

Birds help each other partly for selfish reasons

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Up to now, researchers have believed that birds stay at home and altruistically help raise younger siblings because this is the only way to pass on genes when you cannot breed yourself. But this idea is only

partially true. A new study from Lund University in Sweden shows that birds benefit from being helpful because it also increases their chances of reproducing in the future.

"The results show that being helpful not only benefits [family members](#), but also increases the chances they will inherit the breeding group, which is like winning the reproductive jackpot," says biologist Charlie Cornwallis.

Determining whether being altruistic early in life benefits an individual's future reproduction is extremely challenging in social vertebrates – most species out-live the field careers of biologists. There has also been little incentive to do so. Passing on [genes](#) indirectly by helping relatives explains altruism, so why look further?

To get around these difficulties, the researchers used natural variation in how much females and males help their parents across 20 different bird species. If [individuals](#) helped just to pass on genes indirectly, there shouldn't be any differences between the sexes in how much they help, so there must be something else going on.

By comparing which sex helps more with which sex is more likely to breed within its own group later in life, they found that the sex that was more likely to breed in its own group invested more in helping.

There may be different reasons why helpful birds increase their chances of becoming parents. One reason could be that, by helping, they become part of a larger social group than others, boosting their chances of breeding and receiving help to feed their own offspring. It may also involve some kind of policing by which individuals who do not help are thrown out of the group, whereas those that contribute can stay.

"Whatever the reason, it seems that individuals help more to promote

their own success, and not just the success of family members. Even though it seems that helping behaviour is very altruistic, self-interest also appears to be at play," says Charlie Cornwallis.

He and his colleagues believe the study will change the view of helpfulness in social groups. Measuring if individuals are more helpful when they share more genes is relatively easy and so this has dominated current explanations for helping, but our study highlights long-term personal benefits in [birds](#) are an important piece of the puzzle.

More information: Philip A. Downing et al. Sex differences in helping effort reveal the effect of future reproduction on cooperative behaviour in birds, *Proceedings of the Royal Society B: Biological Sciences* (2018). [DOI: 10.1098/rspb.2018.1164](https://doi.org/10.1098/rspb.2018.1164)

Provided by Lund University

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