

Reporting Summary

Nature Portfolio wishes to improve the reproducibility of the work that we publish. This form provides structure for consistency and transparency in reporting. For further information on Nature Portfolio policies, see our [Editorial Policies](#) and the [Editorial Policy Checklist](#).

Statistics

For all statistical analyses, confirm that the following items are present in the figure legend, table legend, main text, or Methods section.

n/a Confirmed

- ☐ ☒ The exact sample size (n) for each experimental group/condition, given as a discrete number and unit of measurement
- ☐ ☒ A statement on whether measurements were taken from distinct samples or whether the same sample was measured repeatedly
- ☐ ☒ The statistical test(s) used AND whether they are one- or two-sided
Only common tests should be described solely by name; describe more complex techniques in the Methods section.
- ☐ ☒ A description of all covariates tested
- ☐ ☒ A description of any assumptions or corrections, such as tests of normality and adjustment for multiple comparisons
- ☐ ☒ A full description of the statistical parameters including central tendency (e.g. means) or other basic estimates (e.g. regression coefficient) AND variation (e.g. standard deviation) or associated estimates of uncertainty (e.g. confidence intervals)
- ☐ ☒ For null hypothesis testing, the test statistic (e.g. F , t , r) with confidence intervals, effect sizes, degrees of freedom and P value noted
Give P values as exact values whenever suitable.
- ☐ ☒ For Bayesian analysis, information on the choice of priors and Markov chain Monte Carlo settings
- ☐ ☒ For hierarchical and complex designs, identification of the appropriate level for tests and full reporting of outcomes
- ☐ ☒ Estimates of effect sizes (e.g. Cohen's d , Pearson's r), indicating how they were calculated

Our web collection on [statistics for biologists](#) contains articles on many of the points above.

Software and code

Policy information about [availability of computer code](#)

Data collection

Data analysis

For manuscripts utilizing custom algorithms or software that are central to the research but not yet described in published literature, software must be made available to editors and reviewers. We strongly encourage code deposition in a community repository (e.g. GitHub). See the Nature Portfolio [guidelines for submitting code & software](#) for further information.

Data

Policy information about [availability of data](#)

All manuscripts must include a [data availability statement](#). This statement should provide the following information, where applicable:

- Accession codes, unique identifiers, or web links for publicly available datasets
- A description of any restrictions on data availability
- For clinical datasets or third party data, please ensure that the statement adheres to our [policy](#)

Human research participants

Policy information about [studies involving human research participants and Sex and Gender in Research](#).

Reporting on sex and gender	We collected data on participant gender and control for gender in our predictive models, along with other demographic variables (education and income). Due to the small number of non-binary participants and participants whose gender identity was undisclosed, we included gender in our models with 1 = woman and 0 = gender identity other than woman
Population characteristics	See above.
Recruitment	Participants were recruited through our database of verified altruistic kidney donors in North America and controls. Additional controls were recruited via the online recruitment database ResearchMatch. Interested participants invited their socially closest other, described as their "closest friend, partner, or relative," to contact the researchers independently. Once both participants in a dyad agreed to participate, they were instructed to separately complete a survey using Qualtrics. Self-selection might bias results such that more prosocial individuals in both the control and altruistic samples took the survey due to the volunteer-like nature of study participants and lack of competitive compensation.
Ethics oversight	Georgetown University IRB approval was attained prior to data collection or recruitment.

Note that full information on the approval of the study protocol must also be provided in the manuscript.

Field-specific reporting

Please select the one below that is the best fit for your research. If you are not sure, read the appropriate sections before making your selection.

☐ Life sciences ☒ Behavioural & social sciences ☐ Ecological, evolutionary & environmental sciences

For a reference copy of the document with all sections, see nature.com/documents/nr-reporting-summary-flat.pdf

Behavioural & social sciences study design

All studies must disclose on these points even when the disclosure is negative.

Study description	This study is a quantitative analysis of self-report data across altruistic kidney donors,
Research sample	260 participants completed all laboratory tasks, exceeding our target sample size (N=208), but in accordance with our stopping rule (N=260). The sample size was determined through a power analysis conducted in G*Power 28. The sample included 59 altruists, 59 close others of altruists (nominated by altruists as their closest other), 71 controls, and 71 closest others of controls.
Sampling strategy	Participants were recruited through our database of verified altruistic kidney donors in North America and controls. Additional controls were recruited via the online recruitment database ResearchMatch. Interested participants invited their socially closest other, described as their "closest friend, partner, or relative," to contact the researchers independently. Once both participants in a dyad agreed to participate, they were instructed to separately complete a survey using Qualtrics.
Data collection	<p>Consenting participants completed a 30-minute online questionnaire. All participants first completed a first-person social discounting task 8,9,53. They next completed our third-party social discounting task created for this research protocol to assess third-party social discounting. Its design closely parallels a first-person social discounting task, except participants allocate money between closer and more distant others (e.g., allocating \$145 to N=1 (favoritism) versus splitting \$150 evenly between N=1 and N=50 (impartial). Because the task requires choosing to favor a close other versus impartiality, the number of choices decreases as the social distance of the close other increases.</p> <p>Before the experiment, participants were requested to provide the names of individuals from their personal social network who corresponded to various social distances, namely N = 1, 2, 5, 10, 20, and 50. They were given the following instructions: "Imagine a list of 100 people in your social circle, with person #1 representing the closest relationship and person #100 being someone completely unfamiliar to you." While it's possible for more than one person to represent a given social distance within social networks, participants were instructed to select only one person for each distance 54. The experiment also included social distance level 100, representing strangers whose names might not be known 8. Subjects were not required to provide a name for this level. Therefore, a total of seven social distances were considered.</p> <p>Participants made a total of 252 decisions across the first-person and third-party social discounting tasks, each involving the seven previously described social distances. The task was structured into seven blocks, each containing nine trials. Following established protocols, participants were instructed to mentally envision the seven individuals on the list (N = 1, 2, 5, 10, 20, 50, or 100) and make nine binary decisions concerning retaining and/or sharing specific amounts of money with each of these individuals. In each trial, participants had to indicate whether they preferred to keep a sum of money exclusively for themselves (the selfish option) or to retain a sum of money for themselves while also sharing an identical amount with the Nth person on their list (the generous option).</p> <p>The selfish options involved keeping varying amounts of money, ranging from \$155 down to \$55, decreasing in \$10 increments. On</p>

the other hand, the generous option consistently entailed keeping a fixed amount of money and sharing that same amount with the Nth person (i.e. "\$75 for you, \$75 for [N]"). Participants were required to confirm their knowledge of each N's identity before task initiation.

Prior to commencing the task, participants were informed that their payments were linked to their task responses, ensuring that the experiment adhered to ethical standards and avoided any form of deception, meeting the requirements of behavioral economics. Based on their actual choices, participants received 10% of the total from a randomly selected trial. If a participant chose the generous option, the designated person also received 10% of the amount allocated for them. If necessary, participants were asked after the task to provide an email address or phone number for contacting the relevant person to facilitate payment through PayPal or an Amazon gift card. In cases where the randomly selected trial involved a person at a social distance of 100, a random recipient received the payment from our database of future participants.

Participants then completed a battery of moral belief questionnaires, which included: the Moral Relativism Scale, Moral Tolerance Scale (MRS, MTS) and the Oxford Utilitarianism Scale (OUS). These scales assessed explicit moral beliefs in order to evaluate the role of normative moral beliefs in impartial altruism.

Participants also completed the McGill Friendship Questionnaire Respondent's Attachment and Friend's Functions subscales (MFQ-RA) MFQ-FF) to assess the quality of relationships between altruists and controls and their closest others.

Timing	Data collection began in May 2021 and continued until May 2022
Data exclusions	Those whose partners failed to complete the survey were excluded from our sample (n=52).
Non-participation	Response rate was 20% for altruists, 70% for friends of altruists, 30% for friends of altruists
Randomization	Participants were not allocated into specific treatment groups.

Reporting for specific materials, systems and methods

We require information from authors about some types of materials, experimental systems and methods used in many studies. Here, indicate whether each material, system or method listed is relevant to your study. If you are not sure if a list item applies to your research, read the appropriate section before selecting a response.

Materials & experimental systems

n/a	Involved in the study
<input checked="" type="checkbox"/>	<input type="checkbox"/> Antibodies
<input checked="" type="checkbox"/>	<input type="checkbox"/> Eukaryotic cell lines
<input checked="" type="checkbox"/>	<input type="checkbox"/> Palaeontology and archaeology
<input checked="" type="checkbox"/>	<input type="checkbox"/> Animals and other organisms
<input checked="" type="checkbox"/>	<input type="checkbox"/> Clinical data
<input checked="" type="checkbox"/>	<input type="checkbox"/> Dual use research of concern

Methods

n/a	Involved in the study
<input checked="" type="checkbox"/>	<input type="checkbox"/> ChIP-seq
<input checked="" type="checkbox"/>	<input type="checkbox"/> Flow cytometry
<input checked="" type="checkbox"/>	<input type="checkbox"/> MRI-based neuroimaging