→ Mark your confusion.
→ Purposefully annotate the article (1-2 mature, thoughtful responses per page to what the author is saying)
→ Write a 250+ word response to the article.
(If you are a teacher or student who would like to modify this Google Doc, go to File > Make a Copy. I cannot and do not respond to Share requests -- my apologies!)

Gratitude: Uniquely Human or Shared with Animals?

By Jason G. Goldman, 12-01-10

If we wish to make an argument that some animals possess at least some sort of proto-gratitude, or the cognitive building blocks required for them to feel and express gratitude, we first have to decide what gratitude really means.

"Two chimps had been shut out of their shelter by mistake during a cold rain storm. They were standing dejected, water streaming down their shivering bodies, when Professor Köhler chanced to pass." Upon opening the door for the two chimps, Dr. James Leuba recounts, "instead of scampering in without more ado, as many a child would have done, each of them delayed entering the warm shelter long enough to throw its arms around his benefactor in a frenzy of satisfaction."

"Chimpanzees," primatologist Frans de Waal points out, "do not normally hug their caretakers for no reason." It's a compelling image, isn't it? The idea that at least some animals might be capable of feeling and communicating gratitude? If we wish to make an argument that some animals possess at least some sort of proto-gratitude, or the cognitive building blocks required for them to feel and express gratitude, we first have to decide what gratitude really means.

Impala are large antelopes native to Africa that groom each other. Grooming exchanges among African impala are usually unsolicited: one individual grooms the neck of a second individual, and then the second individual returns the favor, and grooms the first individual for an equivalent amount of time. Hart and Hart suggested that this mutual grooming behavior serves to remove ticks from parts of the body that an individual can't reach itself.

Vampire bats, as you might expect, survive only on blood, and most feed at least once every three days. And while adult vampire bats regularly miss meals, they need not worry, as other individuals will regurgitate blood to feed them.

While the impala and vampire bat examples are interesting, they can be explained by much a simpler mechanism than gratitude: symmetry-based reciprocity. That is, "if members of a species preferentially direct favors to close associates, the distribution of favors will automatically be reciprocal due to the symmetrical nature of association." In other words, the mutual back-scratching of the impala and blood-vomiting of the vampire bat could simply be correlational: individuals who hang out together will tend to engage in reciprocal interactions, but only because they tend to hang out together. These sorts of interactions do not require any sophisticated mental computation for directing repayment only at certain individuals or for keeping track of services received and rendered over time.

Perhaps it seems like your adopted dog or cat pays special attention to you, perhaps in gratitude for his or her rescue? Bonnie and de Waal write: "Even though we have all heard of (and the authors have personal experience with) pets adopted from a miserable stray existence into the comfort of modern homes, it is possible to tell if their greater-than-average appreciation (e.g. tail wagging, purring) of our care and food has anything to do with gratitude. The simpler alternative is that, after prolonged deprivation, there is a contrast effect that lasts a lifetime, making these animals show greater-than-average expressions of pleasure at receiving a full bowl of food. In humans, no one would confuse pleasure with gratitude. On the other hand, if the pleasure is expressed in a personal manner, aimed specifically at the individual who delivers it, are not we getting closer to gratitude?"

De Waal observed the common exchange of food for grooming among chimpanzees in order to determine if the trade of food for grooming is simply the result of proximity (as in the impala or vampire bat), or good feelings (as in the adopted domestic dog), or if it is somehow more computationally intensive, such as requiring the ability to direct reciprocity at specific individuals.

Bundles of leaves and branches were placed into the chimpanzee enclosures after the researchers had identified the patterns of grooming on a specific day. The adult chimps were more likely to share food with

individuals who had groomed them earlier that same day. Since the chimps shared their food only with their former grooming partners instead of with just anyone, de Waal reasoned, chimps must keep track of favors given and received, and they must be able to distinguish among different social partners. This form of reciprocity, then, is driven by more than just a good mood.

In another experiment, primatologists Seyfarth and Cheney played recordings of vervet monkey calls and measured the reaction of recently groomed individuals. The type of vocalization that they used was a call used to threaten enemies and to solicit the support of friends, in anticipation of a conflict. When the recording was of a previous grooming partner, vervet monkeys paid more attention than when the recordings were of other individuals.

Taken together, these studies indicate that some non-human primates have the long-term memory abilities required for gratitude, as well as the ability to distinguish among individuals. These abilities may be necessary for gratitude, but are they sufficient?

But if gratitude is, as Bonnie and de Waal write, the "glue and lubricant" of human society, then there is one more prerequisite for gratitude: obligation. That is, upon receiving a favor, one must not only desire to repay it, but must be obligated to do so. To not do so would represent a social transgression, worthy of punishment. Indeed, a study of humans by Fehr and Gachter indicated that without the possibility for punishment, the cycle of cooperation breaks down. They interpret this finding as evidence that "altruistic punishment is a key force in the establishment of human cooperation, [and that their] study indicates that there is more at work in sustaining human cooperation" than is offered by mechanisms like kin selection or reciprocal altruism. It is possible, Bonnie and de Waal argue, that "gratitude appears to provide [for cooperation] support from one end, whereas punishment and retribution drive it from the other."

Do animals have gratitude? I think its still an open question. But it is clear that some animals, such as chimpanzees and other non-human primates, seem to possess at least a more basic form of proto-gratitude, based on their ability to keep track of favors given to and received from different individuals.

Response option(s):

- What are the similarities and differences in gratitude as expressed in humans and "gratitude" as observed in these animal species?
- What is the author's general argument? Is it on one side or the other, or is it nuanced? How does he support it?
- *Anthropomorphism* is the attribution of human characteristics to nonhuman things-- in this case, animals. Why do you think humans are so intrigued by these accounts and studies of animals seemingly behaving like us?
- Pick any passage and respond to it.