ANTHROPOLOGY 611
COMPARATIVE SOCIOECOLOGY: HUMANS AND NON-HUMAN PRIMATES
SPRING 2011
TUESDAY 4:15-7:05, SS 117

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Office hours: Thursday, 10 am to noon, or by appointment.

COURSE DESCRIPTION

"Whatever phenomenon varies in any manner whenever another phenomenon varies in some particular manner, is either a cause or an effect of that phenomenon, or is connected with it through some fact of causation."

- John Stuart Mill, *"A System of Logic"* (1843)

"*Q*: What does a five-hundred-pound gorilla eat? *A*: Anything it wants!"

- worn-out childrens' joke

In a nutshell, this course will apply Mill's observations on the comparative method to the assumptions underpinning that tired old joke about the five-hundred-pound gorilla: we will use the comparative method to explore theoretical perspectives on the link between ecological pressures and social organization and behavior in primates, including humans. This includes variables such as group size, social structure, and adult sex ratio in social groups; life history variables such as timing of growth and development, sex-specific ontogenetic patterns, and reproductive rates; and behavioral models such as foraging behavior, female bonding, and coalition formation. Various methodological approaches will be discussed, in particular the comparative method as applied to *inter*specific studies across primates and to *intra*specific studies across populations within modern humans.

This course will use a discussion format, and you and your fellow students are responsible for leading and participating in the discussions – the best way to learn this material is to make an effort to explain it to others! Do not expect me to give lectures during which you can be passive note-takers. This course will be enjoyable and successful for you only if every student actively participates. Read each article closely and be prepared to comment on all of them during every class.

The prerequisite for this course is graduate standing in the Department of Anthropology or permission of the instructor.

REQUIRED READINGS

We will be reading the following edited volume in its entirety:

Lee, PC, editor. 1999. *Comparative Primate Socioecology (Cambridge Studies in Biological and Evolutionary Anthropology)*. Cambridge University Press.

Readings from the book (abbreviated *CPS* below) will be supplemented by journal articles selected by myself (listed below) and additional articles selected by the students of the class; we will discuss this in more detail on the first day of class.

COURSE WEBSITE

The course website can be found on Blackboard. Readings and announcements will be posted there. Check the website regularly for announcements about changes to office hours, readings, or anything else important.

GRADING

This course uses the A-E grade system. Your final grade is determined based on the following components:

leading discussion:	**20%**	**presentation:**	**20%**
research project/proposal:	**40%**	**class participation:**	**20%**

Leading discussion of readings (20%): Each student is responsible for leading the class discussion of readings for one week. I expect the discussion leader to not only carefully read all the assigned readings (all students are required to do this for all classes), but also to bring to class a list of topics and/or questions to stimulate a lively discussion in which ALL students will participate. The discussion leader will not give lectures about the material, but will be responsible for guiding the class discussion about the readings. I will evaluate your performance as discussion leader based on how well you get your fellow students to talk about the material at hand.

Research project/Proposal (40%): I expect all students to complete **either** an independent research project (*i.e.*, not a literature review) **or** a grant proposal during the course of the semester. Projects should ideally be related to the topics discussed in this class in some way. Projects may be based on a data set previously collected by you, collected by you over the course of the semester, mined from the literature, or drawn from data sets previously collected by myself. Proposals should be related to the student's dissertation topic, but should incorporate some of the concepts covered in the course.

I expect each of you to meet with me during my office hours by the end of week 6 to discuss your project or proposal topic. Rather than meeting during the regular class time on week 7, that time will be given to you to begin work on your project or proposal. Class during week 12 (three weeks before the projects are due) will be dedicated to discussing your progress. At that point you will be expected to have collected the majority of your data or completed a first draft of your proposal, and you will give a brief presentation on the status of your analysis/proposal along with any difficulties you are encountering. You must be prepared to present a preliminary analysis or summary of your proposal at this time! Discussion will follow each presentation, and students are expected to provide constructive criticism on all presentations.

Projects should be written in scientific journal format, with an abstract, introduction, materials and methods, results, and discussion. The project should be contextualized in terms of the relevant literature. Proposals should follow National Science Foundation Dissertation Improvement Grant guidelines. All papers will be graded on content, style, and grammar. Papers are due on Tuesday, May 3rd at the beginning of class.

Presentation of research project/proposal (20%): During the last class meeting, students will present their research projects or proposals in a conference meetings-style talk. Each student will have twenty minutes: fifteen minutes for the presentation, and five minutes for questions. You will be graded on the clarity of your verbal presentation, your ability to handle questions, and the clarity of your slides. Presentations should provide a brief introduction and contextualization, but should focus on the results and implications of the research for projects, or the hypotheses to be tested and methodology for proposals. You are expected to use PowerPoint, and your slides should reinforce your talk without distracting the audience; *i.e.*, only one figure per slide, minimal text (just a few bullet

points per slide, no paragraphs), and what text there is should be large and easily readable (*i.e.*, 20 point or larger).

Class participation (20%): During the class discussions I will make note of who makes comments and asks questions. Do the assigned readings before coming to class and be prepared to participate. Everyone must participate in the discussions – it is NOT acceptable to let all the others do the talking and not comment or ask questions. You are not expected to be an expert in the topics of discussion. You ARE expected to ask questions and make comments during class to show me that you are making an effort to understand the material, regardless of background, interest, amount of sleep, *etc*. DO NOT rely on the discussion leader or me to do all the discussing. Everyone should think about the readings – relevance, importance, unresolved questions, confusing bits, *etc.* – and talk about these things in class.

Attendance: Attendance is mandatory in this course and is reflected in your participation grade. Poor attendance suggests you are not committed to doing well in the course. I will allow excused absences in the case of religious holidays, documented illness, professional conferences, and possibly other activities, but please let me know about these absences with as much advance notice as possible. I will also allow one unexcused absence without penalty; however, it is common courtesy to let me know in advance if you know you are going to miss a class, or to let me know afterwards why you missed a class. I understand that people have family emergencies, have car trouble, suffer power failures that render alarm clocks useless, *etc*. – please just let me know why you missed class. If you have more than one unexcused absence, I will deduct 4% from your final grade for each additional absence. If for some reason you will miss the class for which you are scheduled to lead the discussion, it is your responsibility to find someone to trade with you – if you fail to do so, you automatically get a zero for leading discussion (which counts for 20% of your final grade).

ACADEMIC INTEGRITY

Academic dishonesty of any kind will not be tolerated in this course. Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabricating information or citations, facilitating acts of academic dishonesty by others, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students. Students who are found to be academically dishonest will receive academic sanctions as outlined in the university's Graduate Regulations and Degree Requirements:
http://www.albany.edu/graduatebulletin/requirements_degree.htm#penalties

STUDENTS WITH DISABILITIES

If you have special needs, please notify me immediately; I will be happy to work with you. Let me know if you anticipate needing any type of special accommodation in this course or have questions about physical access. For more information about "reasonable accommodation", please see the Disability Resource Center website:
http://www.albany.edu/disability/rap.shtml

MAJOR DEADLINES

Thursday, March 3rd:	Meet with Dr. Gordon by this date to discuss research project/proposal
Tuesday, April 12th:	Have completed data collection/first draft and present preliminary analysis/summary in class
Tuesday, May 3rd:	Final presentations in class, and papers due at the beginning of class – no exceptions

COURSE SCHEDULE

Note that this schedule is subject to change.

WEEK	TOPIC	READINGS
1: 1/25	Introduction and the comparative method	*CPS* Preface, Part 1 Intro (pp. xii-4) MacLarnon (*CPS*, pp. 5-22)
2: 2/1	The role of phylogeny in the comparative method	Robson-Brown (*CPS*, pp. 23-43) Purvis and Webster (*CPS*, pp.44-70) Nunn and Barton, 2001
3: 2/8	Ecology of reproductive rates and growth	*CPS* Part 2 Intro (pp. 71-72) Ross and Jones (*CPS*, pp. 73-110) Lee (*CPS*, pp. 111-139)
4: 2/15	Evolution of human life history	Blurton-Jones *et al.* (*CPS*, pp. 140-166) Walker *et al*., 2006
5: 2/22	**NO CLASS (WINTER BREAK)**	
6: 3/1	Evolutionary ecology of the brain	Barton (*CPS*, pp. 167-203) Aiello and Wheeler (1995) Pérez-Barbería *et al*. (2007)
7: 3/8	FINAL PROJECT RESEARCH DAY	
8: 3/15	Sex, social structure, and intrasexual competition	Wrangham (1980) Van Schaik *et al.* (*CPS*, pp. 204-240) Plavcan (*CPS*, pp. 241-270) Gustafsson and Lindenfors (2004)
9: 3/22	Sex and food: female dominance and female bonding	*CPS* Part 3 Intro (pp. 271-272) Kappeler (*CPS*, pp. 273-299) Strier (*CPS*, pp. 300-319) Dunham (2008)
10: 3/29	Energetics and food	Williamson and Dunbar (*CPS*, pp. 320-338) Dufour and Sauther (2002) Bean (*CPS*, pp. 339-362)
11: 4/5	Socioecological inference in hominin behavioral evolution	Foley (*CPS*, pp. 363-386) Bird and O'Connell (2006)
12: 4/12	PRELIMINARY PRESENTATIONS	
13: 4/19	**NO CLASS (SPRING BREAK)**	
14: 4/26	Cross-cultural evolutionary ecology in modern humans	Mace and Holden (*CPS*, pp. 387-405) Gurven (2005) *CPS* Editor's conclusion (pp. 406-409)
15: 5/3	FINAL PRESENTATIONS	

FULL CITATIONS FOR READINGS

Aiello LC and Wheeler P. 1995. The expensive-tissue hypothesis: the brain and the digestive system in human and primate evolution. *Current Anthropology*. 36: 199-221.

Barton R. 1999. The evolutionary ecology of the primate brain. In Lee PC (ed.): *Comparative Primate Socioecology*. Cambridge: Cambridge University Press. pp 167-203.

Bean A. 1999. Ecology of sex differences in great ape foraging. In Lee PC (ed.): *Comparative Primate Socioecology*. Cambridge: Cambridge University Press. pp 339-362.

Bird DW and O'Connell JF. 2006. Behavioral ecology and archaeology. *Journal of Archaeological Research*. 14: 143-188.

Blurton-Jones N, Hawkes K, and O'Connell J. 1999. Some current ideas about the evolution of the human life history. In Lee PC (ed.): *Comparative Primate Socioecology*. Cambridge: Cambridge University Press. pp 140-166.

Dufour DL and Sauther ML. 2002. Comparative and evolutionary dimensions of the energetics of human pregnancy and lactation. *American Journal of Human Biology*. 14: 584–602.

Dunham AE. 2008. Battle of the sexes: cost asymmetry explains female dominance in lemurs. *Animal Behaviour*. 76: 1435-1439.

Foley RA. 1999. The evolution of human behaviour and adaptation: missing links in comparative primate socioecology. In Lee PC (ed.): *Comparative Primate Socioecology*. Cambridge: Cambridge University Press. pp 362-386.

Gurven M. 2005. To give and to give not: the behavioral ecology of human food transfers. *Behavioral and Brain Sciences*. 27: 543-559.

Gustafsson A and Lindenfors P. 2004. Human size evolution: no evolutionary allometric relationship between male and female stature. *Journal of Human Evolution*. 47: 253-266.

Kappeler P. 1999. Lemur social structure and convergence in primate socioecology. In Lee PC (ed.): *Comparative Primate Socioecology*. Cambridge: Cambridge University Press. pp 273-299.

Lee PC. 1999. Comparative ecology of post-natal growth and weaning among haplorhine primates. In Lee PC (ed.): *Comparative Primate Socioecology*. Cambridge: Cambridge University Press. pp 111-139.

Lee PC, editor. 1999. *Comparative Primate Socioecology (Cambridge Studies in Biological and Evolutionary Anthropology)*. Cambridge: Cambridge University Press.

Mace R and Holden C. 1999. Evolutionary ecology and cross-cultural comparison: the case of matrilineal descent in Sub-Saharan Africa. In Lee PC (ed.): *Comparative Primate Socioecology*. Cambridge: Cambridge University Press. pp 387-405.

MacLarnon A. 1999. The comparative method: principles and illustrations from primate socioecology. In Lee PC (ed.): *Comparative Primate Socioecology*. Cambridge: Cambridge University Press. pp 5-22.

Nunn CL and Barton RA. 2001. Comparative methods for studying primate adaptation and allometry. *Evolutionary Anthropology*. 10: 81-98.

Pérez-Barbería FJ, Shultz S, and Dunbar RIM. 2007. Evidence for coevolution of sociality and relative brain size in three orders of mammals. *Evolution*. 61: 2811-2821.

Plavcan JM. 1999. Mating system, intrasexual competition and sexual dimorphism in primates. In Lee PC (ed.): *Comparative Primate Socioecology*. Cambridge: Cambridge University Press. pp 241-270.

Purvis A and Webster AJ. 1999. Phylogenetically independent comparisons and primate phylogeny. In Lee PC (ed.): *Comparative Primate Socioecology*. Cambridge: Cambridge University Press. pp 44-70.

Robson-Brown K. 1999. Cladistics as a tool in comparative analysis. In Lee PC (ed.): *Comparative Primate Socioecology*. Cambridge: Cambridge University Press. pp 23-43.

Ross C. 1999. Socioecology and the evolution of primate reproductive rates. In Lee PC (ed.): *Comparative Primate Socioecology*. Cambridge: Cambridge University Press. pp 73-110.

Strier K. 1999. Why is female kin bonding so rare?: comparative sociality of neotropical primates. In Lee PC (ed.): *Comparative Primate Socioecology*. Cambridge: Cambridge University Press. pp 300-319.

van Schaik C, van Noordwijk MA, and Nunn CL. 1999. Sex and social evolution in primates. In Lee PC (ed.): *Comparative Primate Socioecology*. Cambridge: Cambridge University Press. pp 204-240.

Walker R, Hill K, Burger O, and Hurtado AM. 2006. Life in the slow lane revisited: ontogenetic separation between chimpanzees and humans. *American Journal of Physical Anthropology*. 129: 577–583.

Williamson D and Dunbar R. 1999. Energetics, time budgets and group size. In Lee PC (ed.): *Comparative Primate Socioecology*. Cambridge: Cambridge University Press. pp 320-338.

Wrangham RW. 1980. An ecological model of female-bonded primate groups. *Behaviour*. 75: 262-300.