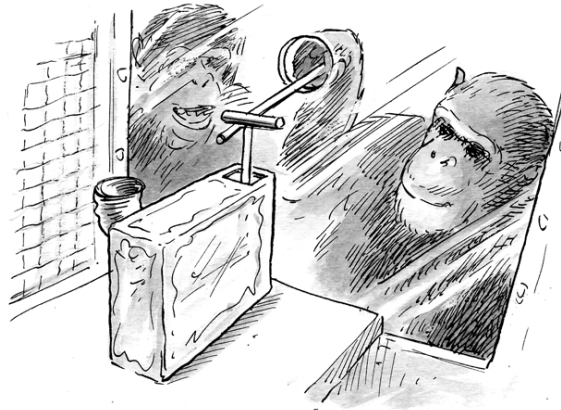


Short Paper 2: The Evolution of Social Cognition



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Assignment: As you've discovered from your readings and our discussions, a great deal of debate exists not only about how to measure cognitive abilities in other primates, but also about how these abilities evolve. In the 1800's Darwin proposed the notion of evolutionary continuity, which posits that traits should be similar in species with shared ancestry. Thus, humans and monkeys should have similar cognitive abilities because of our shared evolutionary history. However, many authors argue that cognition evolves in response to an animal's particular social and environmental conditions (adapted cognition), so cognitive abilities may be very different in closely related species. For example, vervet monkeys (*Cercopithecus aethiops*) may have evolved cognitive skills that enable them to understand and behave appropriately within a strict dominance hierarchy (Seyfarth & Cheney 2002), but these skills may not be present in another primate who does not have to navigate the same social landscape. **In this assignment, you must select a cognitive ability associated with 'social cognition' in primates (e.g., self-awareness, joint attention, perspective taking, deception), and develop an argument for how this ability could have evolved in monkeys, apes, or humans within the framework of the theory of adapted cognition laid out in Hare & Wrangham (2002).** In order to make your case convincing, you will need to bring in empirical evidence to demonstrate the presence of this ability in the primate you choose to discuss and explain how specific selective pressures may have shaped the evolution of that cognitive ability.

Writing Objectives: This assignment will enable you to think more deeply about not only *how* primates differ in terms of their social intelligence, but also *why* these abilities may have evolved differently across the primate order. **In order to write a successful paper, you must engage with the theoretical concepts as well as the research of various scholars and use field and laboratory research to support your claims.** You must also make wise choices about how you organize the elements of your argument, be selective about the evidence you use, and make sure you provide detailed (but concise!) information about the research so that the reader understands what the studies show and how they support the evolutionary scenario you are presenting.

Grading: This paper is worth 15% of your course grade. A successful paper will have a **clearly articulated thesis (central claim) and make good use of empirical evidence to bolster your main points, provide appropriate contextual information about the primate and the cognitive ability you select as well as the adapted cognition theory, and show an appreciate of the complexities of the topic.** Please refer to the *Developing a Central Claim*, *Audience*, and *Introductions* handouts for useful advice on crafting a strong thesis and introductory paragraph, and tailoring your writing style

to the appropriate audience. **Your grade will also depend on your adherence to the formatting guidelines laid out in The Fine Print section of this prompt.**

Due Date: This assignment must be handed to me at the beginning of class on **Thursday, September 20th**. Papers turned in after the start of class will automatically be considered one day late and are subject to the late policy outlined in the syllabus.

The Fine Print: This paper should be **3-4 double-spaced pages** with 1-inch margins using a 12-point font comparable to Times New Roman. Please put your name, course section number, date, and the title of your paper at the top of the first page and number all pages. **Please paperclip your papers.** Printing double-sided is okay! Please use proper **APA-style** citations within your paper and include a **Works Cited page** at the end. If you have questions about APA-style citations or Works Cited pages, please refer to the **APA Style Guidelines** (the full guide and/or the quick reference guide) posted in the Course Readings folder and linked to the syllabus on Sakai.

Sources: You must use **at least 5** of the sources listed below and cite them properly within your paper:

- Bolhuis, J.J., & Wynne, C.L. (2009). Can evolution explain how minds work? *Nature* 458: 832-833.
- Crist, E. (2002). The inner life of earthworms: Darwin's argument and its implications. In M. Beckoff, C. Allen, and G. Burghardt (Eds.), *The cognitive animal: empirical and theoretical perspectives on animal cognition*. (pp. 3-8). Cambridge, MA: MIT Press.
- Darwin, C. (1896). *The expression of the emotions in man and animals*. (Volume 10). New York, NY: D. Appleton & Co. p. 12.
- Hare, B. & Wrangham, R. (2002). Integrating two evolutionary models for the study of social cognition. In M. Beckoff, C. Allen, and G. Burghardt (Eds.), *The cognitive animal: empirical and theoretical perspectives on animal cognition*. (pp. 363-369). Cambridge, MA: MIT Press.
- Lemonick, M.D. (2007, September 6). Babies or chimps: who's smarter? *TIME Magazine*. Retrieved from <http://www.time.com/time/health/article/0,8599,1659611,00.html>
- Povinelli, D.J. (2004). Behind the ape's appearance: escaping anthropocentrism in the study of other minds. *Daedalus* (133)1: 29-41.
- Rubin, J. (Writer, Producer, Director). (2011, July 6). *Ape Genius* [PBS NOVA television series]. Retrieved from <http://www.pbs.org/wgbh/nova/nature/ape-genius.html>
- Seyfarth, R. & Cheney, D. (2002). The structure of social knowledge in monkeys. In M. Beckoff, C. Allen, and G. Burghardt (Eds.), *The cognitive animal: empirical and theoretical perspectives on animal cognition*. (pp. 379-384). Cambridge, MA: MIT Press.
- Tomasello, M. & Herrmann, E. (2010). Ape and human cognition: what's the difference? *Current Directions in Psychological Science* 19(1): 3-8.
- Whiten, A. (2002). From the field to the laboratory and back again: culture and "social mind" in primates. In M. Beckoff, C. Allen, and G. Burghardt (Eds.), *The cognitive animal: empirical and theoretical perspectives on animal cognition*. (pp. 385-392). Cambridge, MA: MIT Press.

Remember to take time to proofread your work, paying special attention to spelling, grammar, and punctuation.