Is costly punishment altruistic? Exploring rejection of unfair offers in the Ultimatum Game in real-world altruists

Kristin M. Brethel-Haurwitz<sup>1,\*</sup>, Sarah A. Stoycos<sup>1,+</sup>, Elise M. Cardinale<sup>1</sup>, Bryce Huebner<sup>2</sup>, and Abigail A. Marsh<sup>1</sup>

<sup>&</sup>lt;sup>1</sup>Department of Psychology, Georgetown University, Washington, DC 20057, USA.

<sup>&</sup>lt;sup>2</sup>Department of Philosophy, Georgetown University, Washington, DC 20057, USA.

<sup>\*</sup>kb527@georgetown.edu

<sup>&</sup>lt;sup>+</sup>S.A.S. is now at University of Southern California.

## **Figure Legends**

Figure S1. Mean rejection rates broken down by fairness and education. Given the difference in education level between groups, education and its interaction with fairness were added to the model in which group, fairness, and a group x fairness interaction predicted rejection rates. The main effect of education was marginally significant,  $\chi^2(1) = 3.77$ , p = .052, in which a higher education was associated with less rejection overall, p = .059. In an interaction between education and fairness,  $\chi^2(2) = 22.20$ , p < .001, those with a higher education were less likely to reject very unfair offers, p = .001. \*\*p < .01. Error bars represent 95% confidence intervals, based on the SEM.

**Figure S2. Descriptive ratings of altruistic kidney donation, costly punishment, and SRA items.** In an a separate online sample, altruistic kidney donation is rated as significantly less descriptively normative than both costly punishment, t(99) = 11.33, p < .001, and the average rating for SRA behaviours, t(99) = 13.63, p < .001. Costly punishment is rated as more descriptively normative than SRA behaviours, t(99) = 2.65, p = .005.

Figure S3. Prescriptive ratings of altruistic kidney donation, costly punishment, and SRA items. In an a separate online sample, altruistic kidney donation is rated as significantly less prescriptively normative than both costly punishment, t(99) = 4.75, p < .001, and the average rating for SRA behaviours t(99) = 10.06, p < .001.

Figure S1

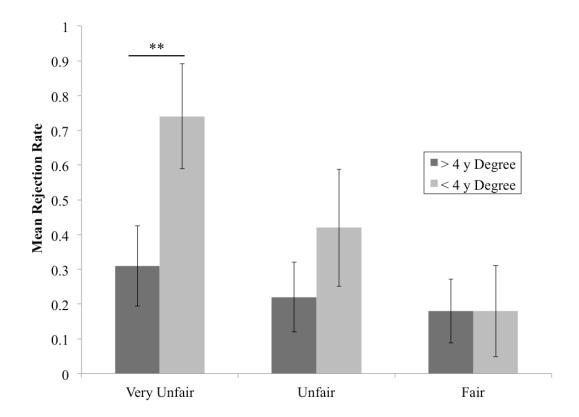


Figure S2

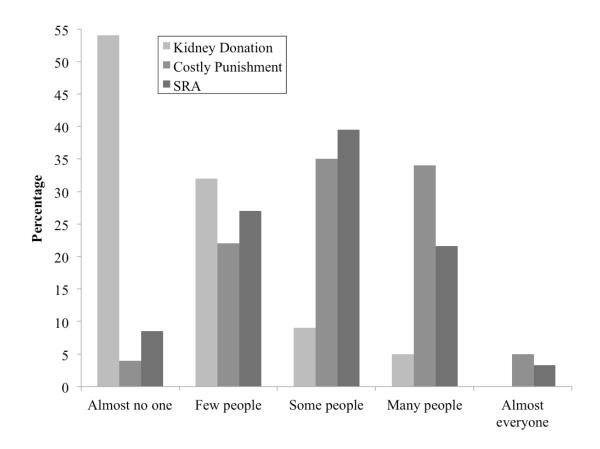


Figure S3

