Evolution & Human Behavior

Winter 2018

The theory of evolution by natural selection is the underlying theme that unites all fields of biology. In this course we will cover the basic principles of evolution, explore ways in which evolutionary theory can be applied to human biology and behavior, and consider how evolutionary thinking might guide the development of social policy. We will consider questions such as these:

- Why are women and men different?
- Which is more egalitarian: monogamy or polygamy?
- Why do step-parents and step-children often have more conflicted relationships than biological parents and biological children?
- When do people cooperate, when are they selfish, and why?
- What can we do to reduce the rate of spousal abuse and homicide?

Objectives

My goal is to help you learn selection thinking; that is, to reason like evolutionary biologists. I will encourage you to pose questions, formulate hypotheses, design experiments, and critically evaluate the quality of evidence. After taking this course, you will be able to:

- Apply evolutionary theory to human interactions, especially those involving social conflict, and make predictions about how the divergent interests of the parties involved will affect their behavior.
- Design observational studies and experiments to test these predictions.
- Interpret and critically evaluate graphs and tables showing data on behavioral patterns in humans and animals.
- Provide evolutionary interpretations of various human social institutions, such as laws, wills, and social policies.

Time & Place

Honors 221 A: T Th 10:30-12:20 in MGH 242
Honors 221 B: T Th 12:30-2:20 in MGH 284

Instructor

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Office Hours: To be announced or by appointment

Please note that the best way to communicate with me is in person, either before, during or after class, or during office hours. You can also send me a concise email with “EHB: ” at the beginning of the subject line. I tend to process my email last-in, first-out, like a stack of cafeteria plates. And I often fall behind. If you haven't heard from me after 2 or 3 days, try again. Better still, speak with me in person. Unless otherwise instructed, I do not recommend that you communicate with me through Canvas. Canvas has a lot of channels, and I rarely check any of them.

Readings

Most assigned readings will be from the two required texts:

- *Evolution for Everyone*, by David Sloan Wilson, is a readable and wide-ranging book on how selection thinking can be productively applied to human behavior. Wilson is a partisan in an ongoing debate about the importance of individual vs. group selection. I do not agree with everything Wilson says, nor will you. But the book will provide ample food for thought and fodder for discussion.
- *The Secret Of Our Success,* by Joseph Henrich, is a new book by a scientist whose work I've long admired. Henrich identifies our capacity for cultural learning as the key trait that distinguishes humans from our closest relatives. And he argues that our capacity for cultural learning is an adaptation that evolved by natural selection. This view provides insights into a variety of otherwise deeply puzzling aspects of human behavior.

Other readings will be made available via the course website.

Assignments, Papers, and Grading

Grades for the course will be based on papers, assignments, participation in class and web discussions, and a collaborative research project.

Papers (40% of course grade)

Five papers will be due at ~2-week intervals. Papers must be double spaced, on 8.5 by 11 inch white pages, with at least 1 inch margins, in Times New Roman, 11 points or larger. I will not read past the end of the second page. Papers will be graded for accuracy of content, clarity of writing, and originality of thought. Unless you have made a prior arrangement with me, late papers will penalized 1/3 of a letter grade per day. I will give detailed instructions for the papers in class.

Assignments and participation in discussions (40% of course grade)

For most discussion meetings there will be at least one written assignment to be completed in advance and at least one written assignment to be completed in class. These assignments may include problems to solve, data to analyze, readings to critique, and questions to ponder. I strongly encourage you to talk with your classmates while working on the assignments, but all written answers, graphs, etc., must be your own work. This includes in-class assignments.

Assignments to be completed before class will be posted on the course website for you to download and print no later than 48 hours before they are due. These assignments will be due at the beginning of class.

Assignments to be completed in class will be handed out in class. They are due at the end of class. Some of these assignments may be too long to complete during class. Don’t worry about it! I am more interested in the quality and depth of your discussions than in whether you finish all the questions.

Assignments will be graded on a check, check-plus, check-minus system. No assignments will be accepted late, as doing so would defeat their purpose in stimulating discussion.

To encourage you to keep up with and discuss the readings, I will occasionally post discussion questions on the course website. You will not be graded on what you say, but you will get course credit for participating. Questions will be posted at least 24 hours before class. To receive credit, you must participate in the discussion before class begins.

Collaborative research project (20% of course grade)

The objective for this project is to give you some experience doing your own scientific research.

Part 1. Working with two or three of your classmates, pose a question about human behavior and suggest a hypothesis about the answer. Design a study to answer your question. Prepare a research proposal describing the logic of your study and submit it for our approval.

Part 2. Collect and analyze data. Compare your results to your predictions and draw a conclusion. Discuss the strengths and weaknesses of your study, consider the significance of your results in the context of other scientists' work, and suggest avenues for future research. Your final report will be due at the final exam.

Part 3. Present your work to your classmates during our final-exam-day symposium.

I will give additional details on this project in class.

Course Website

The course website features a weekly schedule, homework and paper assignments, readings and supplementary materials, online surveys and discussions, and links to other sites of interest.

The URL is: https://canvas.uw.edu/courses/1127956

Please notify me immediately if anything seems amiss on the website or with the files posted there—I'm human; I make mistakes.

Honors Portfolios

I offer this reminder from the Honors program:

> Students are encouraged to archive items from this course in their Honors learning portfolios. Readings, lecture notes, visual materials, music, poems, syllabi, tests, papers, etc, are examples of items that might assist with reflection on experiential learning and ways of thinking within and across disciplines. The Honors electronic learning portfolios span students' undergraduate years and are best used as an ongoing, dynamic forum for the integration of knowledge. In addition to archiving items, students are also asked to take a few minutes to write-up a paragraph or two describing the significance of the archived items and how what they learned in the course contributed to their larger experiences, goals, and thoughts about education and learning.

Students with Disabilities

If you have a disability, please speak with me about how I can accommodate you during the class.

Tentative List of Topics

Please note that the following list of topics is flexible, based on your background and interests. I want to learn from you what issues in evolution and human behavior are most compelling and important from your perspective. Read *Evolution for Everyone* and *The Secret of Our Success*, browse the library, the newspaper, and the web, and let me know what you want to cover.

Selection Thinking

Origin of modern humans, adult lactase persistence, and natural selection
Studying adaptation

Darwinian Medicine

Who benefits? Pathogens and behavior in humans and other animals
Adaptation to what environment? The trouble with time travel

Introduction to Evolutionary Psychology

The challenge of studying human behavioral adaptations
Deception and self-deception

Mating & Marriage

Sexual selection, why people marry, monogamy vs. polygamy
Confidence in paternity, sperm competition, mate guarding & parental care

Genetics, determinism, and behavioral strategies

Basic human genetics, genes in populations
Determinism versus flexible behavioral strategies

Kinship and altruism

Inbreeding and the genetics of mate choice
Selfishness and kin selected altruism

Games and Economic Behavior

Reciprocal altruism, prisoner's dilemma, the ultimatum game
Punishment and cooperation

Groups and group selection

Group selection and cooperation
Religion

Culture

What is the most adaptive way to learn?
How do cultural evolution and biological evolution interact?

Darwinism and Social Policy

Who makes the rules and whose interests do they serve?
Crime and punishment