

Comparative Psychology and Dog Cognition

APDT
Winter 2019

Instructor: Dr. Sasha Protopopova, PhD, CPDT-KA
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Course dates: November 13-December 17, 2019

Description: Does your dog understand that objects continue to exist even when out of view? In this class, we will cover topics in the field of comparative psychology with an emphasis on current research in dog cognition. Comparative psychologists focus on the evolutionary, developmental, and environmental variables influencing behavior of various species of animals. In this class, we will cover the history of animal behavior and cognition, the role and dangers of anthropomorphism and anthropocentrism, and cover key topics in dog cognition research such as social learning, abstract concepts, communication and language, and theory of mind. Students will be expected to read up to two scientific articles each week as well as additional homework, such as trying out famous experiments on your own (or your friends') companion animal.

Bio of the Instructor: Dr. Alexandra (Sasha) Protopopova, MS, PhD, CPDT-KA is an assistant professor in the Animal Welfare at the University of British Columbia. Protopopova's and her students' research aims are improving animal shelter practices, improving companion animal welfare through the development of behavioural interventions, and improving human-animal interactions for the benefit of both. Dr. Protopopova earned an MS and a PhD in Behavior Analysis from University of Florida and was previously an assistant professor in animal and food sciences at Texas Tech University. She has published numerous peer-reviewed articles and is a frequent presenter in scientific and professional conferences. Dr. Protopopova spends her days conducting behavioral research, teaching university classes in companion animal welfare, and cuddling dogs.



Level of Knowledge: *Prior to attending this course, it is assumed that all students:*

- Are familiar with basic concepts of animal learning, including Pavlovian and operant conditioning,

- Are *familiar* with basic concepts of evolutionary processes, such as the concept of traits, inheritance, and selection of those traits.
- This class presumes no previous knowledge of comparative psychology or animal cognition.

Learning Objectives:

- Demonstrate knowledge of the field of comparative psychology
- Demonstrate the importance of scientific thinking when it comes to animal behavior and cognition
- Define anthropomorphism and anthropocentrism and explain the importance of not engaging in these errors
- Engage in active learning and discussions about various topics of animal cognition

Course Evaluation and Completion: *will be determined based on:*

- Participation on the discussion boards (10 points)
 - Participating students are required to make two posts each week
 - You will get 1 point for each discussion post, for a maximum of 2 points per week
 - Discussions must relate to course material (questions about due dates, technical issues, etc., do not count toward your discussion requirement)
- Completing weekly assignments (50 points)
 - There will one assignment each week
 - Each assignment is worth 10 points
 - Grading will be based on understanding of the course material, critical thinking and application skills and grammar, punctuation, and clarity of writing
 - Each assignment will be graded using the following scale:

| Grade | Total points |
|--------------------------|--------------|
| High honors | 9-10 |
| Honors | 8 – 8.5 |
| Pass | 7 – 7.5 |
| Unsatisfactory (no pass) | Less than 7 |

- Late assignments
 - Assignments are due on Tuesday at 12 pm ET.
 - Unexcused late assignments will be assigned a 2 point penalty for each day they are late
 - Assignments submitted at 12:01 pm ET on Tuesday are considered one day late (2 point deduction). Assignments submitted at 12:01 pm on Wednesday are considered two days late (4 point deduction), etc.
 - Extensions without point deductions will only be granted in the case of emergencies and with proper documentation.

The overall course grade will be determined as follows:

| Grade | Total points | Percentage |
|--------------------------|----------------|---------------|
| High honors | 49.5 or more | 90 and above |
| Honors | 44-49 | 80 - 89 |
| Pass | 38.5 - 43.5 | 70 – 79 |
| Unsatisfactory (no pass) | Less than 38.5 | Less than 70% |

CEUs: 20 for successful completion of entire course from CCPDT, IAABC, KPA, & IACP (partial CEUs will not be awarded.)

Reading: Reading will be assigned by the instructor (see schedule for each reading assignment).

Class schedule: The class will run for five weeks total.

WEEK 1

Lecture released- Wednesday, November 13- 1:00pm EST

Lecture: Introduction to Cognition

- What is animal cognition?
- History of animal behavior/ comparative cognition and specifically canine cognition
- Behaviorism, vs ethology, vs. cognitive psychology
- Anthropomorphism/ anthropocentrism

Due Tuesday, November 19 by 1:00pm EST

Assignment:

- Write a professional, clear, succinct paragraph (1/2 page, single-spaced, 12 point font) on the following topic:
 - o Which dog problem behavior often prompts owners to engage in anthropomorphism? How might this be detrimental (or beneficial) for their relationship with their dog?
 - o Submit by uploading via your Education Dashboard
- Submit two secret words from eLearning course (provided during lecture).
- Participate (at least two thoughtful posts) in the Online Discussion Forum
- Read the required reading assignment below.

Reading:

1. Feuerbacher, E. N., & Wynne, C. D. L. (2011). A history of dogs as subjects in North American experimental psychological research. *Comparative Cognition and Behaviour Reviews*, 6, 46-71.
2. Wynne, C. D. (2004). The perils of anthropomorphism. *Nature*, 428(6983), 606-606.

WEEK 2

Lecture released- Wednesday, November 20- 1:00pm EST

Lecture: Social Learning

- Social learning and cultural transmission
- Imitation (bidirectional studies)
- Do as I do research
- Teaching in animals

Due Tuesday, November, 26 by 1:00pm EST

Assignment:

- Conduct **one** of the following experiments/demonstrations on your dog (or other non-human animal). Submit a ½ page discussion of what you did/found **and/or** a 5 min video.
 - Imitation task (either the Bidirectional or Two-Action Method)
 - Teach "do as I do" cue
 - Submit by uploading via your Education Dashboard
- Submit two secret words from eLearning course (in the lecture recording).
- Participate (at least two thoughtful posts) in the Online Discussion Forum
- Read the required reading assignment below.

Reading:

1. Topál, J., Byrne, R. W., Miklósi, A., & Csányi, V. (2006). Reproducing human actions and action sequences: "Do as I Do!" in a dog. *Animal cognition*, 9(4), 355-367.

WEEK 3

Lecture released- Wednesday, November 27- 1:00pm EST

Lecture: Abstract Concepts

- Perceptual concepts
- Object permanence
- Conditional discrimination
- Matching to sample tasks
- Stimulus equivalence

Due Tuesday, December 3 by 1:00pm EST

Assignment:

- Conduct **one** of the following experiments/demonstrations on your dog (or other non-human animal). Submit a 1/2 page discussion of what you did/found **and/or** a 5 min video.
 - Teach a Match to Sample (if successful, try stimulus equivalence)

OR

- Object permanence (no rotation and with 180 degree rotation)
- Submit by uploading via your Education Dashboard
- Submit two secret words from eLearning course (from lecture recording).
- Participate (at least two thoughtful posts) in the Online Discussion Forum
- Read the required reading assignment below.

Reading:

1. Miller, H. C., Gipson, C. D., Vaughan, A., Rayburn-Reeves, R., & Zentall, T. R. (2009). Object permanence in dogs: invisible displacement in a rotation task. *Psychonomic bulletin & review*, 16(1), 150-155.

WEEK 4

Lecture released- Wednesday, December 4- 1:00pm EST

Lecture: Communication and Language

-Eavesdropping, cues, and signals
-Dishonest signaling
-Language

Due Tuesday, December 10 by 1:00pm EST

Assignment:

- Read the Marshall-Pescini reading and repeat a simplified version of this study on your own dog (or other non-human animal). Submit a 1/2 page discussion of what you did/found **and/or** a 5 min video.
 - Submit by uploading via your Education Dashboard
- Submit two secret words from eLearning course (attended live or via recording in your Education dashboard).
- Participate (at least two thoughtful posts) in the Online Discussion Forum
- Read the required reading assignment below.

Reading:

1. Marshall-Pescini, S., Passalacqua, C., Ferrario, A., Valsecchi, P., & Prato-Previde, E. (2011). Social eavesdropping in the domestic dog. *Animal Behaviour*, 81(6), 1177-1183.
2. Pilley, J. W. (2013). Border collie comprehends sentences containing a prepositional object, verb, and direct object. *Learning and Motivation*, 44(4), 229-240.

WEEK 5

Lecture released- Wednesday, December 11- 1:00pm EST

Lecture: Theory of Mind and Social Cognition

- Self-recognition
- Guilty dog
- Deceit
- Perspective taking

Due Tuesday, December 17 by 1:00pm EST

Assignment:

- Conduct one of the following experiments/demonstrations on your dog (or other non-human animal): Pointing Task (hand point, foot point, gaze) or Begging Task (book in front of one person, closed eyes). Submit a 1/2 page discussion of what you did/found and/or a 5 min video.
 - Submit by uploading via your Education Dashboard
- Submit two secret words from eLearning course (attended live or via recording in your Education dashboard).
- Participate (at least two thoughtful posts) in the Online Discussion Forum
- Read the required reading assignment below.

Reading:

1. Udell, M. A., Dorey, N. R., & Wynne, C. D. (2011). Can your dog read your mind? Understanding the causes of canine perspective taking. *Learning & Behavior*, 39(4), 289-302.