

# Researchers shed light on trading behavior in animals -- and humans

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Humans, from ancient exchanges of food to modern day home mortgages, have bartered or traded to receive something that they couldn't achieve on their own. It's the basis of the economy, and it requires a leap of faith to believe that each party will receive a payoff in return for taking a risk.

When confidence breaks down, such as what happened during the recent collapse of the housing market, the economy slows.

The willingness to take risk is based at least in part on the reputation of trading partners and may be unique among humans. Our closest evolutionary relatives, chimpanzees, aren't very good at it, according to new research by scientists at Georgia State University's Language Research Center.

Georgia State's Sarah Brosnan, assistant professor of psychology, and research scientist Michael Beran conducted a study to see if chimpanzees spontaneously bartered foods among each other, using tokens which represented those foods. While results indicated that the animals were cognitively able to understand [trade](#), without enforcement from human experimenters, trade disappeared.

Chimpanzees are known to trade services, such as grooming for food, but the ability does not seem to extend to trading commodities.

Most of the trading of services seems to occur between partners who

interact a lot, and so are familiar with each others' behavior. The chimpanzees thus know whether the risk is likely to pay off, and most of the time, what's being traded is a relatively inexpensive commodity.

"If I spend five minutes grooming you, but you don't groom back, I haven't lost very much," Brosnan said. "But I might not want to trade a food that represents 10 or 20 percent of my calories for the day if I risk getting nothing in return. If you don't complete the trade, I've lost a lot."

One thing that may separate humans from chimpanzees is our third-party reinforcement mechanisms, Brosnan said. While chimpanzees rely on personal interactions, humans have mechanisms to foster confidence in trade, such as legal or social penalties for those who don't follow through. At the simplest level, a critical aspect to confidence in trade is reputation — reinforced through language, or gossip, which is something [chimpanzees](#) lack.

"I can say to someone, 'I gave this person a banana, and they were supposed to give me strawberries in return, but they didn't.' It's a powerful enforcer of reputation," Brosnan said.

The results of this research help scientists to better understand the roots of human economic behavior, Beran explained.

"We need to continue these kinds of tests with nonhuman animals to properly place human behavior in context with nonhuman behavior, and to understand the evolutionary roots of human economic decision making," he said.

Source: Georgia State University ([news](#) : [web](#))

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