

PUNISHMENT CARRIES A REPUTATION PENALTY EVEN WHEN PRO-SOCIAL



SIMON COLUMBUS^{1,2}, BOBBY DEN BEZEMER¹, AND MARK VAN VUGT³

¹ UNIVERSITY OF AMSTERDAM, ² AMSTERDAM UNIVERSITY COLLEGE, ³ VU UNIVERSITY AMSTERDAM

INTRODUCTION

Altruistic punishment may have evolved via group-level pressures [1] or through indirect reciprocity. However, while punishers may be more trusted than non-punishers, they do not consistently gain other reputation benefits [2]. Here, we show that even when thought to be fair, punishment carries a reputation penalty relative to reward.

MATERIALS & METHODS

Groups of four participants played six rounds of a modified public goods game in either a punishment or a reward condition. After contributions, one player could voluntarily move first to punish (resp. reward) one or more other players at a cost to themselves. This leader's decision was communicated to the other players, who could then make their own punishment (resp. reward) decision simultaneously.

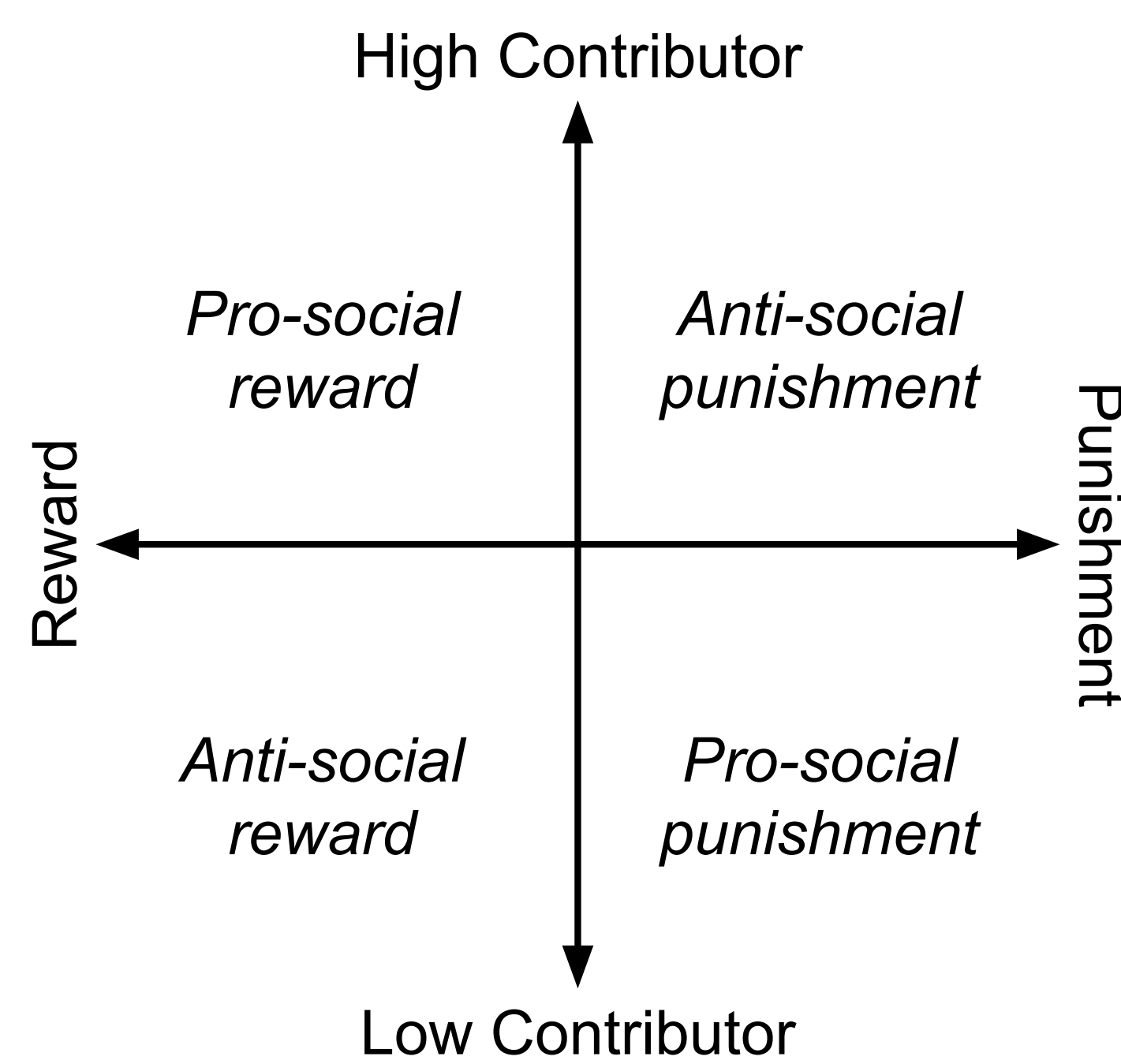


Figure 3: Pro- and anti-social punishment and reward.

Following the public goods game, participants were presented with four scenarios in which a voluntary leader punished (rewarded) a low (high) contributing player. They were then asked to rate the leader on three five-point Likert items:

- This leader is dominant.
- This leader is altruistic.
- This leader is fair.

RESULTS

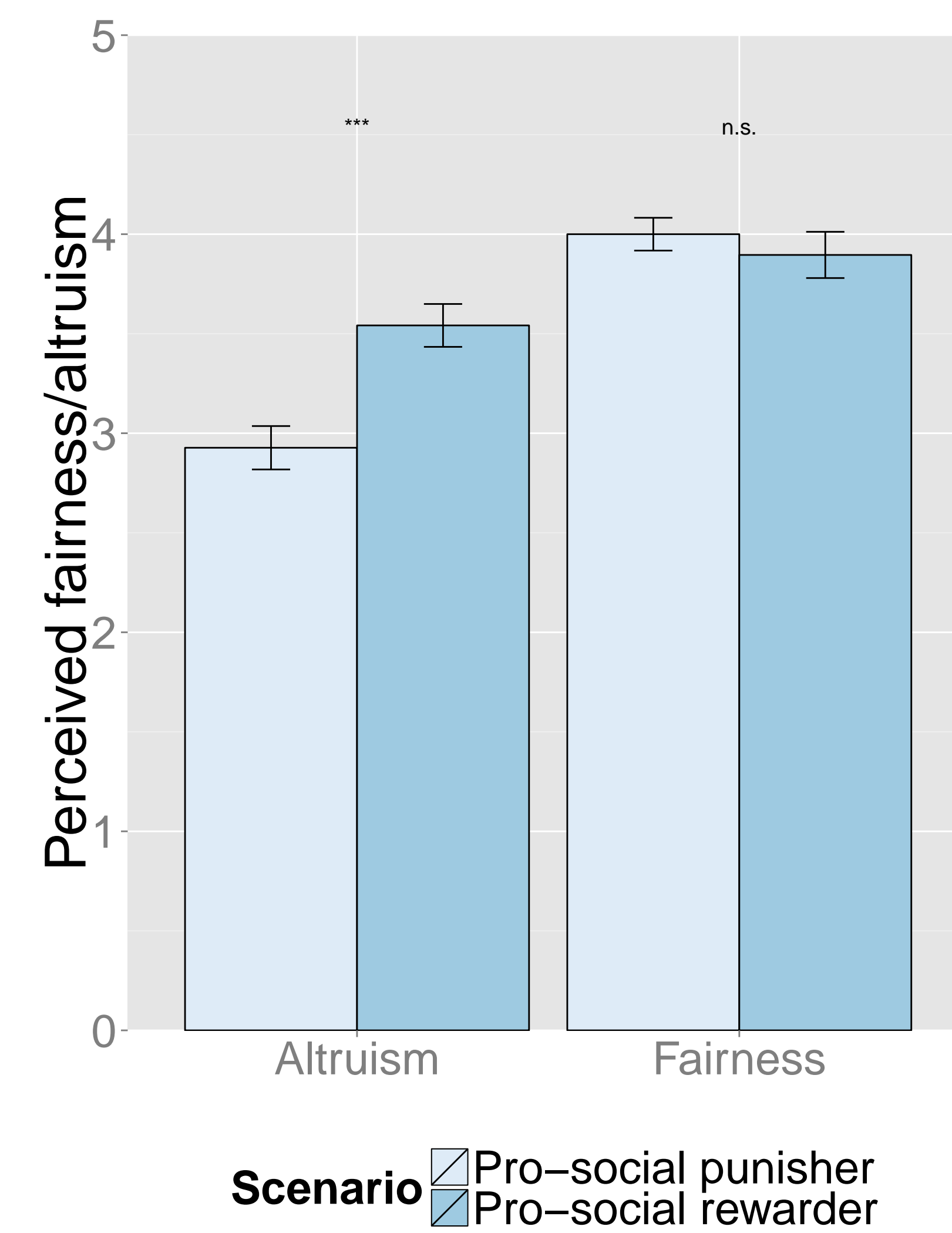


Figure 1: Perceived altruism and fairness of pro-social punishers and rewarders. Error bars indicate 1 SE.

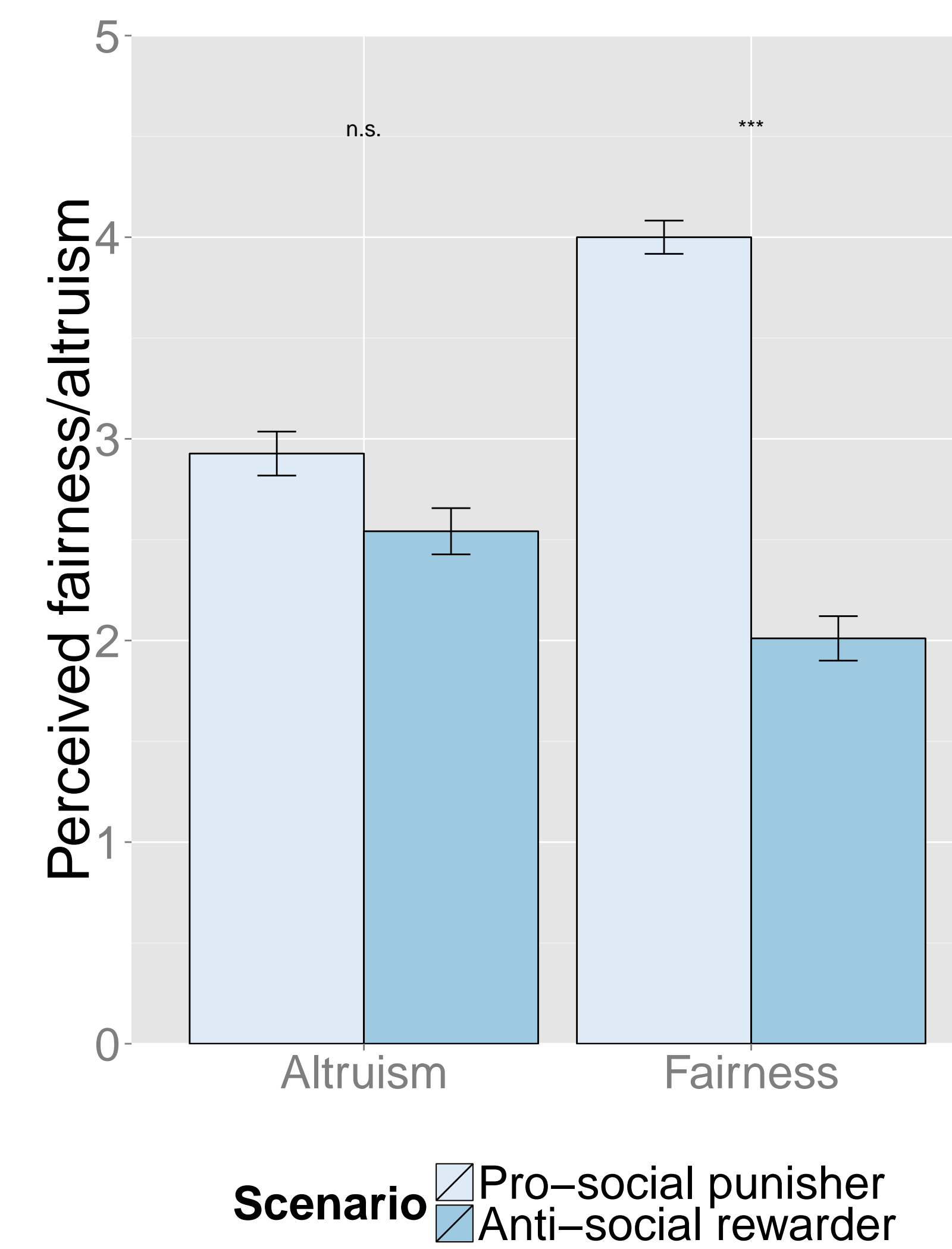


Figure 2: Perceived altruism of pro-social punishers and anti-social rewarders.

KEY FINDINGS

- Pro-social punishers and rewarders are judged as equally fair.
- Pro-social punishers are judged as less altruistic than pro-social rewarders.
- Pro-social punishers are judged as no more altruistic than anti-social rewarders.

RESULTS (CONT.)

Comparison	Fairness			Altruism			Dominance		
	$\bar{x}_1 - \bar{x}_2$	SD	Sig.	$\bar{x}_1 - \bar{x}_2$	SD	Sig.	$\bar{x}_1 - \bar{x}_2$	SD	Sig.
pp/pr	0.104	1.302	1.000	-0.615	1.208	0.000***	0.188	0.886	0.457
pp/ar	1.990	1.539	0.000***	0.385	1.631	0.336	0.740	1.172	0.000***
pp/ap	2.312	1.340	0.000***	0.823	1.480	0.000***	0.031	0.978	1.000
ar/ap	0.323	1.342	0.170	0.438	1.344	0.055	-0.708	1.345	0.000***
ar/pr	-1.885	1.666	0.000***	-1.000	1.501	0.000***	-0.552	1.123	0.000***
ap/pr	-2.208	1.528	0.000***	-1.438	1.685	0.000***	0.156	1.182	1.000

Table 1: Comparison using Wilcoxon signed-rank tests; p-values with Bonferroni correction

DISCUSSION

Our results indicate the punishment carries a reputation penalty relative to reward. Thus, individuals motivated by reputational concerns should prefer to engage in reward rather than punishment. However, punishment is still common even when reward is possible [3]. It may however be that studies so far have considered too limited a range of reputations. A recent study indicates that punishers are perceived as formidable, but that not all individuals can benefit from this [4]. In additional, contextual factors may affect what reputations punishers attain and can use [2].

FURTHER RESEARCH

Reputation has many facets. In an informal literature review, we have identified ten relevant reputation constructs: prestige, dominance, trustworthiness, morality, fairness, altruism, cooperativeness, power, attractiveness, and honour. A conceptual comparison indicates that these constructs are indeed distinct.

A major obstacle to a more encompassing perspective on punishment and reputation is a lack of studies that compare different reputations across settings. To facilitate such research, we aim to develop a multidimensional reputation scale to be applied in economic games, and in particular to punishment.

REFERENCES

- [1] Robert Boyd, Herbert Gintis, Samuel Bowles, and Peter J. Richerson. The evolution of altruistic punishment. *Proceedings of the National Academy of Sciences of the United States of America*, 100(6):3531–5, March 2003.
- [2] Nichola J. Raihani and Redouan Bshary. The reputation of punishers. *Trends in Ecology & Evolution*, pages 1–6, January 2015.
- [3] James Andreoni, William Harbaugh, and Lise Vesterlund. The Carrot or the Stick: Rewards, Punishments, and Cooperation. *The American Economic Review*, 93(3):893–902, 2003.
- [4] David S. Gordon, Joah R. Madden, and Stephen E. G. Lea. Both Loved and Feared: Third Party Punishers Are Viewed as Formidable and Likeable, but These Reputational Benefits May Only Be Open to Dominant Individuals. *PLoS one*, 9(10):e110045, January 2014.

CONTACT INFORMATION

Web <http://simoncolumbus.com>
Email simon@simoncolumbus.com
Twitter @simoncolumbus