



ScienceWatch-Lending a Helping Wing

“We found that African grey parrots voluntarily and spontaneously help familiar parrots to achieve a goal, without obvious immediate benefit to themselves.” – D. Brucks

Altruistic behavior is unusual in nature, and it goes against the idea that all organisms are competing with each other to survive and pass on their genes. In fact, seemingly selfless acts by

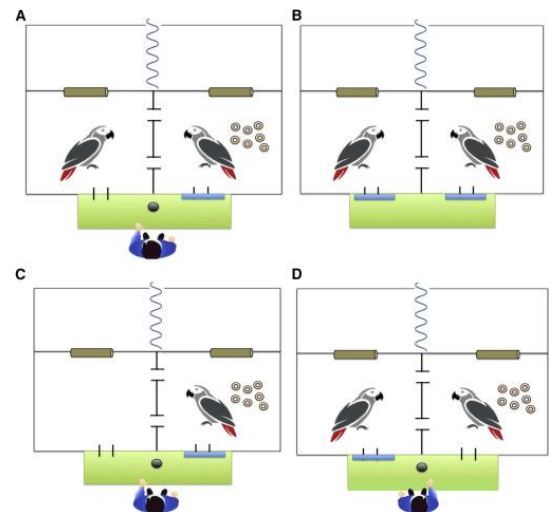
animals generally are viewed not as altruistic by biologists, but a consequence of “kin selection.” For example, social insects like ants and honeybees sacrifice themselves to preserve a colony consisting of their close relatives and so are really passing on their genes. A true altruist helps strangers as well as relatives.

We humans are both a cooperative and altruistic species. We think nothing of providing a helping hand to others. Certain great apes, orangutans and bonobos, also proactively help others under experimental conditions. Now a study published in the January 9, 2020 issue of *Current Biology* shows that this behavior extends to birds.

Désirée Brucks and August von Bayern, Max Planck Institute for Ornithology, Seewiesen, Germany, looked for altruistic behavior in unrelated African grey parrots (*Psittacus erithacus*) and compared that with what they saw in blue-headed macaws (*Primolius couloni*). Both parrot species would eagerly exchange a token with a human experimenter for a walnut treat. Would they be willing to give the token to a neighboring parrot, allowing it to obtain the treat instead of themselves?

Brucks and von Bayern tested 14 African grey parrots using four experimental conditions (see Figure). A pair of parrots was placed in neighboring plastic compartments. In condition “A” the “helper,” with tokens, could not exchange them for food because the exchange portal where the experimenter sat with food was blocked. However, it could pass the tokens through a side transfer portal to its partner, who could then give them to the experimenter in exchange for food. In “B” both exchange portals were blocked so neither bird could make the exchange. In “C” no partner was present, and in “D” only the helper could exchange tokens for food. Each pair was scored for helper behavior in one setup and their roles reversed before being tested in the next one.

The researchers found that the helper parrots readily transferred tokens to their partners under the test condition (A), but did so much less frequently under any of the control conditions (B, C and D) where helping was irrelevant.



During their first session almost all parrots in the test condition gave tokens to their partner who had none. “It surprised us that seven out of eight African grey parrots provided their partner with tokens spontaneously—in their very first trial—without having experienced the social setting of the task before and without knowing that they would be tested in the other role later on. Therefore the parrots provided help without gaining any immediate benefits and seemingly without expecting reciprocation in return,” said von Bayern.

By contrast, initial tests showed that blue-headed macaws transferred few tokens under any condition and the authors stopped studying them.

The best explanation for these results is that African grey parrots have an intrinsic motivation to help others. They were not engaged in some form of social play, but rather they deliberately helped when they knew the transfer of tokens could provide food for their partner. Stopping short of labelling it altruism, the researchers call this unusual intrinsic desire to help “proactive helping behavior.”

They point out that these highly intelligent and social birds live in a society that is fluid. Group compositions are constantly changing so any particular bird will have varying partners over time. A bird that is a good helper will gain a reputation as a good partner in future coalitions and will likely receive help when needed. By contrast, group composition remains constant for blue-headed macaws so individuals have little need to gain favor with others.

Are African grey parrots acting altruistically? Maybe they are, maybe they aren't.

Maybe they just want to be the most popular bird in the flock.

Saul Scheinbach