

CSPB 3702 - Reckwerdt - Cognitive Science

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Started on Monday, 4 December 2023, 2:46 PM

State Finished

Completed on Monday, 4 December 2023, 2:53 PM

Time taken 7 mins 3 secs

Question 1

Correct

Marked out of 1.00

Which of the following actions does not map to a "Selfish Genes" perspective of evolution and survival?

Select one:

- ☐ a. Sounding an alarm to alert your extended family to danger.
- ☐ b. Staying together as a mating pair, working together to raise young.
- ☒ c. Raising an abandoned animal of a different species



Question 2

Correct

Marked out of 1.00

Babysitting for your niece or nephew is an example of what kind of "selfish genes" behavior?

Select one:

- ☐ a. Altruism
- ☒ b. Kin Selection
- ☐ c. Death
- ☐ d. Sex



Question **3**

Correct

Marked out of 1.00

When considering the "evolutionarily stable strategies" idea for the hawk and dove sets of strategies, what would happen to the ratio of hawks and doves if the negative impact of a fight were increased (e.g. the hawk-hawk fight costs 75 instead of the 50 it does in lecture)?

Select one:

- ☐ a. The relative distribution will favor hawks more than before.
- ☒ b. The relative distribution will favor doves more than before. ✓
- ☐ c. The relative distribution will stay the same.

Question **4**

Partially correct

Marked out of 1.00

Which of the following might be a benefit from a self-handicapping behavior? Choose all that apply.

Select one or more:

- ☒ a. Dissuading a predator from pursuit ✓
- ☐ b. Increased likelihood to succeed at a feeding task
- ☐ c. Increased preference for sexual selection
- ☐ d. Increased social standing for success at a task

Question 5

Correct

Marked out of 1.00

When Richard Dawkins uses the term “selfish gene,” what is he referring to?

- ☐ a. Species as a whole focus on their immortality
- ☒ b. Our genes strive for survival in competition with other genes
- ☐ c. Lineage is the most important factor in game theory
- ☐ d. Gene Hackman is a very selfish man, but so are most animals



Question 6

Correct

Marked out of 1.00

What argument can follow the gene-centered view of evolution given in Dawkins' *The Selfish Gene*?

- ☒ a. The more closely related and genetically similar two individuals are, the more beneficial it is for them to act cooperatively
- ☐ b. All species are better off if they work cooperatively
- ☐ c. Genes are not a reliable explanation for cooperative behavior in families
- ☐ d. That “rugged individualism” is the most reliable strategy for survival



Question 7

Correct

Marked out of 1.00

What is the reason for altruistic behavior as described in the lecture?

- ☐ a. Altruistic behavior benefits the individual, not just the species
- ☐ b. So that species as a whole can more often use a dove strategy instead of a hawk strategy
- ☒ c. For genes to save the copy of themselves, even if it means sacrificing the carrier
- ☐ d. We have not yet determined the reason species show altruistic behavior



Question 8

Correct

Marked out of 1.00

Why would a bee-eater, the bird discussed in lecture, serve as a "helper" to one of its siblings?

- ☐ a. So that it can be prepared when it wants to have children of its own
- ☐ b. When they serve as a helper, they are better able to protect themselves, not just their kin
- ☒ c. So that their genes, though only a quarter in the children, are able to continue
- ☐ d. The bee-eater can still be taken care of by one of its siblings



Question 9

Correct

Marked out of 1.00

Are pure hawk and dove strategies evolutionary stable?

- ☐ a. Dove is an evolutionary stable strategy, but hawk is not.
- ☐ b. Both hawk and dove are evolutionary stable strategies.
- ☐ c. Hawk is an evolutionary stable strategy, but dove is not.
- ☒ d. Neither hawk nor dove is an evolutionary stable strategy.



Question 10

Incorrect

Marked out of 1.00

Which strategy can invade a bourgeois strategy?

- ☐ a. Bourgeois animals cannot be invaded by hawk or dove.
- ☐ b. Bourgeois animals can be invaded by dove, but can be invaded by hawk.
- ☐ c. Bourgeois animals can be invaded by hawk and dove.
- ☒ d. Bourgeois animals cannot be invaded by hawk, but can be invaded by dove.



Question 11

Correct

Marked out of 5.00

Consider the following “Hawk / Dove” outcomes table for resource competition. The resource is worth 40 points, a hawk-hawk fight is worth -60 points, and a dove-dove display is worth -10 points. Consequently, we get the expected values table below (shown for A's expected values).

	B Hawk	B Dove
A Hawk	-10	40
A Dove	0	10

In this scenario, what is the population distribution of hawks and doves for an evolutionarily stable strategy?

- ☐ a. Hawks: 67%, Doves: 33%
- ☒ b. Hawks: 75%, Doves: 25%
- ☐ c. Hawks: 25%, Doves: 75%
- ☐ d. Hawks: 50%, Doves: 50%



Question 12

Correct

Marked out of 5.00

With our hawk / dove expectations above, what are the expected values for the bourgeois strategy? Fill in the values in the table below.

	B Hawk	B Dove	B Bourgeois
A Hawk	-10	40	___
A Dove	0	10	___
A Bourgeois	__A__	__B__	__C__

☐ a. A = 5, B = -25, C = 15

☐ b. A = 20, B = 10, C = 15

☒ c. A = -5, B = 25, C = 20



☐ d. A = 25, B = 5, C = -10

Question 13

Correct

Marked out of 1.00

What can we learn about the empiricism vs rationalism debate from the Siamese twins?

☐ a. Siblings, with similar nature and nurture, are bound to be similar one another.

☒ b. Our inborn traits alone cannot determine who we are as people because things like personal experience and culture also play an important role in shaping us.



☐ c. Nurture has a greater impact on our being than nature

☐ d. Nature has a greater impact on our being than nurture

Question **14**

Correct

Marked out of 1.00

What aspect of cognitive science was largely absent in the first 25 years of study, that now is fundamental?

- ☒ a. Biology
- ☐ b. Animal cognition
- ☐ c. Machinery
- ☐ d. Human development

Question **15**

Correct

Marked out of 1.00

When looking at evolution from the teleological standpoint, what questions might we be asking?

Select one or more:

- ☒ a.
Could we attribute a positive effect of those limitations? ✓
- ☐ b.
What caused this thing to occur?
- ☒ c.
What purpose might this serve? ✓
- ☒ d.
What purpose might this have served a million years ago? ✓

Question 16

Correct

Marked out of 1.00

What are reasons why “pure” teleological reasoning is flawed?

Select one or more:

- ☒ a.
Some things simply happen by chance as a result of historical events ✓
- ☐ b.
We fear predators even if the risk of harm is low.
- ☒ c.
Sexual selection often leads to trade-offs in adaptivity ✓
- ☒ d.
Cultural influences can impact whether something is adaptive or not ✓

Question 17

Correct

Marked out of 1.00

How are genes and memes similar?

- ☐ a. They spread from person to person, regardless of lineage.
- ☐ b. They operate as complete opposites of one another.
- ☐ c. They are both fully determined by cultural influences.
- ☒ d. They have the same talent for self-replication. ✓