidelines of the University. Strong evidence of cheating or plagiarism may result in a zero credit for the work in question. According to the University Act (section 61), the President of UBC has the right to impose harsher penalties including (but not limited to) a failing grade for the course, suspension from the University, cancellation of scholarships, or a notation added to a student's transcript. All graded work in this course, unless otherwise specified, is to be original work done independently by individuals. Do **not** use Google/Yahoo/MSN Search/etc. to find articles for assignments in this course. **Do** use any of the indexes and databases listed under Indexes and Databases, Subject Resources, OneSearch or Metasearch on the Library's website at <http://www.library.ubc.ca>. (Not sure which index to use? Click HELP on the library homepage at www.library.ubc.ca or try Subject Resources.) If you have any questions as to whether or not what you are doing is even a borderline case of academic misconduct, please consult your instructor. For details on pertinent University policies and procedures, please see Chapter 5 in the UBC Calendar (<http://students.ubc.ca/calendar>).

Special Accommodations:

UBC accommodates students with disabilities who have registered with the [Disability Resource Centre \(DRC\)](#). If you have a disability that may affect your performance in this class, please make sure you have contacted the DRC to arrange for accommodations. Please let me know of these accommodations as soon as possible.

UBC also accommodates students whose religious obligations conflict with attendance, assignments, or examinations. Please let me know as soon as possible – and well in advance of any assignment or examination – if you will require any accommodation on these grounds.

The university does not have any formal policy on accommodating students who plan to be absent for varsity athletics, family obligations, or other similar commitments. So, please do not assume that you will get special accommodations for these sorts of absences. It is your responsibility to ensure that you meet the course requirements as scheduled. If you do plan to be absent during any time an assignment or examination is scheduled, please discuss this with me as soon as possible (and make sure you do so before the drop date.)

