

PRIMATE SOCIAL PSYCHOLOGY

Course

PSYC W3628x (4 pts)

Location: 200C Schermerhorn

Term: Fall 2014

Day(s): Wed

Time: 12:10 – 2 PM

Instructor

Christine Webb

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Prerequisites

Science of Psychology (PSYC 1001) or Mind, Brain, and Behavior (PSYC 1010), or equivalent introductory psychology course, plus instructor permission.

Course Description

This seminar covers recent progress in the growing field of primate social behavior and cognition. Most primate species live in complex social groups, requiring sophisticated knowledge of relationships and social processes in order to survive therein. Topics in this course range from aggression and dominance to affiliation, altruism and cooperation, with a special emphasis on contemporary debates such as the origin of moral systems and the question of animal 'culture.' Readings, discussions, and assignments will center on various theoretical and methodological approaches to the study of primate sociality, generating new insights and questions for pertinent dimensions of human social psychology.

Course Rationale & Overview

Primate social behavior is a subject that naturally engages human beings. After all, humans are primates too. Whether we are scientists conducting research, interested students, or simply occasional zoo visitors, it is difficult to not be captivated when observing a group of nonhuman primates interact. But what is it exactly that we observe? What types of social systems, relationships, and dynamics exist in other primates? How do we define and measure social constructs? Though we can easily identify with nonhuman primate behavior, to what extent are our assumptions valid? The aim of this course is to provide you with the tools to develop your own answers to these questions.

While some courses are designed to steer clear of human phenomena—to avoid anthropomorphism—this class welcomes and encourages interdisciplinary discourse and healthy debate around the extent to which humans and other primates are similar. As such, an important component of the course will be to apply principles from readings and discussions on nonhuman primates to phenomena in our own species—what is similar, what is different, what is unknown? Regarding the latter, you will have the opportunity to develop an original research proposal for humans inspired by relevant nonhuman primate research. This will require you to think across disciplines, being both critical and creative in your evaluation of how primatology can inform human behavior.

In addition to providing a solid knowledge base and relevant scientific research literacy, you will cultivate your oral (e.g. through leading discussions) and written (e.g. through regular response posts) communication skills in this course. Class sessions will center on discussion of assigned readings, including review, theory, and empirical papers. These bridge traditionally distinct fields such as personality psychology and evolutionary biology, highlighting a fruitful intersection for the study of social behavior across species. As such, course readings, discussions, and assignments provide more general insights to the comparative study and evolution of sociality.

Course Role in Departmental Curriculum

PSYC W3628 is a seminar designed particularly for undergraduates who are majoring in Psychology and for students participating in the Psychology Postbac Certificate Program. These students will have priority in registration, followed by junior majors followed by non-majors. The course will fulfill the following degree requirements:

- For the Psychology major or concentration in the College and in G.S., for the Psychology minor in Engineering, and for the Psychology Postbac certificate, it will meet the Group III (Social, Personality, and Abnormal) distribution requirement.
- For Psychology Postbac certificate students, and for Psychology majors who enter Columbia in Fall 2013 or later, it will fulfill the seminar requirement.
- It will meet one term of the social science requirement of G.S., provided that students obtain the necessary permissions and have taken the prerequisite psychology courses. Majors will have priority over students who are taking the course for social science credit.
- For the Barnard Psychology major, it will fulfill the senior seminar requirement.

Course Objectives

This course will enable you to:

- Engage in constructive scientific discourse and thinking on primate social behavior and cognition
- Critically evaluate scientific articles, including review, empirical, and theory papers
- Effectively communicate (both orally and written) your resulting knowledge and opinions
- Understand links (and lack thereof) between human and nonhuman primate social psychology
- Generate interdisciplinary hypotheses and methods, ultimately forming the basis for an original study proposal

Course Grading & Requirements

20%	Class participation
20%	Response posts
20%	Leading discussion
30%	Research proposal (5% presentation, 25% final paper)
10%	NYC has Primates

Class Participation

You are expected to attend and actively participate in every class meeting. As attendance and participation are essential not just to your own experience but to that of the rest of the class, inadequate preparation and/or unexcused absences (see Course Policies) will lead you to lose participation points. I am more than happy to meet with you throughout the course to provide you with feedback on the quantity and quality of your participation. As the major focus of each class meeting is discussion, I encourage you to come to me with any concerns ahead of time.

While assigned discussion leaders are expected to lead the class, they are certainly not the only ones responsible for a productive class session. Effective participation involves helping your peers by giving required materials a thorough and thoughtful read while preparing to engage in various points of discussion (see Leading Discussions). Your response post is a great opportunity to guide and collect your thoughts ahead of time, giving you a way to translate what you have written into class contributions.

Response Posts

You are required to submit a response post—roughly 1 page, doubled-spaced—to the Discussion Board of CourseWorks no later than NOON the day before the class meets. This will

allow the discussion leader to consider your comments on the material ahead of time. These response posts should demonstrate active engagement with the readings by raising questions, providing synthesis with previous material, and indicating particular points of interest and/or confusion. Each response post *must* include at least one question for class discussion, and could involve:

- A synopsis of readings in light of the broader weekly topic areas
- An insightful description of an empirical and/or theoretical approach to the areas
- An attempt to build connections with prior reading material and/or other student posts
- Commentary on comparative work between human and nonhuman primates

Please also bring a printed copy of your response to class. Each post will be graded out of 5 points. Note that you are *not* required to write a response post when you are discussion leader.

Leading Discussions

You are responsible for leading the class discussion once during the course. Your role as discussion leader is to provide a succinct overview of the day's topic and required readings, *and* read and integrate the *supplemental* readings for that day into the discussion. You are in charge of initiating and sustaining a healthy class discussion on this material. We will talk more about what that means early in the semester (when I will be leading the majority of the discussions). Leaders are more than welcome to meet with me at least 2 days before their class to go over a discussion map. In preparation for that meeting and the class discussion, consider such issues as:

- **For review papers**, do authors draw justified conclusions based on available information? What research would discredit/enhance their conclusions?
- **For empirical papers**, is there a clear experimental rationale, adequate research design and convincing evidence in favor of researchers' hypotheses?
- **For theory papers**, what are the main assumptions underlying the authors' thinking? If we take this line of reasoning seriously (or fail to), what are the implications?

Additionally, an important role as discussion leader will be to provide an in-depth analysis of the empirical paper(s) for that day, including a summary of the authors' rationale, hypotheses, methods, results, and implications. Many of you will find using PowerPoint to aid your discussion to be particularly helpful in this regard, but note that I will *not* be grading your PowerPoint or other presentation tools, just the quality of the discussion that ensues. If you have a criticism of an aspect of a paper, great, but be sure to provide substantive suggestions for improvement—and encourage the rest of us to do so as well. Most of the empirical papers we read will focus on social behavior and cognition in nonhuman primates. While leading the discussion, it will also be important to address whether authors cite comparable research that has been done in humans, and if not, whether and how such work would be possible. This will help everyone engage in the conversations and thought processes necessary to conceive an original study design of their own, detailed below.

Research Proposal

The research proposal paper (8-10 pages, double-spaced, not including references) involves developing an idea and design for an original research study in humans. Your proposal should be inspired by an empirical study on nonhuman primates covered in the course. We will read at least one such empirical paper per week (you are welcome to look ahead to future topics when beginning your proposal), and many of the supplemental readings are also empirical in nature. As an alternative option, you can find a nonhuman primate empirical paper of your own (one good way to do this would be to research those cited in the articles we read for class), propose it

to me, and, pending my approval use that as the basis for your own proposal. In either case, your paper will resemble an empirical paper, with the following sections (and rough breakdown):

- **Introduction** (2-3 pages): What question do you want to answer? Why? What previous research are you building on?
- **Method** (2-3 pages): What empirical steps will you take to answer that question? Who is your sample? How will you operationally define the constructs you want to measure?
- **Predicted Results** (1-2 pages): What are your anticipated findings? Do this objectively and *without* interpretation, using both text and illustrative materials (tables and/or figures).
- **Discussion** (1-2 pages): So what? Now what? Provide a context for your results by discussing potential implications and future directions. Here is where you can interpret!
- **References** (as needed): Use APA formatting: <http://library.tc.columbia.edu/kb/idx.php/15/107/article> and please also review the Academic Integrity section of this syllabus.

We will go over these different sections in more detail as the course progresses. The paper will build on the readings, discussions, and assignments throughout the term, culminating in a novel research study that (hopefully) interests and excites you. The overall goal of the project is to allow you to be creative and interdisciplinary, but only to the extent that it guides new and scientifically sound insights to the study of social psychology. For example, if you are interested in dominance relationships, you will have to think very carefully about how you would operationalize and measure that construct differently (or similarly) in humans and nonhuman primates. As such, you will have to review *both* the animal- and human-relevant literatures on the topic. Fortunately, **I am here to help you!** You will meet with me individually at least twice throughout the term (once before the 5th and 11th class meeting, respectively, and more as deemed necessary) to plan and develop this project. As part of the assignment, you will complete a 5-7 minute PowerPoint (to present on the 7th class meeting), proposing your ideas along with prospective study methods. This will allow us to brainstorm together and provide you with constructive group feedback. Lastly, you have the option of submitting a (complete) research proposal draft by the 13th class meeting, on which I will also send you feedback. The final paper will be due (in hard-copy) at the beginning of the final class meeting.

NYC has Primates

Throughout the term, you will have the opportunity to immerse yourself in primatology in several different ways. Somewhat surprisingly, NYC is a hub for primatological research, with various universities, zoos, and other institutions conducting laboratory and/or field-based work. This assignment can take one of the two following forms:

- **Conducting primate observations:** On the second day of class, we will complete a short exercise on how primatologists conduct observations of social behavior. You will extend this exact exercise to your own social behavioral observations on any of NYC's many nonhuman primates (gelada baboons at the Bronx Zoo are a personal favorite). On CourseWorks, I will post a list of different opportunities throughout the city/admissions fees (on certain days, many Wildlife Conservation Society zoos/aquariums are pay-what-you-wish).
- **Attending a scientific talk:** I will maintain a schedule on CourseWorks to inform you of when and where course-relevant lectures take place. You are also welcome to propose a different scientific talk if you come across a pertinent one that I have not yet posted. In attending the talk, please note the following: What is the speaker's field of expertise? How might that lend itself to a different approach than much of the research we have read for this class? Did s/he use field- and/or lab-based methods, and how were they appropriate for the research question(s)?

Upon completion of either, you will submit a (roughly 2 page, double-spaced) description of your experience, thoughtfully synthesizing it with course readings and/or discussions. This must be posted to the Discussion Board (by midnight) before the 14th class, at which point we will have a group discussion of the various topics covered.

Course Policies

Class Attendance & Assignments

Excused absences are granted only if proper documentation (i.e. a letter from your doctor or advising dean) is provided. Note that you are still responsible for the work that is due for that particular class session. In the event that you require a make-up assignment (e.g. for leading a discussion), you also need a letter as indicated above. Points will be deducted for late class assignments—including response posts (1 point per day) and papers (10% per day).

Class Etiquette

Mobile phones are not permitted during class. Laptops may be used for anything course-related, but please refrain from unrelated activities. We are all social animals, but that is no excuse to distract others.

Students with Disabilities

If you require particular classroom accommodations or support services, please contact the Office of Disability Services (ODS—<http://health.columbia.edu/services/ods>) to make the necessary arrangements.

Academic Integrity

"The intellectual venture in which we are all engaged requires of faculty and students alike the highest level of personal and academic integrity. As members of an academic community, each one of us bears the responsibility to participate in scholarly discourse and research in a manner characterized by intellectual honesty and scholarly integrity...In practical terms, this means that, as students, you must be responsible for the full citations of others' ideas in all of your research papers and projects; you must be scrupulously honest when taking your examinations; you must always submit your own work and not that of another student, scholar, or internet agent."

From the Faculty Statement on Academic Integrity
(www.college.columbia.edu/academics/integrity-statement)

Last but not least, cheating and plagiarism are not tolerated. Any student found guilty of either will receive a zero for that assignment and be referred to the Dean's Disciplinary Process, described here (www.college.columbia.edu/academics/disciplinaryprocess). For more information on what constitutes a violation of academic integrity, consult the Columbia University Guide to Academic Integrity (<http://www.college.columbia.edu/academics/integrity>). Although an exhaustive review of Columbia's policies and the numerous forms that plagiarism can take is not possible here, keep in mind that the following are unacceptable:

- Submitting essays (or portions of essays) written by others as one's own
- Failing to acknowledge—through proper bibliographic and in-text citations—the sources of one's work. This can range from:
 - Direct quotations and paraphrases to expressions and *ideas* reflected in others' work. References (and quotation marks where appropriate) are required in all cases, including for website material.
 - Intentional to accidental plagiarism—neither is tolerated. It is your responsibility to remain knowledgeable and careful regarding inadvertent plagiarism.
- Collaborating on an assignment without specific permission from the instructor

It is your responsibility to ensure that your work maintains expected standards. Remember that when it comes to issues of academic integrity, it is better to err on the side of caution. As your

proposal will involve extensive use of references, please feel free to ask me any questions along the way.

Calendar Readings are listed in suggested order

Class/Date		Discussion Topics	Required Readings: page #s
Introduction / Aggression & Conflict			
1	09.03	<ul style="list-style-type: none"> • Course overview & expectations • What is anthropomorphism? • Research methods & ethics 	de Waal (1999): 255-280 Altmann (1974): 227-265 ASAB/ABS ethics statement: 301-309
2	09.10	<ul style="list-style-type: none"> • Primate taxonomy • Conducting behavioral observations • Intro to primate sociality 	Kummer (1978): 687-705 Kappeler & van Schaik (2002): 707-723 Silk <i>et al</i> (2010): 1359-1361
3	09.17	<ul style="list-style-type: none"> • Inter- & intra-group aggression • Relational conflict • Reconciliation & consolation 	Wilson & Wrangham (2003): 377-392 Aureli <i>et al</i> (2002): 325-343 Webb <i>et al</i> (2014): 57-63
Social Organization & Dominance			
4	09.24	<ul style="list-style-type: none"> • Social behavior to organization • Social roles • Social network analysis 	Rubenstein & Rubenstein (2013): 571-579 Kutsukake (2010): 387-394 Brent <i>et al</i> (2011): 720-730 Flack <i>et al</i> (2006): 426-429
5	10.01	<ul style="list-style-type: none"> • Competition • Coalition formation • Dominance hierarchies 	Chapais (1996): 7-23 Hawley (1999): 97-108 Sapolsky (2005): 648-652
Research Proposals / Affiliation & Cooperation			
6	10.08	<ul style="list-style-type: none"> • Development of social bonds • Grooming & exchange-of-benefits • Measuring friendship 	Maestriperi & Roney (2006): 120-137 Seyfarth & Cheney (1984): 541-543 Ventura <i>et al</i> (2006): 1138-1149
7	10.15	<ul style="list-style-type: none"> • Proposal mini-presentations • Class feedback 	ASSIGNMENT: proposal idea presentations
8	10.22	<ul style="list-style-type: none"> • Reciprocity & altruism • The effect of kinship • Function of play 	Cheney (2011): 10902-10909 Hare <i>et al</i> (2007): 619-623 Bekoff (2001): 81-90
Self-Awareness & Empathy			
9	10.29	<ul style="list-style-type: none"> • All-or-nothing / along a continuum? • Mirror-self-recognition • Social awareness & cognition 	Anderson & Gallup (2011): 1-3 Rajala <i>et al</i> (2010): 1-8 Rochat <i>et al</i> (2011): 1491-1497 Bryne & Bates (2010): 815-830
10	11.05	<ul style="list-style-type: none"> • Social contagion (e.g. yawning) • Empathy • Theory of mind 	Preston & de Waal (2002): 1-20 Palagi <i>et al</i> (2009): 19262-19267 Norscia & Palagi (2011): 1-5 Call & Tomasello (2008): 187-192
Social Learning & Culture			
11	11.12	<ul style="list-style-type: none"> • Types of social learning • Tool-use • Animal traditions 	Whiten (2000): 477-492 Perry (2011): 988-996 Dunbar (2008): 15-33
12	11.19	<ul style="list-style-type: none"> • Evidence for culture • Cultural transmission • Human unique? 	McGrew (1998): 301-328 Whiten <i>et al</i> (2005): 737-740 Laland & Janik (2006): 542-547
Individual Differences & Personality / Wrap-up			
13	11.26	<ul style="list-style-type: none"> • What is animal personality? 	Freeman & Gosling (2010): 653-671

		<ul style="list-style-type: none"> • Validity of methods • 'Social' personalities 	Koski (2011): 2161-2174 Brosnan <i>et al</i> (2009): 129-147
14	12.03	<ul style="list-style-type: none"> • NYC has Primates experiences • Course wrap-up & discussion 	ASSIGNMENT: final proposal due in class

Bibliography of Required & Supplemental Readings

All available on CourseWorks. Readings in *italics* are supplemental readings (required for discussion leaders). Note that for *starred readings, you are only required to read the subset of pages listed in the course Calendar.

Class 1: Introduction

- de Waal, F.B.M. (1999). Anthropomorphism and anthropodenial: Consistency in our thinking about humans and other animals. *Philosophical Topics*, 27: 255-280.
- Altmann, J. (1974). Observational study of behavior: Sampling methods. *Behaviour*, 49(3): 227-267.
- Guidelines for the treatment of animals in behavioural research and teaching. (2012). *Animal Behaviour*, 83: 301-309.

Class 2: Introduction (cont.)

- Kummer, H. (1978). On the value of social relationships to nonhuman primates: A heuristic scheme. *Social Science Information*, 17(4/5): 687-705.
- Kappeler, P.M. & van Schaik, C.P. (2002). Evolution of primate social systems. *International Journal of Primatology*, 23: 707-723.
- Silk, J.B., Beehner, J.C., Bergman, T.J., Crockford, C. Engh, A.L. Moscovice, L.R., Wittig, R.M., Seyfarth, R.M., & Cheney, D.L. (2010). Strong and consistent social bonds enhance the longevity of female baboons. *Current Biology*, 20: 1359-1361.

Class 3: Aggression + Conflict

- *Wilson, M.L. & Wrangham, R.W. (2003). Intergroup relations in chimpanzees. *Annual Review of Anthropology*, 32: 363-392.
- Aureli, F., Cords, M., & van Schaik, C.P. (2002). Conflict resolution following aggression in gregarious animals: A predictive framework. *Animal Behaviour*, 64: 325-343.
- Webb, C.E., Franks, B., Romero, T., Higgins, E.T., & de Waal, F.B.M. (2014). Individual differences in chimpanzee reconciliation relate to social switching behaviour. *Animal Behaviour*, 90: 57-63.
- Romero, T., Castellanos, M.A., & de Waal, F.B.M. (2010). Consolation as possible expression of sympathetic concern among chimpanzees. *Proceedings of the National Academy of Sciences of the United States of America*, 107(27): 12110-12115.
- de Waal, F.B.M. & Pokorny, J.J. (2005). *Primate Conflict and its Relation to Human Forgiveness*. In E.L.J. Worthington (ed.), *Handbook of Forgiveness* (pp. 15-32). New York: Brunner-Routledge.

Class 4: Social Organization

- Rubenstein, D.I. & Rubenstein D.R. (2013) Social Behavior. In: Levin S.A. (ed.) *Encyclopedia of Biodiversity*, 2nd edition, Volume 6 (pp. 571-579). Waltham, MA: Academic Press.
- Kutsukake, N. (2010). Japanese Macaque Society as a Complex Adaptive System. In: N. Nakagawa, M. Nakamichi, & H. Sugiura (eds). *The Japanese Macaques* (pp. 387-394). Tokyo: Springer.
- Brent, L.J., Lehmann, J., & Fernández, G. (2011). Social network analysis in the study of nonhuman primates: A historical perspective. *American Journal of Primatology* 73(8): 720-730.
- Flack J.C., Girvan, M., de Waal F.B.M., & Krakauer, D.C. (2006). Policing stabilizes construction of social niches in primates. *Nature*, 439: 426-429.
- van Schaik, C.P. & Van Hooff, J.A.R.A.M. (1983). On the ultimate causes of primate social systems. *Behaviour* 85(1/2): 91-117.

Class 5: Dominance

- Chapais, B. (1996). Competing through cooperation in nonhuman primates: Developmental aspects of matrilineal dominance. *International Journal of Behavioral Development*, 19: 7-23.
- *Hawley, P.H. (1999). The ontogenesis of social dominance: A strategy-based evolutionary perspective. *Developmental Review*, 19: 97-132.
- Sapolsky, R.M. (2005). The influence of social hierarchy on primate health. *Science*, 308(5722): 648-652.
- Tiddi, B., Aureli, F., & Schino, G. (2012). Grooming up the hierarchy: The exchange of grooming and rank-related benefits in a new world primate. *PLoS One*, 7(5): e36641.

Class 6: Affiliation

- Maestripietri, D. & Roney, J.R. 2006. Evolutionary developmental psychology: Contributions from comparative research with nonhuman primates. *Developmental Review*, 26: 120-137.
- Seyfarth, R.M. & Cheney, D.L. (1984). Grooming, alliances, and reciprocal altruism in vervet monkeys. *Nature* 308: 541-543.
- Ventura, R., Majolo, B., Koyama, N.F., Hardie, S., & Schino, G. (2006). Reciprocation and interchange in wild Japanese macaques: Grooming, cofeeding and agonistic support. *American Journal of Primatology* 68: 1138-1149.
- Massen, J.J.M., Sterck, E.H., de Vos, H. (2010). Close social associations in animals and humans: Functions and mechanisms of friendship. *Behaviour*, 147: 1379-1412.

Class 7: Research Proposals

There are no assigned readings for this class

Class 8: Cooperation

- Cheney, D.L. (2011). The extent and limits of cooperation in animals. *Proceedings of the National Academy of Sciences*, 108: 10902-10909.
- Hare, B., Melis, A.P., Woods, V., Hastings, S., & Wrangham, R. (2007). Tolerance allows bonobos to outperform chimpanzees on a cooperative task. *Current Biology*, 17: 619-623.
- Bekoff, M. (2001). Social play behaviour: Cooperation, fairness, trust, and the evolution of morality. *Journal of Consciousness Studies*, 8: 81-90.
- Sussman, R.W., Garber, P.A. & Cheverud, J.M. (2005). Importance of cooperation and affiliation in the evolution of primate sociality. *American Journal of Physical Anthropology*, 128: 84-97.
- Koenig, A., Borries, C., Doran-Sheehy, D.M., & Janson, C.H. (2006). How important are affiliation and cooperation? A reply to Sussman et al. *American Journal of Physical Anthropology*, 131: 522-524.

Class 9: Self-Awareness

- Anderson, J.R. & Gallup, G.G.Jr. (2011). Which primates recognize themselves in mirrors? *PLoS Biol* 9(3): e1001024.
- Rajala, A.Z., Reininger, K.R., Lancaster, K.M., & Populin L.C. (2010). Rhesus monkeys (*Macaca mulatta*) do recognize themselves in the mirror: Implications for the evolution of self-recognition. *PLoS ONE*, 5(9): e12865.
- Rochat, P., Broesch, T., & Jayne, K. (2012). Social awareness and early self-recognition. *Consciousness & Cognition*, 21: 1491-1497.
- Bryne, R.W., & Bates, L.A. (2010). Primate social cognition: Uniquely primate, uniquely social, or just unique? *Neuron*, 65(6): 815-830.
- Gallup, G.G.Jr. (1982). Self-awareness and the emergence of mind in primates. *American Journal of Primatology*, 2: 237-248.
- Plotnik, J.M., de Waal, F.B.M., & Reiss, D. (2006). Self-recognition in an Asian elephant. *Proceedings of the National Academy of Sciences*, 103(45): 17053-17057.

Class 10: Empathy

- Preston, S.D. & de Waal, F.B.M. (2002). Empathy: Its ultimate and proximate bases. *Behavioral & Brain Sciences*, 25: 1-20.
- Palagi, E., Leone, A., Mancini, G., & Ferrari, P.F. (2009). Contagious yawning in gelada baboons as a possible expression of empathy. *Proceedings of the National Academy of Sciences*, 106(46): 19262-19267.
- Norscia, I. & Palagi, E. (2011). Yawn contagion and empathy in *Homo sapiens*. *PLoS ONE*, 6(12): e28472.
- Call, J. & Tomasello, M. (2008) Does the chimpanzee have a theory of mind? 30 years later. *Trends in Cognitive Sciences*, 12(5): 187-192.
- Silk, J.B., Brosnan, S.F., Vonk, J., Henrich, J., Povinelli, D.J., Richardson, A.F., Lambeth, S.P., Mascaró, J., & Schapiro, S.J. (2005). Chimpanzees are indifferent to the welfare of other group members. *Nature*, 435: 1357-1359.
- de Waal, F.B.M. (2007). With a little help from a friend. *PLoS Biology*, 5(7): e190.

Class 11: Social Learning

- *Whiten, A. (2000). Primate culture and social learning. *Cognitive Science*, 24(3): 477-508.
- Perry, S. (2011). Social traditions and social learning in capuchin monkeys (*Cebus*). *Philosophical Transactions of the Royal Society B*, 366: 988-996.
- Dunbar, R.I.M. (2008). Why humans aren't just great apes. *Issues in Ethnology & Anthropology*, 3(3): 15-33.

- Caro, T.M. & Hauser, M. (1992). Is there teaching in nonhuman animals? *Quarterly Review of Biology*, 67: 151e174.
- Byrne, R.W. & Rapaport, L.G. (2011). What are we learning from teaching? *Animal Behaviour*, 82(5): 1207-1211.

Class 12: Culture

- McGrew, W.C. (1998). Culture in nonhuman primates? *Annual Review of Anthropology*, 27: 301-328.
- Whiten, A., Horner, V. & de Waal, F.B.M (2005). Conformity to cultural norms of tool use in chimpanzees. *Nature*, 437, 737-740.
- Laland, K.N. & Janik, V.M. (2006). The animal cultures debate. *Trends in Ecology & Evolution*, 21(10): 542-547.
- Boesch, C. & Tomasello, M. (1998). Chimpanzee and human cultures. *Current Anthropology*, 39(5): 591-614.

Class 13: Individual Differences + Personality

- Freeman, H.D., & Gosling, S.D. (2010). Personality in nonhuman primates: A review and evaluation of past research. *American Journal of Primatology*, 72(8): 653-671.
- Koski, S.E. (2011). Social personality traits in chimpanzees: Temporal stability and structure of behaviourally assessed personality traits in three captive populations. *Behavioral Ecology and Sociobiology*, 65(11): 2161-2174.
- Brosnan, S.F., Newton-Fisher, N.E., & van Vugt, M. (2009). A melding of the minds: When primatology meets personality and social psychology. *Personality & Social Psychology Review*, 13(2): 129-147.
- Nettle, D., & Penke, L. (2010). Personality: Bridging the literatures from human psychology and behavioural ecology. *Philosophical Transactions of the Royal Society B-Biological Sciences*, 365(1560): 4043-4050.
- Franks, B., Reiss, D., Cole, P., Friedrich, V., Thompson, N., & Higgins, E.T. (2013). Predicting how individuals approach enrichment: Regulatory focus in cotton-top tamarins (*Saguinus oedipus*). *Zoo Biology*, 32(3): 1-9.

Class 14: Wrap-up

There are no assigned readings for this class

—Syllabus is subject to revision. Updates will be posted on CourseWorks—