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Why be nice? Better not think about it

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Are people more likely to be cooperative if they must act quickly or if they have more time to mull it over? The results of a recent series of studies suggest that peoples' initial impulse is to cooperate, but that with more time and reflection they become more selfish.

Evolutionary biologists are fond of defining altruism as 'that which cannot evolve'. The point is that organisms who sacrifice themselves for others inordinately are at a strong disadvantage in the struggle to contribute more genes to the next generation. On the evolutionary level, momentary acts of altruism – which indisputably do exist – must somehow reap the altruist equal or greater benefits of reproductive fitness in the long run.

Among primates, humans are inordinately altruistic, and, unlike the eusocial insects such as ants and termites, this is not based on kin selection. One hypothesis is that at some point in human evolution individuals were forced by a changing ecology to forage with others collaboratively and mutualistically or else starve [1,2]. This makes individuals interdependent – with a stake in the well-being of their needed partners – and so they invest time and effort to help their partners both during the collaboration, which makes immediate sense, and also outside the collaboration, given that they will need collaborative partners in the future. To the degree that the cultural group as a whole is a collaborative entity, especially in competing with other groups, this same logic of interdependence holds for all of its members, even those who do not know one another personally. In general, a recent model demonstrates that under plausible evolutionary conditions it is worse to be skeptical and so miss out on collaborative opportunities than it is to be promiscuously cooperative and so tricked by a cheater every once in a while [3]. For all of these reasons, then, it is likely that humans have at least some evolved propensities for cooperating with others.

However, that is all on the evolutionary level. On the level of individual psychology, what is needed is a mechanism to implement this tendency toward cooperation in such a way that it benefits (or at least does not harm) the individual's long-term reproductive success. In a recent series of studies, Rand *et al.* [4] used the currently popular dual-process model of human decision-making to ask: are humans intuitively altruistic or selfish, and does more time and reflection change this initial tendency? They operationalized intuitive judgments (System 1) in terms of faster reaction time, and reflective judgments (System 2) in terms of slower reaction time [5].

To answer their questions, Rand *et al.* conducted a series of ten experiments. In most of the studies, groups of four anonymous participants played a public goods game with one another online. Public goods games have the basic structure of a prisoner's dilemma in that cooperation benefits everyone, if everyone does it, whereas selfishness benefits the subject even more, regardless of what the others do (Figure 1). In the first set of studies, the finding was simply that participants who responded fastest in a public goods game were also the ones who were most cooperative. This was corroborated in a second set of studies, which provided *post hoc* analyses of reaction times in a number of previous studies from the authors' laboratory using several different economic games. However, these are just correlations and there are many reasons why fast responders might be altruists.

More impressive are two sets of true experiments. In the first set, participants were required either to act quickly or else to delay their response. This manipulation caused participants to respond differentially: acting more quickly led to more altruistic responses, whereas delaying led to more selfish responses. (Interestingly, this difference was not caused by participants predicting that others would be behaving in this way, as participants did not predict that this manipulation would affect their partners.) In a second set of experiments, participants were primed either for quick, intuitive action or thoughtful, reflective action. Again, participants acting after an intuitive prime were more cooperative, whereas those acting after a reflective prime were more selfish.

These results are novel and revealing of the processes that individuals use to make decisions about cooperation. Importantly for their validity, they fit with a number of other recent empirical results. First, when humans play a public goods game repeatedly, they start off being mostly cooperative; however, over time, with different partners, they tend to become more selfish – possibly because they have more time to think over the costs and benefits to themselves [6]. Second, a number of studies conducted by Haidt and colleagues, as well as others (see [7], for a review) show that people make all kinds of moral decisions based more on intuition and emotion than on rational reflection. In the phenomenon that Haidt calls moral dumbfounding, subjects intuitively judge that something such as brother–sister incest is disgusting, even if they cannot justify this decision rationally. Third, recent research on altruistic helping and sharing in young children has produced the hypothesis that early in ontogeny, one-year-olds help and share with others quite readily, almost indiscriminately, and only over the next couple of years do they become more cautious and selective in targeting

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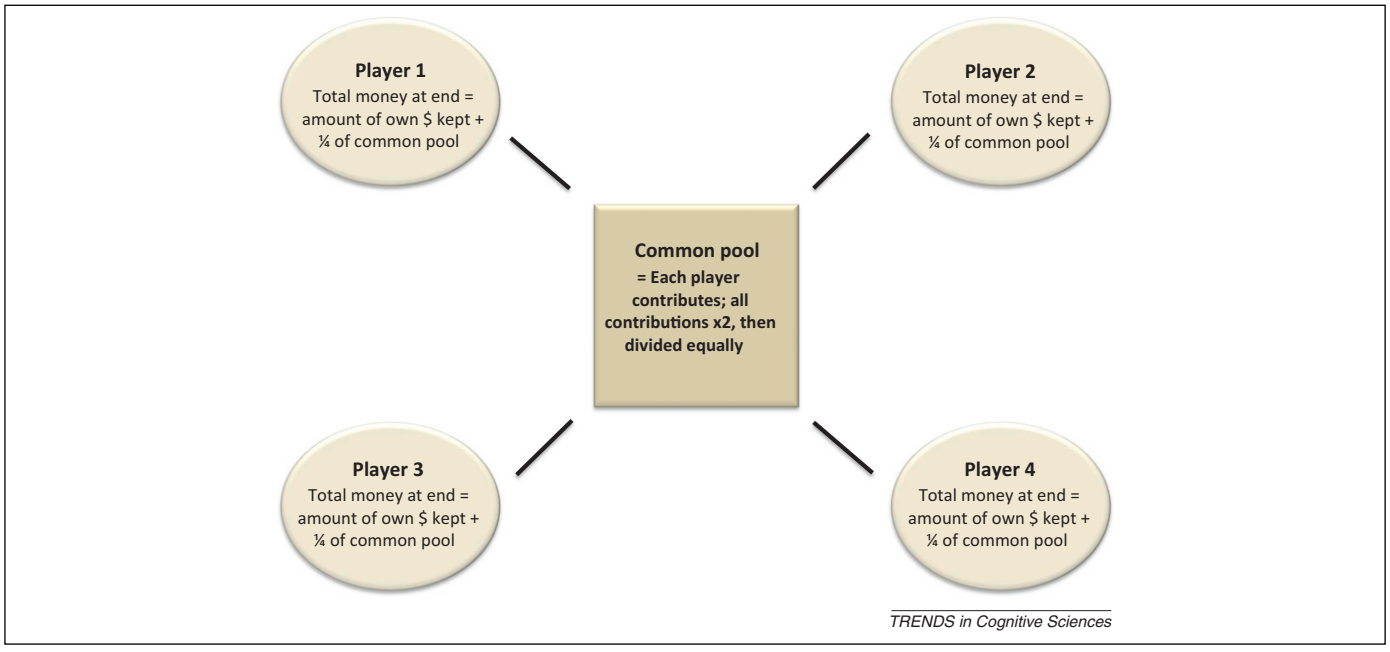

Figure 1. In the current public goods game, each individual contributed money from his own resources to a common pool, which was then doubled and divided equally among all four players. Taken together, the best outcome for the group is if everyone contributes all of his money to the common pool. For the individual, however, each money unit contributed decreases his/her resources by one, and then that unit comes back in the division of the common pool at the rate of 0.5 (it was doubled and then divided by four). The individual's best selfish choice – regardless of what the other players do – is thus to contribute nothing, but then to share in the contributions of the others. For example, if I contribute six of my ten money units, which are then doubled, with four players I will get back three of those units (plus a quarter of the contributions of others). If I had contributed nothing, I would have kept all six of my money units (plus a quarter of the contributions of others), for a net gain of three.

their altruism to those who will not take advantage of them [8].

One remaining puzzle is the following. Pinker [9] reviews evidence showing that over the past few thousand years human beings have become less violent and more cooperative. This is almost certainly not because humans' intuitive impulses for cooperation have been strengthening. Rather, what is happening is that over historical time individuals are reasoning together and creating social norms to promote cooperation in situations that are often plagued by non-cooperation. Norm creation is thus a cultural–historical process driven mainly by reason, not by intuition. However, this process is not contradictory to research on individual psychology. Children are socialized into a world of historically created social norms to which they are expected to conform, and their intuitive impulse is indeed to conform [10]. The outcome is that most humans, most of the time, have the intuition that their first best choice is either to cooperate or else to conform to the expectations of others – which also means, most often, to cooperate.

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