

Studyguide # 5: Cooperation (reciprocity, social brain, coalitions) and sexual conflict

General Guidance:

- The Haidt reading was on the syllabus for this section and is relevant here, but will be discussed later in the course so will not be on this quiz.
- Lectures are heavily represented in this studyguide because I devoted 3 lectures to a single chapter (9).
- All of chapter 9 except the material on friendship should be studied for the quiz. Also, the readings by Sigmund et al. and by Sapolsky.
- Most of the material in last Thursday's lecture is also addressed in Buss chapter 11, so you should read it. Because of short notice, however, any material in ch. 11 that was not discussed in lecture will not be on this quiz.

Reciprocity and collective action

- Chimpanzee politics involves coalitions; what do the chimp males get out of the alliance? (p 273-4)
- What is reciprocal altruism? What is the "free-rider" problem it poses?
- Game theory is used when the optimal strategy depends on what the opponent does. What are the conditions of the prisoner's dilemma game? (not the story, but the reason it is a dilemma).
- Why do evolutionary psychologists think that reciprocity was important in the EEA, when everyone lived as foragers in a world of foragers?
- Why does the "rational" solution to the one-shot prisoner's dilemma (PD) lead to a suboptimal outcome? How does having an iterated (repeated) game change things? What is "tit for tat" and why is it often successful (it is not always best strategy)? Turning a one-shot PD into an iterated PD can be a helpful way of solving problems.
- What is the short-term economically "rational" solution to the dictator game? What do people actually do in the ultimatum and dictator games? Spite (punishing at a cost to oneself) would seem to be maladaptive, yet the ultimatum game suggests that people do it.
- What do Americans (including members of our class) typically donate in an ultimatum game of "divide ten dollars"? How can you increase selfishness in the ultimatum and the dictator games (lecture)? What does the importance of anonymity imply about the importance of reputation?

- There are cross-cultural differences in how much people donate in these games. How typical are Americans? What factors affect generosity cross-culturally? (lecture, Sigmund et al)
- Why are we interested in gossip?
- What are the key features of a public goods game? As with the prisoner's dilemma, there are short-term advantages to defection, but if everyone cooperates they all do better. How do people behave in these games, and what factors increase cooperation?
- Tit for tat will punish cheaters in a 2-person game, but how do you get cooperation in larger coalitions? Punishment of free-riders is sometimes viewed as altruistic because the punisher bears the full cost of the punishment but everyone shares in the benefit. Do people engage in such punishment? Why? Does it work? (lecture and text)
- Speed of response affects generosity in experimental games. How? What does this suggest about our "social brain"? (lecture)
- Are we able to recognize prospective altruists (and likely cheaters before we are cheated)? How much interaction is needed (what do studies show)?

Coalitions and group bias

- Humans tend to favor their own group and discriminate against outsiders. How easy is it to get people to discriminate in this way? This may be the "black lining" in the adaptive silver cloud of reciprocity and cooperation. What factors enhance, and what factors minimize, inter-group hostility?
- Sosis studied religious communes and found that commune longevity was associated with. . . what? Why might this be? (lecture)
- Transcontinental travel is recent in evolutionary time, and some evolutionary psychologists have argued that inter-race contact was probably not very common until recently (e.g., they argue that it is an evolutionary novelty). How does Kurzban (lecture) explain racism, and how did he ameliorate it experimentally?
- The lecture slides on inter- and intra-ethnic trust and neighborhood heterogeneity were not discussed, so will not be on the quiz. However, I encourage you to take a look at them, the results are surprising.

Cooperation: the social brain

- Why do many evolutionary psychologists think we have a mind that is especially designed to solve social contract problems, and to detect cheaters and altruists? (review especially the Wason selection task in its different forms - text and lecture slides).
- One way we are able to cooperate without being taken advantage of is through our ability to "read minds". Four aspects of this were discussed in lecture:

1. intentionality detection: Even young children distinguish animate objects (that move of their own volition) from inanimate ones. We seem predisposed to the former, and to attribute causation to such agents. What did the exercises on intentionality biases in fun and games indicate about this? Why might it be adaptive to have a bias in favor of assuming intentionality?
 2. gaze monitoring (“seeing leads to knowing” - see lecture slides)
 3. shared attention (directing attention of others by pointing, etc.).
 4. Theory of mind. What does it mean to have a theory of mind? How do researchers assess it? (be able to give an example of a “false belief” test, such as the crayon box example in the film *The Social Brain*). When are people able to pass such tests?
- What are the features of autism that suggest “mindblindness” (in the sense discussed above)?
 - Many social emotions (guilt, shame, righteous indignation) lead people to act in ways that seem costly. How can this be explained (lecture on arguments by Trivers and Frank)? Some emotional expressions, like honest smiles, are hard to fake. What is the difference between honest and posed smiles, and what do honest smiles signal?
 - The film *The Social Brain* showed a lot of people with neurological problems: prosopagnosia, autism, Williams syndrome, frontal-lobe damage (the man shown the disturbing photos and the card game). What are the problems, and what is their relevance (collectively) to this topic in evolutionary psychology?
 - Do toddlers understand when someone needs help? Do they help spontaneously, or do they need a reward or encouragement? Is the same true for chimpanzees? (The answers are in the Werneken and Povinelli clips on the “fun and games” section of the webpage. Note that there is variation among individuals, obviously – and we don’t know what was left on their cutting room floor.)

Sexual conflict

- What is sexually antagonistic selection? What do duck genitalia tell us about sexually antagonistic co-evolution?
- Sperm competition in fruitflies involves toxic (to other sperm) semen. It’s also not so good for the females. When Bill Rice prevented the females from evolving and let male-male competition evolve, what was the result? What happened when he forced the male fruitflies to be monogamous? Why does this suggest an evolutionary arms race between males and females in this species? (lecture and Sapolsky)
- What is genomic imprinting? What happens to the offspring when the paternally imprinted gene is knocked out? Ditto the maternally imprinted gene? Why does this suggest an evolutionary arms race in our species? (lecture and Sapolsky)
- The sexual strategies that are optimal for men and women often interfere with each other. What are the resulting conflicts about?

- Buss predicted that men would be more jealous about sexual infidelity while women would be more jealous about emotional infidelity. Why? What do the data show?
- Daly and Wilson (discussed in lecture) argue that sexual jealousy underlies most spousal homicides. This is a difficult claim to make, given the way police attributions of motive are recorded. Review their evidence. At what point in a relationship are women at greatest risk of being killed?
- Daly and Wilson give an evolutionary interpretation of spousal homicide. Do they think, therefore, that spousal homicide is adaptive? If not, what are they arguing?
- Men and women sometimes interpret the same friendly interaction differently. How, and what is the evidence? Why might such a bias be adaptive for men?
- Is rape more common among men who have trouble getting willing mates?