

New Scientist

Fair play: Monkeys share our sense of injustice

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HOW often have you seen rich people take to the streets, shouting that they're earning too much? No, I thought not. Protesters are typically blue-collar workers yelling that the minimum wage has to go up, or that their jobs shouldn't go overseas. Lately, however, we have been hearing a new chorus, exclaiming that none of those fat cats on Wall Street or the City should be compensated for bad behaviour. No golden parachutes for those greedy bloodsuckers!

Concern about fairness is always asymmetrical (stronger in the poor than the rich), and the underlying emotions aren't half as lofty as the ideal itself. It is true to say that our sense of fairness seldom transcends self-interest, that it is seldom concerned with something larger than ourselves. Look at how it starts in life. Children react to the slightest discrepancy in the size of their slice of pizza compared to their sibling's. Their shouts of "That's not fair!" never transcend their own desires.

We're all for fair play so long as it helps us. There's even a biblical parable about this, in which the owner of a vineyard rounded up labourers at different times of the day. Early in the morning, he went out to find labourers, offering each 1 denarius. But he offered the same to those hired later in the day. The workers hired first thing in the morning expected to get more since they had worked through the heat of the day, yet the owner didn't feel he owed them any more than he had originally promised.

That this sense of unfairness may turn out to be quite ancient in evolutionary terms as well became clear when graduate student Sarah Brosnan and I discovered it in monkeys. While testing pairs of capuchin monkeys, we noticed how much they disliked seeing their partner get a better deal. At first, this was just an impression based on their refusal to participate in our tests. But then we realised that economists had given these reactions the fancy label of "inequity aversion," which they had turned into a topic of academic debate. This debate revolved entirely around human behaviour, but what if monkeys showed the same aversion?

We would offer a pebble to one of the pair and then hold out a hand so that the monkey could give it back in exchange for a cucumber slice. Alternating between them, both monkeys would happily barter 25 times in a row. The atmosphere turned sour, however, as soon as we introduced inequity. One monkey would still receive cucumber, while its partner now enjoyed grapes, a favourite food with monkeys. While that monkey had no problem, the one still working for cucumber would lose interest. Worse, seeing its partner with juicy grapes, this monkey would get agitated, hurl the pebbles out of the test chamber, sometimes even those measly cucumber slices. A food normally devoured with gusto had become distasteful.

Discarding perfectly fine food simply because someone else is getting something better resembles the way we reject an unfair share of money or grumble about an agreed-upon rate of pay. Where do these reactions come from? They probably evolved in the service of cooperation. Caring about what others get may seem petty and irrational, but in the long run it keeps one from being taken advantage of.

Had we merely mentioned emotions, such as "resentment" or "envy," our findings might have gone unnoticed. But since we saw no reason not to invoke the principle of inequity aversion, thought to relate to a sense of fairness, we drew the keen, somewhat baffled interest of philosophers, anthropologists and economists, who almost choked on the monkey comparison.

As it happened, our study came out around the time that there was public outcry about the multimillion dollar pay packages that are occasionally given out on Wall Street and elsewhere. Commentators couldn't resist contrasting human society with our monkeys, suggesting that we could learn a thing or two from them.

Our monkeys have not reached the point at which their sense of fairness stretches beyond egocentric interests - for example, the one who gets the grape never levels the outcome by giving it to the other - but in cooperative human societies, such as those in which men hunt large game, anthropologists have found great sensitivity to equal distribution. Sometimes, successful hunters aren't even allowed to carve up their own kill to prevent them from favouring their family. Without ever having heard calls for equality, these cultures are nevertheless keenly aware of the risk that inequity poses to the social fabric of their society.

The 17th-century political philosopher Thomas Hobbes noted in his *Philosophical Rudiments* that humanity is interested in justice "only for Peace's sake". Apes, as opposed to monkeys, may have an inkling of this connection. High-ranking male chimpanzees, for example, sometimes break up fights over food without taking any for themselves. There's even one observation of a bonobo who worried about getting too much. During tests, a female received large amounts of milk and raisins, but could hardly miss the eyes of her friends on her, who were watching her from a short distance. After a while, she refused all rewards. Looking at the experimenter, she kept gesturing to the others until they were given a share of the goodies. Only then did she finish her stash.

This bonobo was doing the smart thing. Apes think ahead, and if she had eaten her fill right in front of the rest, there might have been repercussions when she rejoined them later in the day, not unlike the nasty notes scribbled on the portrait of Richard Fuld, the final chairman and CEO of Lehman Brothers.

Inequity aversion will no doubt prove a rich research area, all the more so since there is no reason to think it is limited to the primates. I expect it to be found in all social animals. One entertaining account concerns psychologist Irene Pepperberg's typical dinner conversation with two squabbling African grey parrots, the late Alex, and his junior colleague, Griffin. "I ...had dinner, with Alex and Griffin as company. Dining company, really, because they insisted on sharing my food. They loved green beans and broccoli. My job was to make sure it was equal shares, otherwise there would be loud complaints. 'Green bean,' Alex would yell if he thought Griffin had one too many. Same with Griffin."

Another species in which to expect such reactions is the dog, which descends from cooperative hunters used to dividing up their prey. At the Clever Dog Lab at the University of Vienna, Austria, Friederike Range found that dogs refuse to lift a paw for a "shake" with a human if they get nothing in return while their companion is rewarded. Disobedient dogs show signs of tension, such as scratching and looking away. The reward itself isn't the issue, because the same dogs are perfectly willing to obey if neither one receives food. So, dogs too, may be sensitive to injustice.

All of this shows that our hostility to conspicuous consumption and excess at the top is only natural. It is part of a long evolutionary history in which cooperation and equity go hand in hand, even though it is undeniable that we have also a hierarchical streak. This is equally true for other primates, not to mention for canines, but no species accepts these vertical arrangements 100 per cent of the time.

Robin Hood had it right. Humanity's deepest wish is to spread the wealth.

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