

Dr. Cronk
Anthropology 328: Evolution, Cooperation, and Conflict (01:070:328:01)
Spring 2019
Index number 15472

Class web site: Available through the main Rutgers Sakai portal: <http://sakai.rutgers.edu>.

Class time and location: Mondays and Thursdays 10:55am to 12:15pm in Biological Sciences Building room 205.

Office: 204A Biological Sciences Building, Douglass Campus. Email: lcronk@anthropology.rutgers.edu; office phone: 848-932-9285.

Office hours: Mondays, 12:30pm to 2pm, and by appointment.

Catalog course description: Use of evolutionary theory to study cooperation and other social behaviors in anthropology and related fields. Topics include kin selection, reciprocity, costly signaling theory, collective action and coordination problems, and the emergence of social norms and conventions.

Detailed course description: By the time you got to college, you already had an understanding of what social scientists refer to as the collective action dilemma. Think back to all of those group projects you were assigned in school. While everyone in your group stood to benefit from a well-done project, everyone also stood to benefit from letting others do most of the work. In more technical terms, the possibility of free riders undermines collective action. But, despite the collective action dilemma, humans cooperate with each other – and particularly with non-relatives - a great deal more than do members of almost any other species. How can we use evolutionary theory, which applies to all species, to address this unique feature of human social behavior? That will be the main question driving us through the semester. To answer it, we will examine not only important work on cooperation from an evolutionary perspective but also some of the large body of work on cooperation compiled over the past few decades by non-evolutionary social and behavioral scientists. Cooperation is a complex and multi-faceted phenomenon, so we will need a variety of ideas to explain it.

In most ways, this will be a typical college class. The professor will lecture, lead discussions, and administer tests. Students will take notes, participate in discussions, read the assigned book and articles, and take tests. However, we will also approach our subject matter – cooperation – in a more hands-on fashion. This will be accomplished in two ways. First, the course will incorporate in-class experimental games and other kinds of simulations. During a typical week, you will participate in such a simulation during the first class and have the option to write a reaction paper about it and about the week's assigned readings that will be due the following class (five such papers are due by the end of the semester, but more than five opportunities to write them will be presented). By participating in simulations and spending some time thinking about them, we may all come to a better understanding of how humans have come to be so remarkably cooperative compared to other species. Second, you will be assigned to a group that will carry out an independent research project throughout the semester. At the end of the semester, your group will make a presentation to the class about your project, and each

individual in your group will write a short paper not about the subject matter of your study but rather about the experience of working on the project as a group.

Course objectives: After taking this course, students will be able to

- Understand the relevance of the theory of kin selection to the study of human social behavior.
- Understand the relevance of theories of direct and indirect reciprocity to the study of human social behavior.
- Understand the application of costly signaling theory to the study of human social behavior.
- Understand the collective action dilemma, the tragedy of the commons, and the problem of free riders.
- Explain major human adaptations for cooperation and coordinated social behavior.
- Understand simple game theory and its use in the study of cooperation.
- Understand the use of experimental games and their use in the study of cooperation.
- Distinguish collective action dilemmas from coordination problems.
- Explain the role of history and culture in the generation of social coordination norms.
- Understand the concept of social emergence and apply it to norms and conventions.
- Understand ways in which the collective action dilemma has been solved historically and cross-culturally.

Required readings (all available through Sakai):

(1) Required

Cronk, Lee, and Beth L. Leech. 2013. *Meeting at Grand Central: Understanding the Social and Evolutionary Roots of Cooperation*. Princeton: Princeton University Press.

Levin, S.R., Scott, T.W., Cooper, H.S. and West, S.A., 2017. Darwin's aliens. *International Journal of Astrobiology*, pp.1-9.

(2) Recommended

Aktipis, C. Athena. 2016. Principles of cooperation across systems: from human sharing to multicellularity and cancer. *Evolutionary Applications* 9(1):17-36.

Cronk, Lee. 2015. Human cooperation: Evolutionary approaches to a complex phenomenon. In *Handbook on Evolution and Society: Toward an Evolutionary Social Science*, eds. J. H. Turner, R. Machalek, and A. Maryanski, pp. 441-459. Boulder, CO: Paradigm Publishers.

Additional readings may be assigned as the semester goes by.

Reaction papers: A centerpiece of this course will be simulations of various kinds of cooperative scenarios. A typical simulation will involve playing an experimental game that has been used in the study of cooperation. Most of these will take place during the first day of each week of class. You will be required to write five short (~3-5 page) reaction papers regarding the

exercises and the corresponding week's readings. Papers should be typed and double-spaced, with one inch margins, page numbers, and a font no smaller than 11 and no larger than 12 points. **Hard copies only are accepted, and they may be turned in only in class.** These reaction papers will be worth one-third of your grade for the semester. **Turning in papers late is inadvisable because a full letter grade will be taken off for every business day that a paper is late. Rather than turn in a late paper, try to do another exercise and turn it in on time.**

Exam: There will be one exam on Thursday, April 25. It will consist of short answer and essay questions. The class period before the exam will be devoted to review, and a review sheet will be distributed at that time.

Make-up exams: You are required to take the exam at the regularly scheduled time. Make-up exams will be given only to those students who are able to provide well-documented written excuses that have been approved in writing by an appropriate college dean. Legitimate excuses are limited to your own serious illness, family emergencies, and religious observances. Arrangements for make-ups should be made as soon as possible after you have missed an exam.

Group project: The class will be randomly divided by the professor into groups of three, four, or five people each. For organizational purposes, each group will be associated with a color (Red, Orange, Yellow, Blue, or Indigo). Each group is to conduct a research project regarding how some group of people in the real world manages to cooperate and the problems they face in doing so. I encourage you to use your imaginations when coming up with a suitable group to study. All group project topics must be approved by the professor. One class period (Thursday 2/7/19) will be devoted to meetings of the groups. After that, each group's meetings must be held at times and places agreed to by the group's members. **Group project topics are due in class on Thursday 2/21/19.** A short paragraph describing the group and confirming that its leaders and members have agreed to participate in the study will suffice. Group projects will lead to two graded assignments: (1) An in-class presentation of the group's findings. In-class group presentations will begin on 4/29/19. Every group must be ready to give its presentation on that day. If no group volunteers to go first, I will randomly choose the order of presentations. (2) **A paper written by each individual group member not about the group being studied but rather about the experience of working on the group project, relating that experience to the theories covered in class.** The paper should be between five and ten double-spaced, numbered pages long, with margins no wider than 1.5" and a typeface no larger than 12 points. References in the text should be in the Name Year: Page number format (e.g., Cronk 1999:45), followed by a complete list of references cited at the end of the paper. Papers will be graded primarily for their content, but up to ten percentage points may be taken off for errors in grammar, formatting, punctuation, spelling, word usage, and so on. The paper is due in class on 5/6/19.

Research on humans conducted by Rutgers students and faculty is normally subject to review by Rutgers' Institutional Review Board (IRB), but an exception is made for classroom exercises that follow certain rules. Specifically, your project must "take place in a classroom, department, dormitory, or other campus setting, or in a public setting with generally unlimited access to the public, such as a shopping center, park, or street," it must "involve only the learning of research techniques," it must "involve no more than minimal risk" to your subjects, and you must record your data anonymously, "(i.e., with no names, social security numbers, or any other codes that can be linked to a list of names, or the recorded data will not identify the subject

through their behavior).” If you have any questions about how to comply with these rules, please ask the professor.

Attendance: Students are expected to attend all classes; if you expect to miss one or two classes, please use the University absence reporting website <https://sims.rutgers.edu/ssra/> to indicate the date and reason for your absence. An email is automatically sent to me.

Academic Integrity: Violations of Rutgers policy in regard to cheating will be taken seriously and will result in an F in the course and referral to the appropriate dean. See http://academicintegrity.rutgers.edu/files/documents/AI_Policy_9_01_2011.pdf

Academic Support: Students with documented disabilities or who feel that they may have a disability are advised to let me know as soon as possible so that accommodations can be made. Please go here for additional information: <http://disabilityservices.rutgers.edu/request.html>.

Evaluation:

Assignment	Due date	Points
Reaction papers	Throughout the semester	5 X 10
Group project topic	2/21	*
Exam	4/25	50
Group presentation	4/29, 5/2, or 5/6	25
Individual paper about group project	5/6	25
Total		150

*One point will be deducted from your group presentation score for every day your group project topic is late.

Grades will be assigned according to the usual system of ten percentage points per passing grade (A = 90 - 100%, B+ = 88 - 89%, B = 80 - 87%, C+ = 78 - 79%, C = 70 - 77%, D = 60 - 69%, F = 0 - 59%).

Course outline and reading assignments:

Week 1

Thursday 1/24: Introduction to the course and introductions of class members.

First reaction paper assignment: A “social interaction” is defined as an interaction between two individuals of the same species. For one entire day, keep track of all your social interactions. This includes not only people to whom you speak but also those with whom you interact in the most fleeting of ways, such as passing them on the sidewalk or holding a door open for them and those with whom you merely exchange emails or texts or likes on social media. Make a note of your relationship with each person (stranger, friend, relative, shopkeeper, etc.), the type of interaction, its duration, its consequences,

and so on. Put the resulting list of interactions into categories that seem logical to you, tally them up, and write a few paragraphs commenting on the experience.

Week 2

Readings: *Meeting at Grand Central*, preface and chapter one.

Monday 1/28: Setting the stage: Cooperation and the major evolutionary transitions.
Required reading: Levin et al. 2017.

Thursday 1/31: First reaction papers due. Introductory lecture: What is cooperation and why is it a problem for scholars?

Week 3

Readings: *Meeting at Grand Central*, chapters three and five.

Monday 2/4: Lecture: How social scientists study cooperation; assignment of groups.

Thursday 2/7: In-class group meetings.

Week 4

Monday 2/11: In-class game/experiment and discussion.

Thursday 2/14: Second reaction paper due; Lecture: How social scientists study cooperation, continued.

Week 5

Readings: *Meeting at Grand Central*, chapter two.

Monday 2/18: In-class game/experiment and discussion.

Thursday 2/21: Third reaction paper due; group project topic due; Lecture: Adaptation and the study of cooperation.

Week 6

Monday 2/25: In-class game/experiment and discussion.

Thursday 2/28: Fourth reaction paper due. Lecture: Adaptation and the study of cooperation, continued.

Week 7

Monday 3/4: In-class game/experiment and discussion.

Thursday 3/7: Fifth reaction paper due; Lecture: Adaptation and the study of cooperation, continued.

Week 8

Reading: *Meeting at Grand Central*, chapter four.

Monday 3/11: In-class game/experiment and discussion.

Thursday 3/14: Sixth reaction paper due; Lecture: Evolutionary models of cooperation.

Week 9

Monday 3/25: In-class game/experiment and discussion.

Thursday 3/28: Seventh reaction paper due; Lecture: Evolutionary models of cooperation, continued.

Week 10

Readings: *Meeting at Grand Central*, chapter six.

Monday 4/1: In-class game/experiment and discussion.

Thursday 4/4: Eighth reaction paper due; Lecture: Evolutionary models of cooperation, continued.

Week 11

Readings: *Meeting at Grand Central*, chapter seven.

Monday 4/8: In-class game/experiment and discussion.

Thursday 4/11: Ninth reaction paper due. Lecture: Emergence and cooperation.

Week 12

Readings: *Meeting at Grand Central*, chapter 7.

Monday 4/15: In-class game/experiment and discussion.

Thursday 4/18: Tenth reaction paper due. ***This is your last opportunity to write a reaction paper.*** Lecture: Consilience and the scientific study of cooperation.

Week 13

Monday 4/22: Review for test.

Thursday 4/25: Test.

Week 14

Monday 4/29: Two group presentations and discussion.

Thursday 5/2: Two group presentations and discussion.

Week 15

Monday 5/6: Final group presentation and discussion; papers due.