

# 'Peter Pan' Apes Never Seem To Learn Selfishness

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A juvenile bonobo in the Democratic Republic of Congo. Image: Vanessa Woods

(PhysOrg.com) -- Sharing is a behavior on which day care workers and kindergarten teachers tend to offer young humans a lot of coaching. But for our ape cousins the bonobos, sharing just comes naturally.

In fact, according to a pair of papers in the latest [Current Biology](#), it looks like bonobos never seem to learn how not to share. Chimpanzees, by contrast, are notorious for hogging food to themselves, by [physical](#)

[aggression](#) if necessary. While chimps will share as youngsters, they grow out of it.

In several experiments to measure food-sharing and social inhibition among chimps and bonobos living in African sanctuaries, researchers from Duke and Harvard say these behavioral differences may be rooted in developmental patterns that portray something about the historical lifestyles of these two closely related apes.

When compared with chimps, bonobos seem to be living in "a sort of Peter Pan world," said Brian Hare, an assistant professor of [evolutionary anthropology](#) at Duke University, who participated in both studies. "They never grow up, and they share."

Hare and his mentor, Richard Wrangham, the Ruth Moore Professor of Anthropology at Harvard, think this kinder, gentler ape's behavior has been shaped by the relative abundance of their environment. Living south of the Congo River, where food is more plentiful, bonobos don't compete with gorillas for food as chimps have to, and they don't have to compete much with each other either.

In essence, they don't have to grow up, Hare said, and cognitive tests that the team performed on the captive animals seem to bear that out. Bonobos shared like juveniles even after they reached adulthood.

"It seems like some of these adult differences might actually derive from developmental differences," said Harvard graduate student Victoria Wobber, who is the lead author on one of the papers. "Evolution has been acting on the development of their cognition."

To measure sharing behavior, paired animals at the Tchimpounga Sanctuary in the Republic of the Congo were put into an enclosure with some food. Younger chimps were found to be quite similar to young

bonobos in their willingness to share food, but the chimps become less willing to share when they're older.

In a second set of sharing experiments, Hare and a colleague at the Lola ya Bonobo sanctuary near Kinshasa, Democratic Republic of Congo gave bonobos an opportunity to have all of a food pile to themselves while a fellow bonobo watched helplessly from behind a gate. Instead, the subjects universally preferred to open the gate and let their friends share. Their friends weren't even begging or carrying on. (See YouTube video: [www.youtube.com/watch?v=sRDc4SCaFLQ](http://www.youtube.com/watch?v=sRDc4SCaFLQ) )

"A chimp would never voluntarily do that," Hare said. "Chimps will do things to help one another, but the one thing they will not do is share food."

In a series of tests on how socially savvy the apes were about asking others for handouts, the chimps were quick studies, but the bonobos never quite got the hang of it. In chimp society, where hogging the food pile is a privilege of rank, younger animals have to learn which adults can be begged from and which cannot, Wobber said.

In one test of social skills, Wobber had two humans hold treats concealed in their hands, while a third human was empty-handed. The animals were encouraged to ask for a treat by touching the hands. The chimps quickly picked up on the pattern and didn't bother begging from the empty-handed person. The bonobos were less discriminating and tried the empty hand just as much as the full ones.

A second social experiment used two people, one with a treat and one without. After the apes had it figured out, the treats were moved to the other human. The [chimps](#) caught on to the new pattern much more quickly than the bonobos.

These experiments don't mean the [bonobos](#) are less smart, Wobber said. It's just that they're less attuned to the social inhibitions a chimp would need to successfully share food without being slapped on the head.

The findings fit into a larger picture that Hare and Wrangham have been building in which animals that have been domesticated, such as pet dogs and arctic foxes in a long-term experiment in Siberia, possess what could be considered juvenile physical traits and behaviors, even after they've reached sexual maturity. It's an example, they say, of selection acting against aggression. Their behaviors are more juvenile, and so too are their physical features.

**More information:** [www.cell.com/current-biology/abstract/S0960-9822%2809%2902141-1](http://www.cell.com/current-biology/abstract/S0960-9822%2809%2902141-1)

Provided by Duke University

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