

# SCIENTIFIC METHOD / SCIENCE & EXPLORATION

## Humans aren't as cooperative as we thought, but they make up for it via stupidity

Economic experiments that supposedly show cooperation may instead depict confusion.

by John Timmer - Jan 21, 2016 7:48pm GMT

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Lots of economic theory is based on the idea that humans will naturally seek to maximize their profits, but is that really the case? The field of behavioral economics involves a variety of attempts to find out. Things like game theory are used to create simplified economic systems in which people's behavior can be tracked.

A number of results indicate that some people do in fact behave as selfish, profit-maximizing individuals. But many others behave more altruistically, forging cooperative relationships in order to obtain greater benefits.

Or so it appeared. A group of Oxford researchers has now published a study in which they looked a bit more carefully at the people who were taking these tests, discovering that they'd be just as altruistic toward a computer. And that's probably because most of them simply don't understand the rules of the game they're playing.

The game in question is typical for this sort of work. In each round, participants can donate a value of their choice into a collective pool. The value in the pool is then multiplied and distributed to all the participants. Total profits are maximized if everyone donates the maximum value to the pool—an altruistic approach. But personal profits are maximized with a selfish approach, where someone donates nothing and counts on everyone else to pitch in.

Put a typical bunch of people together and there will usually be 25 percent who are selfish freeloaders and half who will be what are called "conditional cooperators"—they'll keep donating to the pool as long as their fellow players do.

Results like this were taken to indicate that, far from being profit maximizers, many people are more altruistic and willing to cooperate with their fellow humans. But the Oxford researchers decided to challenge this explanation, and they did so in a very thorough manner.

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To start with, cooperation is typically a two-way street where a pair of individuals choose to participate. You can't really cooperate with (or feel altruistic toward) a computer that's programmed to perform a specific set of actions. So the authors got some participants to play against a computer and made sure they had to click a notification that stated "I understand I am only playing against a computer" before they could proceed. Again, they ended up with half of the participants acting like cooperators and 20 percent who were selfish free-riders.

Switching those same people to human opponents showed that this didn't typically change their behavior. A person's behavior against a computer predicted how they'd act when put in a game against a person.

There are a number of potential explanations for this, but the authors decided to focus on the simplest: confusion. Suspecting that this pattern came about because people didn't fully understand the rules of the game, they crafted a series of questions designed to tease out whether people understood how to maximize their profits. Only 10 percent of the players admitted to being unsure, while over half got the answers wrong. The ones who got the answers right, however, had a tendency to be the uncooperative freeloaders. (In total, 83 percent of the cooperators flunked, while only 33 percent of the selfish players did.)

These results suggested that more people would be acting as selfish freeloaders if they actually understood that this could maximize their profits. Still, there are other possible explanations—for example, the players could be worried about being judged as selfish by the researchers. To account for this, the Oxford team came up with an incredibly clever solution: they asked them.

Half of the players happily stated that they were most interested in maximizing their own profits. Nearly half of the cooperators admitted they were motivated by self-interest.

So, the authors next came to the obvious conclusion: people aren't that interested in cooperating in these games. They are seeking to maximize their profits; it's just that many don't actually understand how to do so.

It's important to note the number of participants in this study is a bit small, and all of them presumably came from the same geographic location as the researchers. There are undoubtedly cultural influences on cooperation, and it would be good to expand the work to a larger number of participants.

But the study still raises an important caution. If we're attempting to understand a person's mental processes based on their behavior, it's rather important to ensure their behavior reflects their intentions.

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