## Supplementary Information: Detailed statistical analysis

Table S1. Logistic regressions predicting PD cooperation in Study 1. Participants in Study 1 were randomly assigned to one of four conditions: PD-Give; PD-Equalize; Give-PD; and Equalize-PD. Column 1 indicates no significant interactions with order (whether the TOG or PD was played first). Column 2 collapses over order and indicates a significant interaction between TOG frame and TOG choice. Columns 3 and 4 indicate opposite effects of TOG choice for the two different TOG frame conditions when considered separately.

|  | (1) <br> All | (2) <br> All | (3) <br> Give <br> Frame | (4) Equalize Frame |
| :---: | :---: | :---: | :---: | :---: |
| TOG Choice (0=efficient, $1=$ equitable) | $\begin{gathered} -1.861^{*} \\ (1.066) \end{gathered}$ | $\begin{aligned} & -1.230 \\ & (0.776) \end{aligned}$ | $\begin{aligned} & -1.230 \\ & (0.776) \end{aligned}$ | $\begin{gathered} 1.190^{* * *} \\ (0.278) \end{gathered}$ |
| TOG Frame (0=give, $1=$ equalize | $\begin{gathered} -0.676 * * \\ (0.338) \end{gathered}$ | $\begin{gathered} -0.662^{* * *} \\ (0.248) \end{gathered}$ |  |  |
| TOG Choice X TOG Frame | $\begin{gathered} 2.944^{* * *} \\ (1.133) \end{gathered}$ | $\begin{gathered} 2.420^{* * *} \\ (0.824) \end{gathered}$ |  |  |
| Order ( $0=$ PD first, $1=$ TOG first) | $\begin{aligned} & -0.239 \\ & (0.272) \end{aligned}$ |  |  |  |
| TOG Choice X Order | $\begin{gathered} 1.848 \\ (1.635) \end{gathered}$ |  |  |  |
| TOG Frame X Order | $\begin{gathered} 0.00969 \\ (0.499) \end{gathered}$ |  |  |  |
| TOG Choice X TOG Frame X Order | $\begin{aligned} & -1.617 \\ & (1.728) \end{aligned}$ |  |  |  |
| Constant | $\begin{gathered} -0.442 * * \\ (0.191) \end{gathered}$ | $\begin{gathered} -0.561^{* * *} \\ (0.136) \end{gathered}$ | $\begin{gathered} -0.561^{* * *} \\ (0.136) \end{gathered}$ | $\begin{gathered} -1.224^{* * *} \\ (0.208) \end{gathered}$ |
| Observations | 498 | 498 | 248 | 250 |

Standard errors in parentheses
*** $\mathrm{p}<0.01,{ }^{* *} \mathrm{p}<0.05,{ }^{*} \mathrm{p}<0.1$

Table S2. Linear regressions predicting DG giving in Study 2. Participants in Study 2 were randomly assigned to one of four conditions: DG-Give; DG-Equalize; Give-DG; and Equalize-DG. Column 1 indicates no significant interactions with order (whether the TOG or DG was played first). Column 2 collapses over order and indicates a significant interaction between TOG frame and TOG choice. Columns 3 and 4 indicate opposite effects of TOG choice for the two different TOG frame conditions when considered separately.

|  | (1) <br> All | (2) <br> All | (3) <br> Give <br> Frame | (4) <br> Equalize Frame |
| :---: | :---: | :---: | :---: | :---: |
| TOG Choice (0=efficient, 1=equitable) | $\begin{gathered} -0.124 \\ (0.0834) \end{gathered}$ | $\begin{gathered} -0.128^{* *} \\ (0.0586) \end{gathered}$ | $\begin{gathered} -0.128 * * \\ (0.0625) \end{gathered}$ | $\begin{gathered} 0.214^{* * *} \\ (0.0322) \end{gathered}$ |
| TOG Frame (0=give, $1=$ equalize) | $\begin{gathered} -0.106 * * \\ (0.0435) \end{gathered}$ | $\begin{gathered} -0.113^{* * *} \\ (0.0303) \end{gathered}$ |  |  |
| TOG Choice X TOG Frame | $\begin{gathered} 0.353 * * * \\ (0.0973) \end{gathered}$ | $\begin{gathered} 0.342 * * * \\ (0.0682) \end{gathered}$ |  |  |
| Order ( $0=$ DG first, $1=$ TOG first) | $\begin{gathered} 0.0193 \\ (0.0359) \end{gathered}$ |  |  |  |
| TOG Choice X Order | $\begin{gathered} -0.00819 \\ (0.118) \end{gathered}$ |  |  |  |
| TOG Frame X Order | $\begin{gathered} -0.0145 \\ (0.0608) \end{gathered}$ |  |  |  |
| TOG Choice X TOG Frame X Order | $\begin{aligned} & -0.0209 \\ & (0.137) \end{aligned}$ |  |  |  |
| Constant | $\begin{aligned} & 0.291^{* * *} \\ & (0.0257) \end{aligned}$ | $\begin{gathered} 0.301^{* * *} \\ (0.0179) \end{gathered}$ | $\begin{gathered} 0.301^{* * *} \\ (0.0190) \end{gathered}$ | $\begin{gathered} 0.187 * * * \\ (0.0226) \end{gathered}$ |
| Observations | 379 | 379 | 194 | 185 |
| R-squared | 0.103 | 0.102 | 0.021 | 0.194 |

Table S3. Linear regressions predicting DG giving in Study 3. Participants in Study 3 were randomly assigned to one of two conditions: DG-Give(generous); and DG-Equalize(fair) (order was not manipulated in Study 3, as it had no effect in Studies 1 and 2). Column 1 indicates a significant interaction between TOG frame and TOG choice. Columns 2 and 3 indicate opposite effects of TOG choice for the two different TOG frame conditions when considered separately.

|  | $(1)$ | $(2)$ <br> Give <br> Frame | $(3)$ <br> Equalize <br> Frame |
| :--- | :---: | :---: | :---: |
| TOG Choice (0=efficient, |  |  |  |
| 1=equitable) | $-0.160^{* * *}$ | $-0.160^{* * *}$ | $0.181^{* * *}$ |
| TOG Frame (0=give, 1=equalize) | $-0.0524)$ | $(0.0522)$ | $(0.0443)$ |
|  | $(0.0413)$ |  |  |
| TOG Choice X TOG Frame | $0.340^{* * *}$ |  |  |
|  | $(0.0685)$ |  |  |
| Constant | $0.303^{* * *}$ | $0.303^{* * *}$ | $0.186^{* * *}$ |
|  | $(0.0251)$ | $(0.0250)$ | $(0.0330)$ |
| Observations |  |  |  |
| R-squared | 263 | 131 | 132 |
| Standard errors in parentheses | 0.093 | 0.068 | 0.113 |
| ${ }^{* * *}$ p $<0.01,{ }^{* *} \mathrm{p}<0.05,{ }^{*} \mathrm{p}<0.1$ |  |  |  |

Table S4. Logistic regression predicting equitable choice in the TOG in Study 5. Participants in Study 5 always played the DG first, and then were randomly assigned to one of four TOG conditions that crossed the frame (equalize vs give) and the descriptive social norm (equitable vs efficient): Equalize/Equitable, Equalize/Efficient, Give/Equitable, Give/Efficient. Column 1 shows an interaction between frame and norm. Columns 2 and 3 indicate that under both norms, people are more likely to pick the equitable choice in the TOG under the Equalize frame, but that this difference is larger under the Equitable norm. See Figure S1.



Figure S1. Fraction of participants choosing the equitable option in the TOG in Study 5, based on TOG Norm and TOG Frame. Error bars indicate +/-1 SEM.

Table S5. Linear regression predicting DG giving in Study 5. Participants in Study 5 always played the DG first, and then were randomly assigned to one of four TOG conditions that crossed the frame (equalize vs give) and the descriptive social norm (equitable vs efficient): Equalize/Equitable, Equalize/Efficient, Give/Equitable, Give/ Efficient. Column 1 and 2 indicate no significant interactions with TOG norm. Columns 3 and 4 indicate that under both norms, we replicate the significant interaction between TOG choice and TOG frame observed in the earlier studies.

|  | $(1)$ | $(2)$ | $(3)$ <br> Efficient <br> Norm | $(4)$ <br> Equitable <br> Norm |
| :--- | :---: | :---: | :---: | :---: |
|  | All | All |  |  |
| TOG Choice (0=efficient, 1=equitable) | $-0.161^{* * *}$ | $-0.178^{* * *}$ | $-0.161^{* * *}$ | $-0.191^{* * *}$ |
|  | $(0.0611)$ | $(0.0509)$ | $(0.0601)$ | $(0.0680)$ |
| TOG Frame (0=give, 1=equalize) | $-0.220^{* * *}$ | $-0.227^{* * *}$ | $-0.220^{* * *}$ | $-0.192^{* * *}$ |
|  | $(0.0404)$ | $(0.0375)$ | $(0.0397)$ | $(0.0443)$ |
| TOG Choice X TOG Frame | $0.443^{* * *}$ | $0.470^{* * *}$ | $0.443^{* * *}$ | $0.501^{* * *}$ |
|  | $(0.0751)$ | $(0.0551)$ | $(0.0738)$ | $(0.0824)$ |
| TOG Norm (0=efficient, 1=equitable) | $-0.0569^{*}$ | $-0.0622^{*}$ |  |  |
| TOG Choice X TOG Norm | $(0.0336)$ | $(0.0320)$ |  |  |
| TOG Frame X TOG Norm | -0.0309 | 0.00797 |  |  |
| TOG Frame X TOG Norm X TOG | $(0.0906)$ | $(0.0518)$ |  |  |
| Choice | 0.0273 | 0.0441 |  |  |
| Constant | $(0.0594)$ | $(0.0501)$ |  |  |
|  | 0.0578 |  |  |  |
| Observations | $(0.111)$ |  |  |  |
| R-squared | $0.382^{* * *}$ | $0.384^{* * *}$ | $0.382^{* * *}$ | $0.325^{* * *}$ |

Standard errors in parentheses
*** $\mathrm{p}<0.01$, ** $\mathrm{p}<0.05,{ }^{*} \mathrm{p}<0.1$

Table S6. Linear regressions predicting amount endowment unclaimed in the taking-framed DG in Study 6. Participants in Study 6 were randomly assigned to play the TOG using either a Give frame or a Take frame, and then played a DG where both the participants and the recipient each started with 5 cents, and the participant then chose how many cents to take from the recipient. Column 1 indicates a significant interaction between TOG frame and TOG choice when predicting the fraction of the total 10c left with the recipient. Columns 2 and 3 indicate opposite effects of TOG choice for the two different TOG frame conditions when considered separately.


