

The benefits of punishment

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(PhysOrg.com) -- The stick rather than the carrot could be a better approach to encouraging slacker colleagues to pull their weight in the workplace, research published in the prestigious journal *Science* has revealed.

A paper by economists at The University of Nottingham entitled 'The Long-Run Benefits of Punishment' has shown that, in the long-term, using punishment as a means of coercing co-operation can prove to be a successful strategy.

Previous experiments into evolutionary models of altruistic co-operation and punishment have suggested that the costs of punishment outweigh the gains from cooperation, although the Nottingham researchers believed this could be because they were conducted over a short timeframe.

They aimed to find out whether over a longer time punishment could actually improve co-operation by organising a series of public goods experiments. For the experiment, groups of three people were given 20 tokens which they could keep or contribute to a public good. Each token kept was worth one money unit (MU) to the holder and each token invested was worth 0.5 MUs for each group member.

Individuals could choose to give up one MU in exchange for deducting three MUs from another group member's 'earnings' to punish them if they haven't invested enough for the greater good of the group.

The experiment was broken into two time periods in which the experiment was carried out either 10 or 50 times. These 'short' and 'long' games were carried out both with a punishment element and without.

Overall, co-operation was higher where players were able to punish each other. This is because people were willing to punish free riders, and this helped induce co-operative behaviour.

Differences in results from the short and long games also suggest that people behave differently, depending on whether they see themselves working in that group over the short term or the long term. While punishment was moderately harmful in the short games — where the experiment was carried out only 10 times — it was highly beneficial in the long games.

The authors point out that punishment is most effective when it doesn't have to be used, but some people are ready to use it when the need arises. Under a long horizon the mere possibility of social sanctions sufficed to steer people to pro-social behaviour, and therefore the sanctions had to be used rarely.

This suggests that having the ability to monitor the contribution of others is beneficial for people who work together frequently or over a long period of time, but not for those working together only occasionally.

Professor Martin Sefton said: “We would suggest that having the ability to monitor the contribution of others can be beneficial to those working together frequently. If team members can observe each other's efforts then they can impose sanctions on those who shirk as it may encourage them to pull their weight.

“We found there was definitely an emotional side to the punishment, targeted to the people who contribute little to the group. Even in the last

play of the game people were willing to punish 'free riders' even though there would be no future benefit. It suggests that they were punishing for an emotional reason and willing to incur a financial cost to get even or teach the person a lesson in some way.”

Provided by University of Nottingham

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