

Syllabus - Fall 2014

FYSP 181:

Selfishness or Altruism? The Evolution of Sociality in Humans and Other Animals

M-W-F, 11:00 - 11:50, Science Center K209 (Biology Conference Room)

Keith Tarvin, Instructor

Department of Biology

Science Center A130

phone: 775-8306

email: keith.tarvin@oberlin.edu

Office Hours:

Mon 1:30-2:30; Tue 11:00-12:00; Fri 3:30-4:30

- PLEASE SIGN UP ON MY OFFICE DOOR -

Or by appointment (contact me via email or phone to set up a time).

If my office door is closed, just knock!

Course Description:

FYSP 181. Selfishness or Altruism? The Evolution of Sociality in Humans and Other Animals

Full Course; 4 NS, QFR

This course explores the ability of evolutionary theory to explain social behavior in humans and other animals. Can natural selection favor cooperation in non-human animals in spite of their “selfish genes”? Perhaps so, but can evolutionary theory account for elaborate social phenomena that seem restricted to humans – for example, religion, economic exchange, and political alliances? We will explore these issues through readings, discussion, modeling exercises, graphical analysis, and independent projects in which you will generate original hypotheses, deduce predictions from them, and design experiments to test them. *Enrollment limit 14.*

Course Objectives:

In this course, I hope to help you:

1. Understand the fundamental elements of the evolutionary process.
2. Evaluate the ability of evolutionary theory to account for sociality in humans.
3. Identify connections between biology and disciplines in the social sciences and humanities.
4. Learn to construct hypotheses and to deduce logical predictions from them, and to think of ways to test them.
5. Use modeling, graphs, and simple equations to express ideas and understand relationships between phenomena.
6. Become more scholarly; that is, learn to critically evaluate the works and ideas of others based on those works and ideas (as opposed to the authority of the authors), and to critically evaluate your own thoughts in relation to the works of others.
7. Learn to find relevant literature for a research project.
8. Enhance your writing, discussion, and presentation skills.

Primary Texts:

Dawkins, R. 1989. *The Selfish Gene* (2nd Edition or above). Oxford University Press, New York.

Ridley, M. 1996. *The Origins of Virtue: Human Instincts and the Evolution of Cooperation*. Penguin Books, New York.

Richerson, P. J. and R. Boyd. 2005. *Not By Genes Alone: How Culture Transformed Human Evolution*. University of Chicago Press, Chicago.

Additional Readings:

A few other readings will be assigned periodically throughout the semester, and are identified on the syllabus calendar. However, I may occasionally add additional readings which are not indicated on the calendar. I'll always give you plenty of time to incorporate additional readings into your schedule. Most of these readings will be available on Blackboard or as handouts.

Format of the Course

Discussions: Class meetings generally will consist of discussion of assigned readings. I expect everyone to have read the material prior to class, and to participate in each discussion. Each student will serve as the Discussion Leader for two class periods and will be responsible for moderating the discussion session on those days. I will provide guidelines for participating in and leading discussions.

Modeling and graphing exercises: We will use Excel-based models to explore some foundational components of social theory. You will use these models to manipulate conditions relevant to the particular social phenomenon under study to evaluate how changes in conditions can lead to differences in social organization or relationships. You will turn in responses to a set of questions based on each of these models. You also will occasionally be asked to generate graphical representations of ideas from the course readings. Sometimes these may be stand-alone assignments; other times they may be part of the take-home exams.

Take-home exams: You will have three take-home exams over the course of the semester. Take-home exams comprise questions about the readings, and short quantitative problems to help you better understand the material.

Metacognitive reflections: You will write short reflections on your own performance during discussions and presentations to actively evaluate your learning processes and habits with the goal of improving them as the semester proceeds. For example, after you lead your first discussion, you will write a short reflection piece in which you evaluate your performance as Discussion Leader, and identify any changes you will make or goals you will set for your second stint as Discussion Leader. Shortly before fall break, you will write a short self-examination piece reflecting on your own participation in discussions that you don't lead, and your plans for improvement during the remainder of the semester. Late in the semester, you will write follow-up pieces in which you evaluate your progress since the first self-evaluation.

Evolutionary Explanations Project: In the second module, you will develop a set of evolutionary hypotheses that can potentially explain some attribute of human social behavior that we have not discussed much in class (I'll give you a list of potential topics later). After everyone has fleshed out their ideas verbally and graphically in a formal paper, each student will give a 10 minute oral presentation of his or her hypotheses to the class. In these presentations, you will present your hypotheses, provide evidence to support your reasoning, and outline potential tests of the hypotheses. A short question/answer/discussion session will follow each person's presentation.

All work submitted for this course should be word-processed, single-spaced, and in 12 point font. **Please submit all written work to me via email (keith.tarvin@oberlin.edu).**

Grading:

Assignments will be graded based on the intellectual rigor and creativity of your thoughts and arguments, the quality of your presentation (organization, clarity, care), and how well you address criteria outlined in the guidelines to the assignment.

I also will grade your participation in class discussions, since those discussions are a fundamental component of the course. Your grade will not only reflect whether and how much you participate, but also the quality of your contributions. I will assign a discussion grade for each half of the semester. *Many people find participating in discussions uncomfortable or difficult. If you share these sentiments, then you should view this course as an opportunity to hone your participation skills and alleviate your trepidations. I'm here to help you do this!*

Finally, you will be graded each time you are the Discussion Leader. I will provide some feedback after your first session, and grade your second session more stringently.

I will provide guidelines that will help you understand what I'm looking for in each assignment. I'm also happy to talk with you one-on-one about any of the assignments. Please don't hesitate to come see me during office hours or at other pre-arranged times if you have any questions or would like to talk over ideas as you are working on your assignments.

Grade distribution for the course:

<u>Assignment</u>	<u>Points</u>	<u>Percent of total grade</u>
1. Discussion participation and reflection during first module	25	3
2. Leading discussion and reflection during first module	25	3
3. Modeling exercises (3)	175	22
4. Stand-alone graphing exercises (2)	75	9
5. Take-home exams (3)	300	38
6. Discussion participation and reflection during second module	25	3
7. Leading discussion and reflection during first module	25	3
8. Evolutionary Explanations paper	100	13
9. Evolutionary Explanations presentation and reflection	50	6
Total	800	100

Other aspects of the course:

Class starts promptly at 11:00 am. Please be on time. Late arrivals are very disruptive and will be counted as absences.

Attendance Policy. Because this course centers on class discussion, you should make every effort to attend all class meetings. If you expect to be absent for a class period, you must consult with me as soon as possible beforehand. If you accumulate several absences, I will deduct from your participation grade in the course. You cannot pass the class if your attendance is low.

Honor Code. As members of the Oberlin College Community, each of us is expected to adhere to the Honor Code. Please familiarize yourself with this code. You can view it online in your Blackboard site: Log on to Blackboard, scroll to the bottom of the page and click on "Honor System".

The following text was taken from The Honor Code and The Honor System Charter:

At the end of each academic exercise students shall write in full and sign the **Honor Pledge**:

"I affirm that I have adhered to the Honor Code in this assignment."

If a student does not follow the appropriate procedure, faculty members have the option of withholding the grade until the student writes the Honor Pledge correctly, although they may not penalize students for an oversight.

You will need to pledge the honor code on every assignment that you turn in.

Special Needs. Please contact me early in the semester if you have special needs so we can make any necessary accommodations. Alternatively, you may contact Jane Boomer, Coordinator for Students with Disabilities, Room G27, Peters Hall (ext. 55588; jane.boomer@oberlin.edu). All discussions between you and Ms. Boomer remain confidential, and I will only receive information that describes the type of accommodation needed.

Calendar for FYSP 181: Selfishness or Altruism? Fall 2011

Wk	Day/date	Topic	Readings	Assignments
1	W/3 Sep	Introduction to the course		
	F/5 Sep	<i>The Selfish Gene</i> : Evol of coop in non-human animals	SG: 1-2 - Keith	
2	M/8 Sep	"	SG: 3 - Keith	
	W/10 Sep	"	SG: 4 - Keith	
	F/12 Sep	"	SG: 5 – student leader	
3	M/15 Sep	"	SG: 6 – student leader	Graphical Exercise 1 due
	W/17 Sep	"	SG:7 – student leader	
	F/19 Sep	"	SG: 8 – student leader	Modeling exercise 1: Kin selection due tomorrow (Thu, 18 th) by 5:00
4	M/22 Sep	"	SG: 9 – student leader	
	W/24 Sep	"	SG: 10 – student leader	
	F/26 Sep	"	SG: 11 – student leader	Modeling exercise 2: Life History due tomorrow (Sat, 27 th) by 5:00
5	M/29 Sep	"	SG: 12 – student leader	
	W/1 Oct	"	SG: 13 – student leader	
	F/3 Oct	Summary discussion of <i>The Selfish Gene</i> ; Begin <i>The Origins of Virtue</i>	OV: Prologue - Keith	Take-home Exam 1 due Sunday (Sun, 5 th) by 5:00
6	M/6 Oct	<i>The Origins of Virtue</i> : Evol of cooperation in humans	OV: 1-2– student leader	
	W/8 Oct	"	OV: 3– student leader	
	F/10 Oct	"	OV: 4– student leader	<i>Identify Evolutionary Explanations topic (submit topic via email)</i>
7	M/13 Oct	"	OV: 5 – student leader	
	W/15 Oct	"	OV: 6 – student leader	Graphical Exercise 2 due
	F/17 Oct	"	OV: 7– student leader	Reflection on Discussion Participation I, due today by 5:00
8		<i>Fall Break - No classes</i>		

9	M/27 Oct	Continue <i>Origins of Virtue</i>	OV: 8 – student leader	
	W/29 Oct	"	OV: 9 – student leader	
	F/31 Oct	"	OV: 10 – student leader	
10	M/3 Nov	"	OV: 11 – student leader	Annotated Outline of Evolutionary Explanations Topic due by 5:00
	W/5 Nov	"	OV: 12 – student leader	
	F/7 Nov	"	OV: 13– student leader	Take-home Exam 2 due tomorrow (Sat, 12 th) by 5:00
11	M/10 Nov	A deeper look into Altruistic Punishment	Papers by Fowler, Heinrich	
	W/12 Nov	<i>Not By Genes Alone: Cultural evolution</i>	NGA: 1– student leader	
	F/14 Nov	"	NGA: 2– student leader	
12	M/17 Nov	"	NGA: 3– student leader	Rough Draft of Evolutionary Explanations Paper due by 5:00
	W/19 Nov	"	NGA: 4– student leader	
	F/21 Nov	"	NGA: 5– student leader	Modeling exercise 3: Cultural Evolution due tomorrow (Sat, 26 th) by 5:00
13	M/24 Nov	"	NGA: 6– student leader	
	W/26 Nov	"	NGA: 7– student leader	
	F/28 Nov	<i>Thanksgiving holiday – no class</i>		
14	M/1 Dec	Special paper – TBA	Keith	Evolutionary Explanations Paper due today by 5:00
	W/3 Dec	Special paper - TBA	Keith	
	F/5 Dec	Presentations		
15	M/8 Dec	Presentations		Reflection on Discussion Participation II, due this week
	W/10 Dec	Presentations		
	F/12 Dec	Presentations		
16	Sat 17 Dec	Take-home Exam 3 due by 11:00 am		Take-home Exam 3 due today by 11:00 am