

Studyguide # 5: Parenting, Kinship, and Cooperation

Parenting - Hrdy (2 articles) and lecture

- *Parenting tradeoffs in non-human species*: Hrdy has argued that maternal care in humans is not automatic, because a mother must make choices in her allocation of investment. Although people often point to non-human species as giving automatic and unconditional mother love (sometimes arguing that people should emulate their example), Hrdy disputes this in the article “natural born mothers,” arguing that infanticide, abortion, and cannibalism are very natural indeed. How do mother mammals cope with the dilemmas of food shortages, social exploitation, and infanticidal males?
- Infanticide and infant abandonment are not rare in human history. Review the examples, including those from 18th and 19th century Europe. Why should mothers ever do this, and under what circumstances is it more likely? Be able to give several circumstances that make infanticide and child abuse more likely (from lecture and text).
- Hrdy points out that human development differs from that of other primates in that babies mature slowly and reach independence late (marmosets and tamarins are most similar in this regard). In consequence, moms need help and we have therefore evolved as cooperative breeders. Review the argument (also, alloparents lecture).
- Help sometimes comes from dads, sibs, grandmothers, and others; why and under what circumstances would these “alloparents” be likely to help? Mother’s mother enhances reproductive success (see evidence in lecture) but she may not be around.
- Explain “partible paternity” as practiced by certain South American groups (discussed in lecture, but also in Hrdy). Does it make adaptive sense, and, if so, for whom?
- Hrdy points out that babies try to get investment, but if they don’t – if their world is not full of nurturing people – they may learn they can’t count on others, and start to act accordingly. Things to think about: (a) Is this an adaptation or pathology? (b) the social implications of poor parenting reach far beyond the family involved.

Parenting (chapter and lectures)

- Mothers in all societies provide more parental care than fathers. Why? Buss gives two reasons (196ff).
- Under what circumstances might we expect fathers to invest more? less? The text mentions three things for parental care generally (199): (a) genetic relatedness, (b) the degree to which fathers can make a difference to the offspring (“offspring’s ability to convert parental care into reproductive success”, and (c) alternative uses for the resources. This last was discussed in class when we talked about mating, since male mating opportunities vary according to sex ratio, etc.). Even where males can help offspring, therefore, they may invest less if they have other mating opportunities.

- What is the evidence that genetic relatedness affects paternal investment? (text)
- What evidence indicates psychological adaptations for parenting that differ between men and women? (text)
- What is the evidence that offspring's ability to convert parental care into reproductive success affects parental investment? (text). Note that the evidence from anthropology that fathers affect child survival varies across cultures.
- Most people would regard infanticide as pathological, but it has been practiced in a wide variety of societies, including Europe in the late 17th and 18th centuries, and the patterning in its practice suggests evolved design, not pathology. Review the circumstances that make it more likely (from lecture and reading).
- NOTE: Remember the "naturalistic fallacy" (just because it is an evolved adaptation doesn't mean it's good for you, or others).
- Cross-cultural data on infanticide show what three conditions make it more likely? (these also apply to parental disinvestment generally). What is the evolutionary rationale for this? (lecture; also text)
- Are young children equally at risk from natural and step-parents? What do Daly and Wilson's data show? Do they think child abuse is an adaptation? (no). What do they think?
- Review the evidence that men also invest more in their own genetic vs step children: Flinn's data on Trinidad fathers (slide), alloparents lecture, also text. Cross-cultural data also support this.
- Poor infant quality is one reason given for infanticide. However, one might also argue that it would be adaptive to give poor-quality infants more investment rather than less, in order to compensate for their poor condition. Which argument (compensation or cut your losses) explains the response of poor Brazilian mothers studied by Scheper-Hughes to frail infants? (lecture). The study by Mann on infant twins, and by Beaulieu and Bugental(text 210)? The study by Bereczkei (lecture)?
- Is the risk of infanticide higher for young mothers or older mothers? Why?
- What does the Trivers-Willard hypothesis predict, and why? How do the Mukogodo data support this? (lecture)
- There is a tradeoff between parenting and mating effort, and theory suggests that men and women will differ in how they allocate these. Are the expectations found cross-culturally (215-217) or are there some societies where men allocate as much to parenting as women do (or more)?
- Aka Pygmy fathers do a great deal of direct infant care (216). What does it consist of? How does it compare with the care of Aka mothers? Is this typical of other societies? This isn't the only measure of investment, of course – 'provisioning' also counts for a lot – but in most traditional societies women are important in that arena also.

- Do high-status Aka men spend more or less time with infants than low-status men?
- Cross-cultural data suggests that the effect of having a living maternal grandmother differs from the effect of having a living paternal grandmother. What is the difference, and why? (lecture)
- Which grandparents invest more in offspring, and why? (lecture on alloparents, and text kinship chapter). Do the arguments extend to aunts and uncles (lecture) and to cousins (text 244-5)?
- Teen pregnancy is not just a matter of ignorance and accidents. What is the evidence? Under what circumstances does it make adaptive sense for girls to want to become mothers when they are still teenagers? (lecture; see the slides if you missed the lecture)
- Why is parent-offspring conflict inevitable? What forms does it take? (text and lecture) Is weaning conflict found in hunter-gatherer societies (kinship lecture)?
- Maternal-fetal conflict is an example of parent-offspring conflict. What evidence indicates an “arms race” between mother and fetus, rather than cooperation? (the text talks about blood pressure regulation, lecture talked about insulin regulation).?
- How is the grief parents experience at the death of a child affected by the child’s age, and why is this consistent with evolutionary thinking? (kinship lecture)

Kinship

- Explain kin selection and be able to write and explain Hamilton’s “rule”.
- One manifestation of sibling competition is that first-borns, later-borns, and middle-born children must adapt to different familial niches. What are the implications of this? (text discusses Sulloway’s arguments, p. 228).
- Which sex gives more alarm calls in Belding’s Ground squirrels, and why? Why do we think they call because of inclusive fitness benefits rather than just parental investment? (231)
- Florida scrub jays sometimes stay home to care for their sibs rather than breed, if available breeding territories are scarce. Is this consistent with arguments from kin selection? Why? (lecture)
- Hamilton’s rule would lead us to expect greater cooperation among biological kin, especially close kin, and greater violence between non-kin. Yet some anthropologists dispute this. They have argued that human kinship systems are “classificatory” (for example, “uncle” lumps several different biological kin) and that it is these classifications, not biological relatedness, that matters. Who is right, and what is the evidence? (lecture, text 230)
- Are patterns of helping among human kin and others consistent with the expectations of Hamilton’s rule? Some of the best evidence in support of inclusive fitness theory comes from (a) comparisons helping behavior to full and half sibs (because many other things are controlled) and (b) bequests. Review the evidence in text and lecture.

- Grandparents are discussed in the kinship chapter of Buss – see question in the section above about which grandparents invest more in offspring.
- Many homicides occur at home, and since we live chiefly with relatives this has caused some to question the importance of kin selection (we should be nice to kin, not kill them). Why is this not correct? Review the evidence on homicide risk to kin and non-kin that Daly and Wilson use to support the claim (lecture).

Reciprocity and collective action (Sigmund et al, lecture, text)

- Be able to explain the following "games" and how people usually behave in them: prisoner's dilemma (one shot and repeated), ultimatum, dictator, and public goods.
- Chimpanzee politics involves coalitions; what do the chimp males get out of the alliance? (text)
- What is reciprocal altruism? What is the "free-rider" problem it poses?
- Why do evolutionary psychologists think that reciprocity was important in the EEA, when everyone lived as foragers in a world of foragers? (lecture)
- 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? How does having a "theory of mind" affect the way people behave in the ultimatum game? Spite (punishing at a cost to oneself) would seem to be maladaptive, yet the ultimatum game suggests that people do it.
- How can you increase selfishness in the ultimatum and dictator games? What does the importance of anonymity imply about the importance of reputation? (lecture)
- 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)
Some cultures were overly-generous in the ultimatum game; why might this be, and why might we be reluctant to accept large favors? What does this suggest about another reason for generosity?
- Why are we interested in gossip?
- It has been suggested that social emotions such as guilt, shame, and righteous indignation are motivators for successful reciprocity. Explain.
- 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? What increases cooperation?

- Speed of response affects generosity in public goods games. How? What does this suggest about our “social brain”? (lecture)
- Public goods games are designed to mimic collective action problems, such as over-exploitation of resources (as discussed by Ridley and Lowe). Do you think the experimental games shed light on how to address these issues in the real world?
- 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. (referred to as the “second order collective action problem”). As Sigmund et al. point out, people punish defectors even when they don’t gain a benefit, just because “revenge is sweet.” Is there a neurological basis for this? (text).
- The text gives two explanations for why people would be willing to punish, even though everyone in the group benefits. What are they? (p 279-80). Note also that while victims are willing to punish transgressors, there is disagreement about whether observers are willing to do that (altruistic punishment, or third-party punishment).
- What is the evidence relating altruistic punishment and reputation? (text 280).

Ridley and Low: Can selfishness save the environment?

- Do they agree that the route to solving collective action problems lies with better education? How about attempts to change values so to better support sustainability? What do they think instead?
- What is the “tragedy of the commons” and how is it similar to the prisoner’s dilemma? Why has privatization been proposed as a solution? Would a private owner necessarily conserve the resource? (see their discussion of Colin Clark).
- There are cases where commonly-held resources are managed sustainably. How does it work in Valencia?
- Do you think “tit for tat” can be scaled up to deal with global problems like limiting atmospheric carbon?

Mindreading and the social brain

- Are we able to recognize prospective altruists (and likely cheaters before we are cheated)? How much interaction is needed (what do studies show)? (lecture and text)
- 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 - lecture and text 264))
- The literature on whether or not people remember the face of cheaters better than non-cheaters is conflicting (review, 267).

- We will discuss costly signalling later, but review the text discussion of it in the context of showing off that you are an altruist (p 269-70)
- 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”)
 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? 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 each of these, and what is their relevance to the theme that our brains are specialized for social reasoning?