

# Chimpanzees modify grooming behavior when near higher ranking members

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Credit: University of Kent

Research by Dr Nicholas Newton-Fisher from the University of Kent has found chimpanzees modify their interactions with other chimpanzees if higher ranking members of their community are nearby.

Dr Newton-Fisher, based in the School of Anthropology and Conservation (SAC) at Kent, and Stefano Kaburu, from the Department of Population Health and Reproduction, School of Veterinary Medicine, UC Davis, University of California and formerly of SAC, observed [grooming](#) interactions between members of a community of chimpanzees in the Budongo Forest Reserve in Western Uganda.

Grooming plays a key role in chimp interactions as it helps reduce stress and remove parasites. Within chimp groups lower ranking members often groom higher ranking members in the hope of receiving benefits such as protection, acceptance and the hope of receiving reciprocal grooming.

However, Dr Newton-Fisher's findings suggest that if another chimpanzee with a higher rank than the chimp being groomed is nearby, the grooming chimp will stop far sooner than if not.

It appears chimpanzees do this so they do not invest too much time grooming with one chimp if there is a risk the chimp being groomed will not reciprocate but instead look to groom the nearby higher-ranking chimp.

This echoes prior research by Dr Newton-Fisher which found that if a larger number of other chimpanzees are nearby then, regardless of rank, the grooming [chimp](#) would usually stop grooming sooner than if there were no other chimps nearby, or a small number.

However, this latest research focused on a group with a more defined social hierarchy, so it was the rank of the nearby chimps that was of more concern to those grooming, rather than the number of others nearby.

Taken together the findings challenge the 'relationship model' theory

that, like other primates, chimps engage in grooming on the basis of prior social interactions.

Instead it appears they are motivated by the circumstances in which they engage in the grooming and the possible benefits they will derive, giving weight to the more economic-orientated 'biological markets' theory of primate social interactions.

The research has been published in the latest edition of *Animal Behaviour* titled Grooming decisions under structural despotism: the impact of social rank and bystanders among wild male [chimpanzees](#).

**More information:** Nicholas E. Newton-Fisher et al. Grooming decisions under structural despotism: the impact of social rank and bystanders among wild male chimpanzees, *Animal Behaviour* (2017). [DOI: 10.1016/j.anbehav.2017.04.012](https://doi.org/10.1016/j.anbehav.2017.04.012)

Provided by University of Kent

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