

Department of Anthropology and Archaeology

Anthropology 425 (Winter 2022)

Primate Cognition

Time: Thursdays 6 - 8:45pm
Instructor: Dr. Hugh Notman
Office: ES 602B
email: hgwnotma@ucalgary.ca

Class Location: ICT 144 (after Feb 18)
Office Hours: Thursday 4-6pm
Phone: 403-493-2539

TA: Zachary Jacobson
Email: zachary.jacobson@ucalgary.ca
Office hours: Mondays 1- 3pm
Location: <https://ucalgary.zoom.us/j/98723114770>

Pre-requisite: Anth 311 Primate Behaviour

Readings: Text: Sara J. Shettleworth: "Cognition, Evolution and Behavior", 2nd edition (2010). Oxford University Press. PRINT or DIGITAL

In addition to this REQUIRED text, you will be required to read journal articles relevant to the topic or theme being addressed on a given week. These journal articles are a mix of empirical (experimental) papers as well as review/theoretical essays. They include many original papers that offer theoretical foundations, as well as more recent review papers. This is why many of the papers appear 'older'; it is important that you understand the pioneering work upon which more recent studies have been built. All (or most) readings will be provided to you via your D2L portal, or you can access them using the UofC online journal library.

It should be noted that *this course requires substantial weekly readings and class attendance*. You must stay on schedule with the readings and be familiar enough with the material to make informed comments, when appropriate, and/or to ask questions.

Minimal learning technology requirements

1. Access to computer with functional browser to access D2L course pages and the library website
2. Word processor to complete assignment

Course Aims

- 1 To introduce students to primary research and theoretical discussions on topics related to the mechanisms and function of primate cognition
- 2 To enhance scientific literacy as it pertains to evaluating empirical methods and interpretation
- 3 To develop critical evaluation skills as they relate to assessing research papers and the current state of primate cognition research in general

Learning Outcomes

On successful completion of this course, students should be able to:

1. Demonstrate an understanding of the evidence as it pertains to specific domains of primate cognition.
2. Critically evaluate primary research articles related to this and other scientific disciplines
3. Evaluate the strengths and weaknesses of particular theoretical views.
4. Demonstrate familiarity with both foundational and current research papers, and integrate knowledge from these different approaches and studies into an integrated argument as it pertains to a particular topic in animal cognition.

Empirical Paper Report

This assignment is designed to introduce you to reading and critically evaluating empirical research papers that are typical of the behavioural sciences. The selection of research articles provided for this assignment are all relevant to one or more topics addressed in this course. Look through the selection of papers below and decide which one is of most interest to you.

Your assignment is to write a report on **one (1) original** research paper from the set of seven options provided below. In your report, ***which is to be no more than 4 typed (double-spaced, 12 pt font) pages***, you are expected to demonstrate an understanding of the following:

1. the **theoretical framework** within which the research goal is articulated;
2. the **hypotheses** that the researchers are testing, and why, given the current state of knowledge, these hypotheses are the ones being tested;
3. the **predictions** stemming from those hypotheses;
4. the **methodological approaches** the researchers use, including a brief description of experimental design and protocol (if applicable), data collection and sampling methods, study subjects, study site (if applicable), and statistical methodology; and
5. the **interpretations and conclusions** of the data presented by the authors and their relevance to the initial hypotheses and theoretical framework.

You are *not* expected to provide exhaustive details about the sampling and statistical methodology used in the paper, as no prior experience in these areas is assumed. However, a brief description of the methods that indicates sample size and experimental protocol (with rationale) is required. You are also *not* required to state numerical values presented in the results section of the research article, such as P values (indicating statistical significance); however, you should state which test results were significant and which were not inasmuch as these are relevant to the overall goals of the study.

To summarize, your report should at minimum include the following:

1. A **rationale** for what the authors of the research are attempting to test or study, and why. In other words, what have the authors identified as the larger theoretical question(s) that require an experimental test to fill the current gap in knowledge?
2. **Hypotheses:** Hypotheses are possible answers to the research question of interest. For example, if the “question” is how chimpanzees navigate a competitive situation with a conspecific for food, hypotheses might include a) that they are using a form of theory of mind, and/or b) that they have learned to anticipate the behaviour of the conspecific through repeated interactions with that individual. Hypotheses need not be mutually exclusive.
3. **Predictions:** Predictions are “if/then” propositions that are generated by each hypothesis. Using the example of the hypotheses above, *if* chimpanzees are using a theory of mind, *then* we would expect to observe X in the experiment. If they are using some other mechanism, such as associative learning, then we would expect to observe Y.
4. **Methodology:** Here you are required to provide a brief description of how each hypothesis is being tested. Do not get too bogged down in intricate details of the experiment, but you should at the very least explain who/what the experimental subjects are (e.g., the species, how many subjects were used in the study, whether they were captive or wild), what kind of experiment is being used (i.e., what the animal subjects had to “do” to complete the experiment), and what the variables are being tested. Examples of variables could include direction of visual gaze as measure of attention, length of gaze toward a stimulus as measure of interest, or kin recognition as assessed by correct matching-to-samples. It is sufficient that you name the statistical test(s) used in the analyses; there is no need to evaluate them.
Note: DO NOT cut and paste any images or pictures from the articles into your report by way of an explanation of experimental design. You must describe and explain this in your own words.
5. **Results and Discussion:** Here you are to report what the study found. Again, in reporting results, you are not required to provide actual values or alpha values of statistical significance, but you should state *which* tests were significant, and which were not, and how these support, or do not support, the predictions stemming from each hypothesis. In the discussion section of the paper, the authors provide their interpretations of their study within the larger context of the rationale laid out in the introduction. You should provide a summary of these, as well as suggested areas for future research.
6. **A brief paragraph** in which you provide your own evaluation of the experiment. Was the experiment persuasive in demonstrating what it was meant to demonstrate? What were its shortcomings? Did the researchers have an adequate sample size to make species-wide generalizations? Did the research generate more questions than it did answer them? Be sure to be specific in your statements.

Browse each of the seven research articles below (available in D2L and the UofC journal library). Choose 1 (one) of the articles for your report.

Amici, F., Aureli, F., Visalberghi, E., & Call, J. (2009). Spider monkeys (*Ateles geoffroyi*) and capuchin monkeys (*Cebus apella*) follow gaze around barriers: Evidence for perspective taking?. *Journal of Comparative Psychology*, 123(4), 368–374.

Cheney, D., & Seyfarth, R. (1990). Attending to behaviour versus attending to knowledge: Examining monkeys' attribution of mental states. *Animal Behaviour*, 40(4), 742–753.

Visalberghi, E., & Limongelli, L. (1994). Lack of comprehension of cause effect relations in tool-using capuchin monkeys (*Cebus apella*). *Journal of Comparative Psychology*, 108(1), 15–22.

Greenberg, J. R., Hamann, K., Warneken, F., & Tomasello, M. (2010). Chimpanzee helping in collaborative and noncollaborative contexts. *Animal Behaviour*, 80(5), 873–880.

Kano F, Hirata S, Call J. 2015. Social attention in the two species of Pan: bonobos make more eye contact than chimpanzees. *Plos ONE* 10:e0129684.

Genty, E., & Roeder, J. J. (2006). Can lemurs learn to deceive? A study in the black lemur (*Eulemur macaco*). *Journal of Experimental Psychology: Animal Behavior Processes*, 32(2), 196–200.

Liszkowski, U., Schäfer, M., Carpenter, M., & Tomasello, M. (2009). Prelinguistic infants, but not chimpanzees, communicate about absent entities. *Psychological Science*, 20(5), 654–660.

Evaluation

You will also be evaluated on a midterm exam and a final exam. The final will **not** be cumulative.

~~All exams will be in-person exams in the regular classroom. They will be a mixture of multiple choice, short answer and long answer (essay) questions. All exams are closed book exams.~~

Midterm exam (Thursday Feb. 10) 30%

~~Length: 1.5 hrs (no lecture afterwards)~~

This timed assessment will be available on D2L starting at regular class time at 6pm on Thursday February 10th and will be available for 24 hours until 6pm on Friday February 11th.

- The exam will be 90 minutes in length, plus 30 minutes extra time to account for issues with technology, caregiving responsibilities, or distractions within your test-taking environment, for a total of 120 minutes (2 hours).

- The exam is open book. Questions will be designed accordingly. You can use your course notes and any materials posted to D2L. You cannot use Google or other internet resources.

- There will NOT be a lecture the day of the exam, (February 10).

Paper Report (due March 3) 35%

Final Exam (registrar scheduled) 35%

This will be an in-person, closed book exam

Length: 2 hours

Classroom Expectations/Regulations

- Try to arrive on time to prevent disruption to the class. If you are late please take a seat at the back of the room to minimize disruption. Likewise please stay seated until class is concluded. We will not run overtime.
- **Do not converse with classmates during lectures.** This is unfair to students sitting nearby who may miss lecture material that will subsequently appear on exams. If you are discussing lecture material please raise your hand to share the comment or question as that will benefit the whole class. Relevant interruptions are welcome. You may also email questions which will be answered in the next lecture.
- All email enquiries about term tests or exams will be answered in class.
- **Please turn off cell phones during class.**

Missed tests or presentations automatically receive a score of zero. In the event of an emergency or illness, the Anthropology office (220-6516) or the instructor **MUST** be notified **BEFORE** the exam, and documentation **MUST** be provided before a make-up test will be scheduled.

Performance on make up exams is typically lower than those taken with the class.

The midterm is NOT returned to students. I will go over the test IN CLASS the week after the test, by which time marks should be available on D2L. If you would like to consult your test, you may come to our posted office hours, or make an appointment. If, after consulting the key, your notes, and the text you have concerns about the marking of your exam, you will be asked to provide a detailed written statement of your concern. Your exam will then be re-graded in its entirety, and marks will be raised, lowered or left unchanged as is warranted. Deadline for the submission of written statement is one week after results of an examination have been posted.

No special arrangements will be made following a poor test performance. For example, we cannot change the weighting of the tests, allow retakes, or accept alternate assignments in lieu of the test. Prepare in advance to ensure a good test performance – this is your opportunity to perform well, not later. After the test no changes will be made.

Final course grades will be calculated based on your overall weighted average for all course assessments (ie., it is not required to pass all course components to pass the course – grades are calculated on overall weighted average) as follows:

A+ 100 - 94.9%

A 94.8 - 89.9%

A- 89.8 - 84.9%

B+ 84.8 – 79.9%

B 79.8 - 74.9%

B- 74.8 – 70.9%

C+ 70.8– 66.9%

C 66.8 – 62.9%

C- 62.8 – 58.9%

D+ 58.8 – 54.9%

D 54.8 – 49.9%

F 49.8% and below

Please note the following policies:

Deferral of the registrar scheduled final exam requires Registrar approval

Reappraisal of Graded Term Work: <http://www.ucalgary.ca/pubs/calendar/current/i-2.html>

Reappraisal of Final Grade: <http://www.ucalgary.ca/pubs/calendar/current/i-3.html>

SUPPLEMENTAL INFORMATION

Principles of Conduct

The University Calendar includes a statement on the principles of conduct expected of all members of the university community (including students, faculty, administrators, any category of staff, practicum supervisors, and volunteers), whether on or off university property. This statement applies in all situations where members of the university community are acting in their university capacities. All members of the university community have a responsibility to familiarize

themselves with the principles of conduct statement, which is available at: www.ucalgary.ca/pubs/calendar/current/k.html. Students should also familiarize themselves with University policies regarding non-academic misconduct: <https://www.ucalgary.ca/legal-services/university-policies-procedures/student-non-academic-misconduct-policy>

ACADEMIC ACCOMMODATIONS

Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services; SAS will process the request and issue letters of accommodation to instructors. For additional information on support services and accommodations for students with disabilities, visit <https://live-ucalgary.ucalgary.ca/student-services/access>. Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their Instructor or the Department Head. The full policy on Student Accommodations is available at <https://www.ucalgary.ca/legal-services/university-policies-procedures/accommodation-students-disabilities-procedure>.

ACADEMIC MISCONDUCT

“Academic Misconduct” includes such things as cheating, falsification, plagiarism, unauthorized assistance, and failure to comply with exam regulations or an Instructor’s expectations regarding conduct required of Students completing academic assessments. Students who participate in, or encourage the commission of, Academic Misconduct will be subject to disciplinary action which could include Probation, Suspension, or Expulsion from the University. For information on academic misconduct and its consequences, please see the University of Calgary Calendar at <https://www.ucalgary.ca/pubs/calendar/current/k-3.html>

Further support on academic integrity is available at: <https://ucalgary.ca/student-services/student-success/learning/academic-integrity>

INSTRUCTOR INTELLECTUAL PROPERTY

Course materials created by professor(s) (including course outlines, presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the professor(s). These materials may NOT be reproduced, redistributed or copied without the explicit consent of the professor. The posting of course materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing.

FREEDOM OF INFORMATION AND PROTECTION OF PRIVACY ACT

Student information will be collected in accordance with typical (or usual) classroom practice. Students' assignments will be accessible only by the authorized course faculty. Private information related to the individual student is treated with the utmost regard by the faculty at the University of Calgary.

COPYRIGHT LEGISLATION

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (<https://ucalgary.ca/legal-services/university-policies-procedures/acceptable-use-material-protected-copyright-policy>) and requirements of the copyright act (<https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>) to ensure they are aware of the consequences of unauthorized sharing of course materials (including instructor notes, electronic versions of textbooks, etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

SUPPORT AND RESOURCES:

Please visit the Registrar's website at: <https://www.ucalgary.ca/registrar/registration/course-outlines> for additional important information on the following:

- Emergency Evacuation/Assembly Points
- Wellness and Mental Health Resources
- Student Success Centre
- Student Ombuds Office
- Student Union (SU) Information
- Safewalk

Contact Information for Student and Faculty Representation

- Student Union VP Academic 403-220-3911, suvpaca@ucalgary.ca
- Students Union Representatives for the Faculty of Arts – 403-220-3913, arts1@su.ucalgary.ca, arts2@su.ucalgary.ca, arts3@su.ucalgary.ca, arts4@su.ucalgary.ca
- Student Ombuds Office information can be found at: www.ucalgary.ca/ombuds/