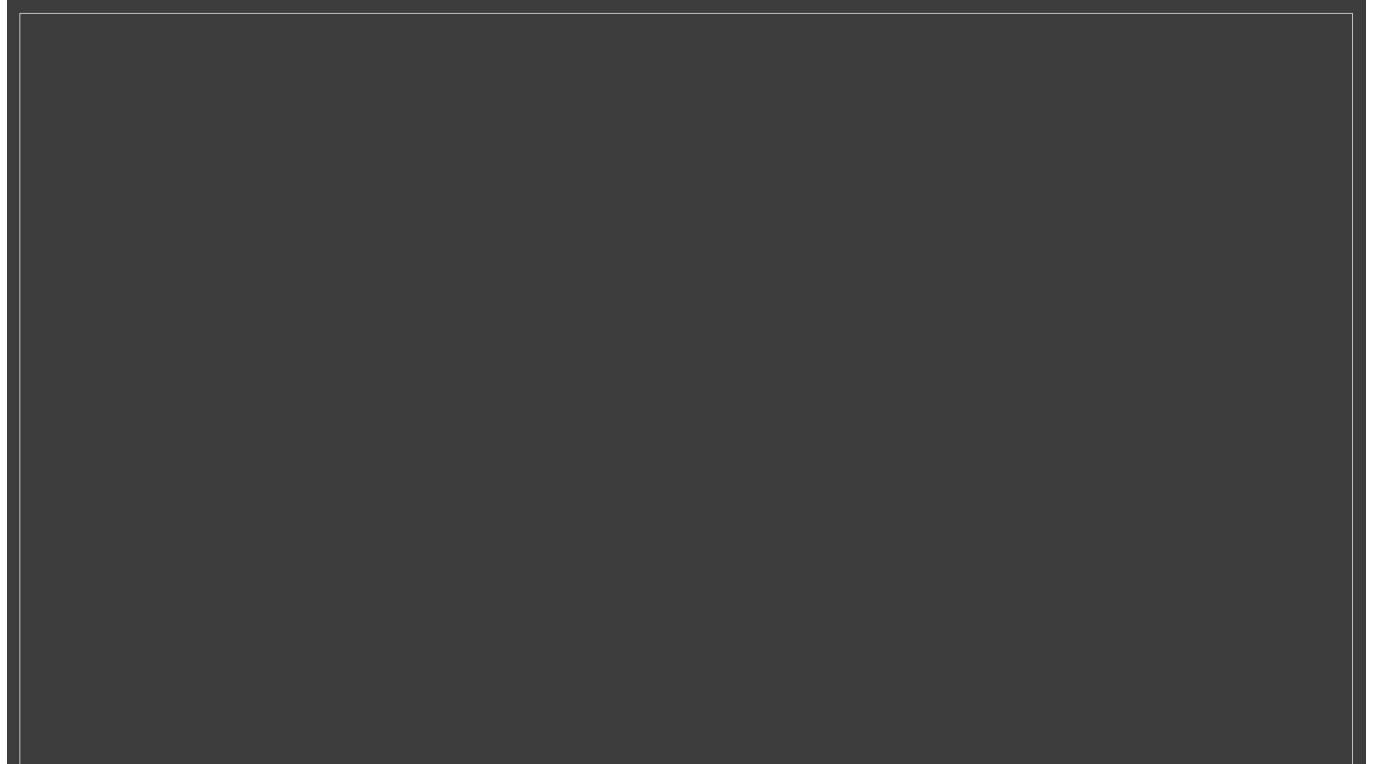


Shared decisions benefit next generations

Psychology experiment shows people can be nudged into cooperation.

Kerri Smith

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A controlled voting system can help a community manage resources sustainably so that future generations can still enjoy them, according to a study published today in *Nature*¹ and re-enacted in this *Nature Video*. Having empirical support for the long-held view that people are mostly cooperative could help to design better public policies aimed at preserving shared resources, such as clean air or fish stocks.

There's plenty of evidence to suggest that people are not purely self-interested. But although economists have long studied how people cooperate in groups, they have not looked specifically at whether individuals are happy to share resources with future generations, who cannot return the favour.

Evolutionary dynamicist Martin Nowak at Harvard University in Cambridge, Massachusetts, and his team wanted to test whether groups of people could sustain a resource over several 'generations' of players. They used the online platform Amazon Mechanical Turk to recruit volunteers. Each generation had five players and a pool of 100 units of a virtual resource to split among them or leave for future generations. If more than half was left, the resource was renewed to 100 for the next group.

Different teams played different versions of the game to see which strategy was best for preserving resources. In the first version of the game, the players were told to take as many units as they liked, to a maximum of 20. The pool quickly depleted, and rarely lasted to the next generation. In the second version, the five players voted on what each should take. Here the resource was sustainable — sometimes out to 14 generations. "In general, people are willing to do the right or fair thing even at some cost for themselves," says co-author David Rand at Yale University in New Haven, Connecticut.

But voting only works if the outcome is binding. In another version of the game, where three players voted and two took what they liked, only 30% of the resource pools were passed on to another generation, as opposed to 100% in the full voting condition. The authors think that a binding vote works best because the majority of cooperators can restrain the selfish minority, and everyone is reassured that they won't lose out.

The team hopes that discussions on how to reduce carbon emissions or prevent overfishing could benefit from their insight. But they recognize that real life is messier than a simple online game.

Nonetheless, empirical evidence that people's altruistic nature can be harnessed is a useful start. "The possibility is there, they just have to be used," says Nowak.

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References

1. Hauser, O. P., Rand, D. G., Peysakhovich, A. & Nowak, M. A. *Nature* <http://dx.doi.org/10.1038/nature13530> (2014).