

Selfless behaviour brings success for all

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An incentive to save energy could possibly be created if villages or local communities competed for the title of the most successful energy saver - and if it was possible to impose sanctions for wasting energy. © Fotolia

(PhysOrg.com) -- One possibility to spur people on to save energy: people punish selfishness more when their group is in competition with others

That which motivates a football team to committed [teamwork](#) could also benefit climate change. The members of a group act in a particularly selfless manner and for the benefit of the group, especially when their community is in competition with others. They are then more likely to accept disadvantages themselves in order to punish members of their group who behave selfishly. A research group headed by the economics researcher Lauri Sääksvuori at the Max Planck Institute of Economics in Jena has gained this insight by conducting investigations involving game

theory. This could result in a way of spurring people on to save energy.

A striker who is primarily interested in his own goal-scoring statistics is likely to cost his team a number of victories. But if he has to make a donation to the team kitty for each instance of reckless behaviour, he will probably let the striker picked by the trainer take the penalty kick, for example. It is possible that incentives can similarly be created to promote unselfish behaviour to protect the climate, for example. This is suggested by findings obtained by researchers at the Max Planck Institute of Economics in Jena.

In many cases, the success of a group depends on its members collaborating for the benefit of the community despite possible [selfish](#) interests. In a laboratory experiment involving game theory, the researchers investigated how well members of competing groups collaborate with each other and how they deal with individuals who pursue only their own self-interests. “We knew that groups whose members cooperate are more successful. But what are the circumstances that lead them to become active when egoistic behaviour is standing in the way of the group’s success?” is how the head of the study, Lauri Sääksvuori, explains the issue, which he investigated together with his colleagues Tapio Mappes and Mikael Puurtinen from the University of Jyväskylä in Finland.

The researchers formed groups whose members were able to distribute monies into their own or the group account in 30 rounds of play. The researchers doubled the amount on the group account after each round and divided it up among all the members – hoarding the money egoistically therefore benefitted only the individual, but had a negative effect on the success of all.

Consistent punishment for the group's success

The researchers varied the conditions, however: in some groups there was the option of sanctioning members who acted selfishly by subtracting points – the person imposing the punishment also had points subtracted, however. At the same time, some groups were in competition with each other, in which case the group with the most money on the joint account won when the game ended.

Behavioural science would now expect that rational individuals would not sanction, but wait to leave the cost of sanctioning to others. If all members act like this, the group obstructs itself and the success decreases. However, the researchers observed different behaviour: as soon as their group is in competition with others, the group members no longer wait to see whether somebody else imposes the sanction – they act fast and bear the costs themselves, for the benefit of the group as a whole.

“The competition between the groups therefore provides the incentive mechanism to change cultural attitudes. A football team plays more of a team game if the cup is at stake,” is how Lauri Sääksvuori categorises the results. The findings can be used in a variety of ways. Governments could create game-like incentives to save energy. A competition between villages or local communities for the title of the best energy saver could help to increase the social pressure on notorious energy wasters.

More information: Lauri Sääksvuori, Tapio Mappes und Mikael Puurtinen, Costly punishment prevails in intergroup conflict, *Proceedings of the Royal Society*, 30 March 2011; [doi: 10.1098/rspb.2011.0252](https://doi.org/10.1098/rspb.2011.0252)

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