People get along 'when it suits'

Humans co-operate when it benefits them but look after themselves when there is less incentive, research on evolutionary biology has claimed.

The Edinburgh University study showed individuals worked in a team to outsmart opponents, but co-operated less when told it was one against one.

Researchers said it backed up behaviour seen in TV shows like The Apprentice, which involves teams and individuals.

The results are published in the latest edition of the journal Current Biology.

In a series of experiments participants were offered cash incentives to help others and found that when competition was between groups it led to reciprocal co-operation inside the teams.

Prisoner's Dilemma

When competition was within groups, the top players in each group won money, which led to selfish conflict within teams.

It was based on the Prisoner's Dilemma which invites players to mimic the behaviour of two criminals held separately, who can either "co-operate" - remain silent about a joint crime - or "defect" - incriminate the other.

The Edinburgh study measured levels of co-operation not just between opposing groups, but also within teams of players.

Researchers said the study helped to explain the puzzle of why some species carry out costly co-operative behaviour - which benefits other individuals - even though the Darwinian notion of survival of the fittest suggests they should look after their own interests.

Evolutionary processes

Dr Stuart West, of the University of Edinburgh's school of biological sciences, said: "The study shows that when individuals have to compete within groups, co-operation is 'selected against' - in other words, becomes less likely.

"This result can be illustrated by considering the extreme case of when two players compete only against each other, and 'fitness' - the ability to prosper - is relative only to one's opponent.

"As co-operation never leads to a higher relative pay-off, the
best option is always to defect."

Although shedding light on evolutionary processes, the results also showed that humans behaved no differently than bacteria and wasps would in the same situations.