

# Research reveals why humans like to share

September 10 2015

---



Research reveals why humans like to share

Human intelligence and knowledge depends on how we collect and use sharable resources, according to scientists from The University of Manchester.

Marco Smolla and Dr Susanne Shultz say in contrast with humans, the impact of competition means it is often costly for [animals](#) to learn from, or [share information](#) with others.

Using a computer simulation to mimic the behaviour of animals, the findings cast important new light on our understanding of human - and animal - behaviour.

The research is published in the *Proceedings of the Royal Society B* today.

Dr Shultz said: "Unique human traits include generosity, teaching and imitation. Our model suggests the key to both of these behaviours might lie in how we overcame the impact of competition, allowing us to [share](#) resources and information between us.

"It does not pay to share a blade of grass or a leaf from a tree. So animals that eat such foods do better by making their own decisions about what to eat rather than copying others.

"However, it does make sense to copy individuals using highly valuable foods even if the proceeds need to be shared.

"So, it is possible a key part of [human evolution](#) was learning to use sharable resource, for example by hunting large game."

Until now, scientists have struggled to explain why animals chose not to learn from those around them when it seems a much easier and less risky way to get information than learning by yourself.

And the team realised that up to now, researchers had excluded competition from their models.

However, competition is one of the major mechanisms that shape interactions between individuals and groups.

Their computer program simulated individual animals that search, collect, and compete for food.

The food was spread over patches that could change over time.

But the crucial difference to earlier models was that individuals had to share food items if they foraged in the same place.

The simple addition resulted in animals ignoring others when using evenly spread out resources, but learning from others when using rare, highly profitable ones.

Marco Smolla said: "What is surprising and previously unexplained is that non-human animals do not share or copy as much information as they might: this is almost as true for honey bees as it is for apes.

"But our study shows that [competition](#) for limited resources provides a compelling explanation.

"We found that when rewards are more evenly distributed in the environment or when our simulated patches quickly change the amount of [food items](#), individuals are less likely to share or copy information.

"There is simply not much use in following others when an individual could also just find food on its own and then doesn't have to compete with others."

**More information:** Competition for resources can explain patterns of social and individual learning in nature, Published 9 September 2015. [DOI: 10.1098/rspb.2015.1405](https://doi.org/10.1098/rspb.2015.1405)

Provided by University of Manchester

Citation: Research reveals why humans like to share (2015, September 10) retrieved 26 April 2024 from <https://phys.org/news/2015-09-reveals-humans.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.