

ANBI 159: Biological and Cultural Perspectives on Intelligence
Winter Quarter 2023

Lectures:

MWF 10-10:50 AM TM 102

Instructor:

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Course website: canvas.ucsd.edu/. All readings, lecture outlines, and other class material will be posted on this site.

Course overview: The goal of this course is to examine anthropological approaches to the study of cognition in non-human primates and humans. The course will focus on evolutionary perspectives on cognition and intelligence, theoretical approaches to studying intelligence, and the ways intelligence gets conceptualized and measured across and within species. The first part of the course will focus on comparative studies of cognition across species, with a particular emphasis on non-human primates. The second part will focus on humans and examine aspects of human cognition from biological and cultural perspectives.

Prerequisites: upper-division standing or consent of instructor. Note that this course expects students to have a good understanding of primate behavior and taxonomy. If you have not taken an introductory class in biological anthropology (ANTH 2 or equivalent), please read sections on non-human primates in Boyd & Silk *How humans evolved*; consult *The natural history of primates: a systematic survey of ecology and behavior* for more information on a particular species discussed in class. Both books are held on reserves in Geisel.

Required Course Texts:

Wynne, Clive D. L & Udell, M. A. R. (2021). *Animal cognition: evolution, behavior, and cognition*. (3rd ed.) Macmillan.

Schwartz, B. L. & Beran, M. J. (Eds.) (2022) *Primate Cognitive Studies*. Cambridge University Press.

Recommended Reading (available on reserve in Geisel): If you are not familiar with primate behavior and evolution, you can consult Sussman, R. W., Hart, D., & Colquhoun, I. C. (Eds.) (2023). *The natural history of primates: a systematic survey of ecology and behavior*. Rowman & Littlefield.

Wynne & Udell is available for purchase through the publisher's website (<https://www.bloomsbury.com/us/>), Amazon, and various other online booksellers. It should be available for purchase through the UCSD bookstore as well. Second edition of the textbook would work, too, but please note that page numbers could be different. The first two weeks of readings assigned from the textbook are posted on Canvas.

Schwartz & Beral is available electronically through UCSD libraries. To access the book on campus, you need to be connected through UCSD password protected network. For off-campus access, you will need to log-in through the virtual private network (vpn.ucsd.edu). Please see instructions for off-campus access: <https://library.ucsd.edu/computing-and-technology/connect-from-off-campus/>

Additional readings as specified in the syllabus are available electronically on the course web-site.

Course Requirements:

Midterm examination (20%)

Final examination (25%)

Class paper

 Topic proposal and annotated bibliography (10%)

 Paper presentation (10%)

 Final paper (35%)

To complete this course, you must satisfy all course requirements; i.e., you must take all exams and turn in all assignments. You are expected to complete assigned readings for the day of lecture.

Your grade for this class will be based on one midterm examination, a final exam, class paper – consisting of topic proposal/annotated bibliography and the final paper -- and an in-class presentation of your paper.

Examinations:

There will be one midterm exam in this course and a final exam. The examinations will be designed to assess your grasp of the readings and lectures, so if you complete the readings and attend lectures, you can expect to do quite well on the exams. The midterm exam will be administered in class on Monday of week 6 (February 13). The midterm will cover the material discussed from the beginning of the class until (including) Wednesday, February 8. You will be allowed to bring one sheet of paper with your hand-written notes and use it in answering exam questions. Make-up exam will be made only in extreme and exceptional emergencies, in which case, valid documentation will need to be provided.

Final exam question will be posted on March 15 and you will have until March 24 at 10:59 AM to submit your answer. The exam will consist of two short essay questions; you will be allowed to use the textbook, your notes, and other course readings in answering the questions. Deadline for the final exam can be extended only in circumstances beyond your control, such as family or health emergencies.

Class paper: In order to further develop your interest into a particular issue related to anthropological perspectives on cognition, you will write an 8-10 page paper on the topic of your choice. The focus of your paper can be anything related to human or non-human animal cognition, but the topic has to be approved by the instructor. The paper grade consists of the paper proposal and annotated bibliography (10% of your grade; due February 6 at 10 AM) and the final paper (35% of your grade; due March 17 at 10 AM). The paper proposal should clearly identify the topic you are exploring and at least four scholarly sources (journal articles/edited books) which you will use in writing the paper. Please see Guidelines for Topic Proposal and Annotated Bibliography module on Canvas for more specific guidelines.

In writing your paper – or for anything related to this class -- do NOT use Wikipedia. Instead, consult a proper encyclopedia (e.g. Britannica) for general information.

All information that is not your own original work must be cited. As of 2017, American Journal of Physical Anthropology (AJPA) requires references to be prepared according to APA style guidelines (see the References section at <https://onlinelibrary.wiley.com/page/journal/10968644/homepage/forauthors.html>). You can use Chicago, MLA, CBE, or any other recognizable citation style.

Paper presentation: At the end of the quarter, students will present their papers to the rest of the class. Presentations should be brief (10 minutes) and need to clearly summarize the main points of your paper. The schedule of presentations will be decided toward the end of the quarter.

Academic integrity:

All assignments submitted for this class are expected to represent your own work. Violations of academic integrity will be taken seriously and reported to the Academic Integrity Office. It is your responsibility to know and observe all of the UCSD rules concerning academic integrity and plagiarism. You should familiarize yourself with your responsibilities and rights under the UCSD Policy on Integrity of Scholarship: <https://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/2>

Any student found to have committed a substantial violation of the University rules concerning academic integrity will fail the entire course and will be reported to the Academic Integrity Office for academic misconduct. In order to avoid charges of academic misconduct, follow these basic guidelines:

- 1) When using another person's ideas, always cite the source;
- 2) Avoid direct quotes; if you do use verbatim text, enclose it in quotation marks and cite the source;
- 3) Do not present another student's work as your own;
- 4) Do not misrepresent information obtained from a source;
- 5) Do not attribute information obtained from one source to a different source;
- 6) Avoid copying whole blocks of text from a source, even if the source is cited.

Further information on how to avoid plagiarism can be obtained by completing UCSD Library plagiarism tutorial: <https://libraries.ucsd.edu/assets/elearning/plagiarism/prevent/story.html>

If you have any questions about what constitutes plagiarism, please contact me or your TA to discuss this topic further.

Policy on an Incomplete (I) grade:

According to the UCSD policy, an Incomplete can be awarded only when student's work is of passing quality, but the class assignments could not be completed due to circumstances beyond the student's control. In other words, to be eligible for an Incomplete you must have completed all coursework except for the final exam or final paper. Further details on UCSD grading policy, including the Incomplete grade, can be found at: <https://www.ucsd.edu/catalog/front/AcadRegu.html>

Students with Disabilities:

Students requesting accommodations and services due to either a short- or long-term disability for this course need to provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD), prior to eligibility for requests. Receipt of AFAs in advance is necessary for appropriate planning for the provision of reasonable accommodations. For additional information, contact the Office for Students with Disabilities: 858.534.4382 (V) 858.534.9709 (TTY) - Reserved for people who are deaf or hard of hearing, email: osd@ucsd.edu. OSD Website: <https://osd.ucsd.edu/>

Title IX Statement:

The Office for the Prevention of Harassment and Discrimination (OPHD) is the Title IX Office for UC San Diego and investigates reports of sexual harassment, sexual violence, dating and domestic violence and stalking. You may file a report online with the UC San Diego Office for the Prevention of Harassment and Discrimination (OPHD). For further information about OPHD, please visit <http://ophd.ucsd.edu/> Or you may call OPHD at 858-534-8298.

Please note that University employees (including all faculty and teaching and research assistants), who are not confidential resources, are designated Responsible Employees. Responsible Employees are required to report any incidents of sexual violence or sexual harassment to OPHD.

TENTATIVE SCHEDULE OF TOPICS:

Week 1

January 9:

Introduction: Course Nuts and Bolts

January 11:

Introduction to the Study of Comparative Cognition

Wynne & Udell: Evolution, adaptation, cognition, and behavior: and Introduction (1-16)

Robin, E. D. (1973). The evolutionary advantages of being stupid. *Perspectives in Biology and Medicine*, 16(3), 369-380.

January 13:

Primate Cognition and Anthropology

Washburn, D. A. & Walters, S. G. (2022) "A history of primates studying primates." In: Schwartz, B. L. & Beran, M. J. (Eds). *Primate Cognitive Studies*. Cambridge University Press. Pp. 12-28.

Matsuzawa, T., & McGrew, W. C. (2008). Kinji Imanishi and 60 years of Japanese primatology. *Current Biology*, 18(14), R587-R591.

Week 2

January 16:

*** Martin Luther King Jr. Holiday – No Class ***

January 18:

Primate Cognition and Behavior: The Basics
Lecture Notes

Zuberbühler, K., & Wittig, R. M. (2011). Field experiments with non-human primates: a tutorial. In Setchell, J. M. & Curtis, D. J. (Eds) *Field and laboratory methods in primatology: a practical guide*, 207-224.

Altmann, J. (1974). Observational study of behavior: sampling methods. *Behaviour*, 49(3-4), 227-266.

If you need to refresh your memory on primate classification and behavior, consult Boyd R. and Silk JB. *How Humans Evolved* (any edition; available on reserve in Geisel). For a refresher on a particular species, consult Sussman, Hart, & Colquhoun.

January 20:

Primate Cognition and Behavior: The Basics (Cont'd)

Fischer, J. (2022). "Studying primate cognition: from the wild to captivity and back." In: Schwartz, B. L. & Beran, M. J. (eds). *Primate Cognitive Studies*. Cambridge University Press. Pp. 609-631.

Week 3

January 23:

Sensation & Perception

Wynne & Udell: "Other ways of seeing the world" (19-41) and "Object permanence" (56-62)

January 25:

Sensation and Perception (Cont'd)

Parrish, A. E. & Agrillo, C. 2022. 'Current perspectives on primate perception'. In: Schwartz, B. L. & Beran, M. J. (eds). *Primate Cognitive Studies*. Cambridge University Press. Pp. 115-134.

January 27:

Evolutionary Perspectives: Tools and Cognition

Wynne & Udell: "Cause and effect" (97-130) and "Reasoning" (133-151)

Week 4

January 30:

Evolutionary Perspectives: Tools and Cognition (Cont'd)

Tomasello, M. & Call, J. (1997). "Tools and causality." *Primate Cognition*. Pp. 57-99.

February 1:

Evolutionary Perspectives: Tools and Cognition (Cont'd)

Visalberghi, E. & Fragaszy, D. (2006). "What is challenging about tool use? The capuchin's perspective." In: Wasserman, E. A. & Zentall, T. R. *Comparative cognition: experimental explorations of animal intelligence*. Pp. 529-552.

Koops, K. & Sanz, C. (2022). Progress and prospects in primate tool use and cognition. In: Schwartz, B. L. & Beran, M. J. (eds). *Primate Cognitive Studies*. Cambridge University Press. Pp. 238-259.

February 3:

Evolutionary Perspectives: Social Cognition

Wynne & Udell: "Social cognition & self-awareness" (193-225)

Week 5

February 6: * Topic Proposal and Annotated Bibliography Due *****

Evolutionary Perspectives: Social Cognition (Cont'd)

Tomasello, M. & Call, J. (1997). "Social knowledge and interaction." & "Social strategies and communication". *Primate Cognition*. Pp. 191-242.

Schino, G., & Aureli, F. (2009). Reciprocal altruism in primates: partner choice, cognition, and emotions. *Advances in the Study of Behavior*, 39, 45-69.

February 8:

Emotions

Brooker, J. S., Web, C. E., & Clay, Z. (2022). "Primate empathy: a flexible and multi-componential phenomenon." In: Schwartz, B. L. & Beran, M. J. (eds). *Primate Cognitive Studies*. Cambridge University Press. Pp. 505-531.

February 10:

Social Learning and Transmission of Behavior

Wynne & Udell: "Social learning" (227-257)

Week 6

February 13: * Midterm examination *****

Covers material discussed January 11 through (including) February 8.

In-class, closed-book exam; you are allowed to *bring one sheet of paper with handwritten notes*.

February 15:

Social Learning and Transmission of Behavior

Biro, D., Sousa, C., & Matsuzawa, T. (2006). "Ontogeny and cultural propagation of tool use by wild chimpanzees at Bossou, Guinea: case studies in nut cracking and leaf folding." In: Matsuzawa, T., Tomonaga, M., & Tanaka, M. (Eds.) *Cognitive development in chimpanzees*. Springer. Pp. 476-508.

Kawai, M. (1965). Newly-acquired pre-cultural behavior of the natural troop of Japanese monkeys on Koshima Islet. *Primates*, 6(1), 1-30.

February 17:

Communication and Language

Wynne & Udell: "Animal communication in the wild" and "Language" (289-328)

Tomasello, M. & Call, J. (1997). "Social strategies and communication". *Primate Cognition*. Pp. 243-272.

Heimbauer, L. A. and Krause, M. A. (2022). "A requiem for ape language research". In: Schwartz, B. L. & Beran, M. J. (eds). *Primate Cognitive Studies*. Cambridge University Press. Pp. 483-504.

Week 7

February 20:

*** President's Day – No Class ***

February 22:

Human Cognition: Comparative Perspectives

MacKinnon K. C. & Fuentes, A. Primate social cognition, human evolution, and niche construction: a core context for neuroanthropology. In: Downey, G. and Lende D. H. (eds) *The encultured brain: introduction to neuroanthropology*. Pp. 68-102.

February 24:

Race, Class, and Intelligence Testing

Dennis, R. M. (1995). Social Darwinism, scientific racism, and the metaphysics of race. *Journal of Negro Education* 64, 243-252.

Price, D. H. (2003). Outcome-based tyranny: Teaching compliance while testing like a state. *Anthropological Quarterly*, 76(4), 715-730.

Week 8

February 27:

Race, Class, and Intelligence Testing (Cont'd)

Cohen, M. N. (2002). "An anthropologist looks at" race" and IQ testing". In: In Fish, J. M. (Ed.) *Race and Intelligence*. Routledge. Pp. 201-223.

Shanklin, E. (2002). "African Inputs to the IQ Controversy, or Why Two-Legged Animals Can't Sit Gracefully." In Fish, J. M. (Ed.) *Race and Intelligence*. Routledge. Pp. 225-239.

March 1:

Student Presentations

March 3:

Student Presentations

Week 9

March 6:

Student Presentations

March 8:

Student Presentations

March 10:

Student Presentations

Week 10

March 13:

Student Presentations

March 15: *** Final exam question posted ***

Student Presentations

March 17: *** Final paper due ***

Student Presentations & course wrap-up

*** Final examination due on Friday, March 24 by 10:59 AM ***