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# Judgments about cooperators and freeriders on a Shuar work team: An evolutionary psychological perspective ☆

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**Abstract**

Evolutionary biological theories of group cooperation predict that (1) group members will tend to judge cooperative co-members favorably, and freeriding co-members negatively and (2) members who themselves cooperate more frequently will be especially likely to make these social judgments. An experiment tested these predictions among Shuar hunter-horticulturalists. Subjects viewed depictions of pairs of workers who varied in the extent to which they had contributed to, and benefited from, a team project. Subjects were then asked to judge which worker deserved more respect, and which deserved more punishment. When judging between unequal-contributors, all subjects tended to favor more cooperative (i.e., higher-contributing) workers. However, when judging between equal-contributors/unequal-benefiters, male subjects who themselves often engaged in team cooperation tended to favor more cooperative (i.e., lower-benefiting) workers, while subjects who were female and who therefore rarely engaged in team cooperation tended to favor less cooperative (i.e., higher-benefiting) workers.


*Keywords:* Cooperation; Work team; Collective action; Free rider; Punishment; Evolutionary psychology; Respect

## Introduction

### *The freerider problem, social judgment, and human nature*

In a collective action, individuals cooperate to produce some resource that they will share among themselves. Collective actions are common in human social life (Ostrom, 1990), including in organizational contexts (Albanese & Van Fleet, 1985; Goren, Kurzban, & Rapoport, 2003): for example, members of a work team who jointly design some new product, and whose efforts bring rewards to all team members. However, collective actions must overcome some challenges in order to succeed, and chief among these is the freerider problem (Olson, 1965). If each member receives an equal share of the benefit that the group produces, no matter how much that member contributed to the production effort, then each member has a private incentive to contribute less than co-members. This incentive to freeride exists because if all members benefit equally, then the members who contributed the least to production will reap the highest net benefits. More formally: in a group of $n$ members, one's cost of contributing $c$ creates a public good, with a total benefit $mc$ that is shared equally by all members. One can contribute productively when $1 < m$; however, if $1 < m < n$, then one

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can profit more individually if one fails to contribute, and instead freerides on the contribution efforts of co-members.

So other things being equal, it would often seem rational for a collective action participant to not contribute at all, and to let co-participants do all the work. But if all participants adopt this strategy, then nobody in the collective action will cooperate, and the collective action will therefore fail. How are humans able to overcome this dilemma? Research suggests that people often solve freerider problems by directing social benefits towards cooperators, and/or by imposing social costs on freeriders (Andreoni, Harbaugh, & Vesterlund, 2003; Fehr & Gächter, 2000; Hawkes, 1993; Patton, 2000; Price, 2003, 2006; Price, Cosmides, & Tooby, 2002; Yamagishi, 1986). This distribution of social benefits and costs occurs because observers make positive and negative social judgments about the behavior of cooperators and freeriders, respectively: cooperators are seen as virtuous and worthy of respect, reward, or some other form of social benefit, while freeriders are seen as irresponsible and deserving of condemnation, punishment, or some other form of social cost. These benefits and costs can be allocated either formally or informally (Falk, Fehr, & Fischbacher, 2005; Price, 2006): for example, a cooperative team member may be rewarded formally with a salary increase, or informally with co-member respect; or, a freeriding member might be punished formally by being fired, or informally by losing respect.

While this pattern of judging cooperators positively and freeriders negatively has been well-documented in industrialized societies, evidence for its cultural universality, especially from small-scale societies, is lacking. If this pattern is universal, then it may reflect something deeper than just the norms or preferences of any particular culture, and could emanate from the ways in which *Homo sapiens* is psychologically adapted for cooperation in groups. It is reasonable to suggest that the human mind is adapted for such cooperation, because ancestral humans could have gained access to crucial fitness-enhancing resources by participating in successful collective actions in the evolutionary past (Chagnon, 1997; Hawkes, 1993; Price et al., 2002), for example in the contexts of group hunting and foraging, warfare, intergroup trade and alliance-building activities, predator defense, and shelter-building. Moreover, as will be explained below, the social judgments that people make in collective action contexts, at least in industrialized societies, are of a form that suggests that they are the products of psychological mechanisms that were shaped by natural selection.

Some evidence about social judgment patterns in small-scale societies does exist, and does tend to support the view that those observed in industrialized societies are indeed universal (Erasmus, 1977; Ostrom, 1990; Price, 2006). However, these accounts are largely anecdotal, and there is a need for additional, quantitative evidence. The study presented in this paper was primarily an effort to produce such evidence, by demonstrating that in a hunter-horticultural society in the Ecuadorian Amazon, villagers make negative judgments about freeriders and positive judgments about cooperators, just as they do in industrialized societies.

### *The evolution of social judgment in collective actions*

An evolutionary biological perspective on cooperation suggests several categories of reasons why humans should make negative judgments about freeriders, and positive judgments about cooperators. Each category will be discussed in turn.

#### *Access to resources*

Participation in cooperative interactions such as collective actions would have been fitness-enhancing for ancestral humans, because it would have permitted them to access resources that they could not have acquired by acting alone (Alexander, 1979). The more cooperative and productive one's co-participants were in an ancestral collective action, the more one could have consumed the resources that they produced, and the better it would have been for one's fitness. Thus, a simple reason why ancestral humans should have evolved to prefer cooperators over freeriders is because this preference would have improved their access to resources. From this perspective, interactants in general (be they cooperators, freeriders, or some other type) should prefer cooperators as partners, because all types of interactants should benefit from having more productive co-interactants. Experimental evidence does suggest that both cooperators and freeriders prefer to interact with cooperators (Ehrhart & Keser, 1999; Page, Putterman, & Unel, 2005).

#### *Exploitation avoidance*

In order for cooperation to evolve, the benefits of cooperation must be preferentially directed towards cooperators, rather than towards freeriders. If cooperators can thus harvest the benefits of their labor preferentially for themselves, then they can prevent freeriders from gaining a fitness advantage. And as long as freeriders are not gaining this advantage, then cooperators can avoid being exploited and outcompeted by freeriders, and collective action can therefore evolve. There are two main ways in which this exploitation avoidance can occur. First, it can occur via *positive assortment*, if cooperators assort into cooperative interactions with other cooperators.