

PRIMATE COGNITION

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MEETING TIME: Tuesday 11:00 – 12:30PM

COURSE TEXT: (i) Tomasello & Call (1997). *Primate Cognition* (PC)
(ii) Povinelli (2000). *Folk Physics for Apes* (FFA)

COURSE DESCRIPTION & OBJECTIVES

Description. *This course will explore the science of comparative psychology with a special emphasis on human and non-human primates. The class will cover various areas of research within the field of primate cognition including knowledge of the physical world including primates' knowledge of quantities, space, tools and objects as well as knowledge of the social world including primates' ability to imitate, communicate and infer the thoughts of others.*

Objectives. *This course aims, through a combination of lecture and discussion to (1) provide students with an overview of primate cognition, (2) how primate cognition is like and unlike human cognition, (3) analyze and critique the primary literature on primate cognition, (4) make oral and written arguments in support or against a particular method or theory used in comparative research.*

COURSE REQUIREMENTS

Special Interest Theme: *Students are to propose a theme of special interest to them. They must select at least 5 articles. One (but no more than 2) of these articles should a review article.*

Review Papers (75%): *Three review papers, no longer than 15 pages in length each. The paper must focus on the following themes: Physical Cognition, Social Cognition and a topic of the student's choosing. This topic cannot include material covered under one of the other topics. Each paper must address the following: (a) summary of major findings or prominent theories, (b) description of at least one significant limitation that spans all studies or concepts in the area, and (c) include at least one question that remains to be addressed.*

CLASS SCHEDULE

Introduction

8/30: Historical Background (PC: Ch. 1)

- (i) *Hodos & Campbell (1991). The Scala naturae revisited: evolutionary scales and anagenesis in comparative psychology*
- (ii) *McPhail (1987). The comparative psychology of intelligence*
- (iii) *Penn et al. (2008). Darwin's mistake: Explaining the discontinuity between human and nonhuman minds.*

Knowledge of the Physical World

9/06: Space & Objects (PC: Ch. 2)

- (i) *Barth et al (2007). Tracking the Displacement of Objects.*
- (ii) *Cacchione et al (2009). Gravity and Solidity in Four Great Ape Species.*

9/13: Tools & Causality (PF: Ch. 3)

- (i) *Santos & Hauser (2006): Probing the Limits of Tool Competence*
- (ii) *Povinelli (2000): Folk Physics for Apes (Ch 5).*

9/20: Features & Categories (PC: Ch. 4)

- (i) *Smith et al (2008): The Comparative Psychology of Same-Different Judgments*
- (ii) *Parr & deWaal (1999). Visual kin recognition in chimpanzees.*
- (iii) *Parr (2011). The evolution of face processing in primates*

Quantities (PF: Ch. 5)

- (i) *Cantlon et al. (2006). Shared System of Ordering Small & Large Numbers in Monkeys and Humans*
- (ii) *Jordan et al (2008). Monkeys match and tally quantities across senses*

***9/27: Theories of Primate Physical Cognition** (PC: Ch. 6)

- (i) *Povinelli (2000). Folk Physics for Apes (Ch. 1)*
- (ii) *Penn & Povinelli (2007). Causal cognition in human and non-human animals: A comparative, critical review.*

*** PAPER 1 DUE ***

Knowledge of the Social World

10/4: Social Knowledge & Interactions (PC: Ch. 7)

- (i) *Melis et al (2006). Chimpanzees recruit the best collaborators.*
- (ii) *Warweken et al (2006). Altruistic helping in human infants & young chimpanzees.*
- (iii) *Silk et al. (2005). Chimpanzees are indifferent to the welfare of unrelated group members*

Social Strategies & Communication (PC: Ch. 8)

- (i) *Herrmann & Tomasello (2007). Apes' & Children's understanding of cooperative and competitive motives in a communicative situation.*
- (ii) *Subiaul, Vonk, Okamoto-Barth & Barth (2007). Do chimpanzee learn reputation by observation?*
- (iii) *Lyn, Russell, Hopkins (2010). The impact of environment on the comprehension of declarative communication in apes.*

10/11: Social Learning & Culture (PC: Ch. 9)

- (i) *Subiaul et al. (2004). Cognitive imitation in rhesus monkeys.*
- (ii) *Horner & Whiten (2005). Causal knowledge and imitation/emulation switching in chimpanzee (*Pan troglodytes*) & children (*Homo sapiens*).*
- (iii) *Whiten, Horner & deWaal. (2005). Conformity to cultural norms of tool-use.*

10/18: Theory of Mind (PC: Ch. 10)

- (i) *Hare et al. (2000). Chimpanzees know what conspecifics do & do not see.*
- (ii) *Wood, Glynn, Phillips & Hauser (2007). The perception of rational, goal-directed action in non-human primates*
- (iii) *Krachun, Carpenter, Call, Tomasello (2009). A competitive nonverbal false belief task for children and apes*

10/25: Theories of Primate Social Cognition (PC: Ch. 11) Quiz II

- (i) *Penn & Povinelli (2007). On the lack of evidence that non-human animals possess anything remotely resembling a 'theory of mind.'*
- (ii) *Call & Tomasello (2008). Does the chimpanzee have a theory of mind? 30 years later*
- (iii) *Whiten (2011). The scope of culture in chimpanzees, humans and ancestral apes*

11/01: Theories of Primate Cognition (PC: Ch. 12)

*** PAPER 2 DUE ***

11/08: **Human Cognition** (PC: Ch. 13)

- (i) Spelke & Kinzler (2007). *Core Knowledge*
- (ii) Carey (2009). *The Origins of Concepts: Chs. 12 & 13*

11/15: **Human Uniqueness**

- (i) Subiaul et al (In Press). *The human imitation faculty*
- (ii) Sherwood et al (2008). *A natural history of the human mind*
- (iii) Premack (2007). *Human and animal cognition: Continuity and discontinuity*
- (iv) Penn et al. (2008). *Darwin's mistake: Explaining the discontinuity between human and nonhuman minds.*

11/22: **NO CLASS** (Movie: *PROJECT NIM*)

11/29: **Special Interest Theme**

12/06: **Conclusions**

*** PAPER 3 DUE ***

CLASS POLICIES

Late work: Loss of 1/3 grade point (e.g., A -> A-), for every calendar day late. Exceptions granted for documented medical or family emergencies, and religious holidays (with prior notification).

Religious holidays: Absence for class and late submission of assignments permitted with at least one week's notice.

Attendance: Class attendance is required but *discouraged in the event that the student has symptoms of the flu*. In the event of a necessary absence, the student should re-schedule a meeting date.

For university policies on teaching, see:
<http://www.gwu.edu/~academic/Teaching/main.htm>.

GRADING

A 100 - 94	B 86 - 84	C 76 - 74	D 66 - 64
A- 93-90	B- 83 - 80	C- 73 - 70	D- 63 - 60
B+ 89-87	C+ 79 - 77	D+ 69 - 67	F < 60

ACADEMIC INTEGRITY

Academic integrity is defined as the pursuit of scholarly activity in an open, honest, and responsible manner and is a basic guiding principle for all academic activity at The George Washington University. Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabrication of 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. Penalties for academic dishonesty are outlined in the *Code of Academic Integrity* (www2.gwu.edu/~ntegrity/code.html) and may lead to disciplinary sanctions including a failing grade for the course.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

It is the University's policy to provide reasonable accommodations to students who have disabilities that may affect their ability to participate in class activities and assignments. Students with disabilities should contact Disability Support Services (994-8250) to obtain assistance with arranging the necessary accommodations and must notify the instructor of the course by first week of class if accommodations are required. No special accommodations are possible without DSS approval.