

# I'll scratch yours if you scratch mine: How rats help each other out

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Rats are happy to help each other out, but only if another rat helps them out first, according to new research from the University of St Andrews and the University of Bern, Switzerland.

It is known that, despite their bad reputation, [rats](#) are surprisingly social.

But researchers at St Andrews and Bern have discovered they literally play quid pro quo when doing favors for one another.

The study, published in *Proceedings of the Royal Society*, is the first to show that animals use this trick to reduce the information load.

Dr. Manon Schweinfurth of the School of Psychology & Neuroscience at St Andrews, who led the research, said: "We asked what rats remember to reciprocate help with cooperative partners. Interestingly, they cooperated based on the last encounter with a partner instead of integrating several encounters.

"To check whether this might be due to a lack of memory capacity, we tested whether rats remember the outcome of encounters that had happened three days before. Cooperation was not diminished by the intermediate time interval. This shows that rats can remember what happened in the distant past, but only use the most recent encounters with a partner."

The researchers carried out a series of tests to establish that rats based decisions to reciprocate help on their last encounters instead of overall cooperation levels.

"We conclude that rats reciprocate help mainly based on most recent encounters instead of integrating [social experience](#) over longer timespans," said Dr. Schweinfurth.

"This is in line with how humans cooperate when it is difficult to remember the exact behavior of several interactions with partners. Given that this is the first study in which animals experienced a partner with conflicting [cooperation](#) experience, future studies are needed to understand how common this behavior is."

**More information:** Manon K. Schweinfurth et al. Rats play tit-for-tat instead of integrating social experience over multiple interactions, *Proceedings of the Royal Society B: Biological Sciences* (2020). [DOI: 10.1098/rspb.2019.2423](https://doi.org/10.1098/rspb.2019.2423)

Provided by University of St Andrews

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