# COGS 1: FALL 2018

## Section E

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Week 6 Updates

● Grades for Midterm 1, Quiz B, and Quiz C are up; Quiz D coming soon

● Midterm 2 on **November 20th (week 8)**
  ○ Fewer lectures will be covered, so there will be a larger emphasis on the readings

● Extra Credit Reminder
  ○ Pre-Reading Quiz on Monday, November 12th
  ○ Remember to *assign your SONA Credit*

● **NO SECTIONS MONDAY (Next weeks quiz will be on TritonEd)**

● **Note:** Do not fill out the missing grade form multiple times for the same missing grade. It creates extra work and slows down our regrade process. If you do this we will move your regrade to the back of the line.
Reminder: Piazza posting guidelines

1. Check to see if your question has already been asked/answered before posting.
2. If your question has anything to do with schedule (quiz, exam, readings, EC quiz, etc.), check the syllabus before asking.
3. Post questions publicly whenever possible (unless it’s a private matter) so other students can help answer and/or if other people have the same question they can see the answer.
4. Do not post answers to quizzes/exams. This is an academic integrity violation.

Side note: students have been sharing self-made study guides - TA’s do not review these and cannot guarantee the content/answers are reliable.
Lecture 10

Animal Cognition, Dr. Johnson
Lecture 10 | Review Questions

1. What are Species-Specific Sensori-Motor Constraints? Be able to cite and understand specific examples from lecture.
2. What are general learning principles? Do they apply across all species? Know the examples mentioned in the lecture.
3. What is Win Stay/Lose Shift?
4. What is taste aversion learning? How does it differ from Pavlov’s Dog experiment?
5. What is social complexity? How does it contribute to the development of animal cognition?
6. What are the examples discussed in lecture of how we can understand animal cognition?
   a. Cognitive Maps
   b. Prospective Encoding
   c. Symbol Use
   d. “Greedy Giveaway Task”
1. What are Species-Specific Sensori-Motor Constraints? Be able to cite and understand specific examples from lecture.

Cognition is constrained by the range of sensory-motor abilities that we have. To study cognition in nonhuman animals, researchers need to assess *species-specific sensori-motor constraints*.

Dolphins vs. the Match-to-Sample Task

Unsurprisingly, they performed poorly
1. What are Species-Specific Sensori-Motor Constraints? Be able to cite and understand specific examples from lecture.

Cognition is constrained by the range of sensory-motor abilities that we have. To study cognition in nonhuman animals, researchers need to assess species-specific sensori-motor constraints.

**Forward Facing Eyes**
- Good Depth Perception
  - For hunting (insects)
  - For arboreal locomotion

**Opposable Thumbs/Grasping Hands**
- Hand-Eye Coordination
2. What are general learning principles? Do they apply across all species? Know the examples mentioned in the lecture.

General Learning Principles:

**Event Correlations:**
When events reliably co-occur, animals will use the earlier event to predict the later event.

**Win-Stay/Lose-Shift**
Keep doing behavior if it works, and if it doesn’t then try something else.

*Keep in mind exceptions*
2. What are general learning principles? Do they apply across all species? Know the examples mentioned in the lecture.

Event Correlations

1. Dog is presented with **food** → **salivation**

2/3. Dog learns to associates **bell** with presentation of **food** (Temporal contiguity)

4. Dog **salivates** with **bell**, even when food is not present
3. What is Win Stay/Lose Shift?

Win Stay / Lose Shift

Peck White-on-Black, Get Reward
3. What is Win Stay/Lose Shift?

Win-Shift is the SMART strategy!

e.g. Hummingbirds do poorly on Win Stay / Lose Shift

Drains nectar from flower at each visit
4. What is taste aversion learning? How does it differ from Pavlov’s Dog experiment?

Taste aversion is learned after having food that causes nausea, sickness, or vomiting.

**Temporal contiguity** would predict that rat should learn to associate food and illness

BUT, they only learn this association with a >1 hour delay
5. What is social complexity? How does it contribute to the development of animal cognition?
6. What are the examples discussed in lecture of how we can understand animal cognition?

Cognitive Maps

Rat developed representation of a cognitive map that it uses to navigate the map, as opposed to performing a learned behavioral response.
6. What are the examples discussed in lecture of how we can understand animal cognition?

By studying the effects of interference on **prospective encoding**, we can make inferences about the mental representations that pigeons undergo when completing a task.
6. What are the examples discussed in lecture of how we can understand animal cognition?

**Symbol Use**: Some animals can perform complex reasoning using symbols

- **Animal learns to reliably pick numbers corresponding to number of objects**
- **Once numbers are learned, apes will exhibit **spontaneous addition** w/o training to sum**
6. What are the examples discussed in lecture of how we can understand animal cognition?

**Greedy Giveaway Task**

Chimp 1 inevitably reaches for larger pile...

Large pile of M&Ms

Small pile of M&Ms

Chimp 1 must watch as Chimp 2 gets selected (larger) pile! Chimp 1 gets stuck with remaining pile.

But, if replace piles with associated numbers . . .

Chimp 1 will reach for smaller number! i.e. respond “rationally”, and gain larger reward.
Quiz time!

- No talking, signing, or communicating of any kind.
- Put *everything* away except a pen or pencil (make sure it’s a black pen and press hard with a pencil)
- When you get your quiz:
  1. Write your name in the “Name” box
  2. Write and bubble in your PID
  3. Sign the Academic Integrity Agreement
  4. Bubble in *this* section (regardless of which you’re assigned to)
- Please have your student ID out when you turn in your quiz!
Write and circle in your PID

Write down your name here

UC SAN DIEGO – DEPARTMENT OF COGNITIVE SCIENCE

STUDENT PID NUMBER

Last NAME, First NAME

COURSE NUMBER

COGS 1

WINTER 2018

Dr. Mary ET Boyle

Quiz I

Oct 8 – Oct 12, 2018

Quiz VERSION

A B C D E F G H

Section you are taking this quiz:

Please Bubble only one!

[1] ○ Monday @ 3 Zoe
[2] ○ Monday @ 4 Lauren
[3] ○ Monday @ 5 Alexis
[4] ○ Monday @ 6 Kenny
[5] ○ Friday @ 9 Sandhya
[6] ○ Friday @ 10 Arturs
[7] ○ Friday @ 11 Subathra
[8] ○ Friday @ 12 Elizabeth

COGS 1: QUIZ I -Choose the best answer. Please bubble in your answers to the right →

ACADEMIC INTEGRITY

By taking this quiz, you agree that you will follow ALL UCSD ACADEMIC INTEGRITY policies. It is YOUR responsibility to know and understand all of the policies. Failure to follow all UCSD Academic Integrity policies could result in expulsion from UCSD.

Signature

Date

Your signature above certifies that you will follow and that you know that you will suffer the consequence for ANY academic integrity violation.

YOUR ANSWERS GO HERE

[A] [B] [C] [D] [E]

1 ○ ○ ○ ○ ○
2 ○ ○ ○ ○ ○
3 ○ ○ ○ ○ ○
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