

Supplementary Materials for
Fewer but Poorer: Benevolent Partiality in Prosocial Preferences

Table of Contents

Stimuli and Procedure in Study 1	1
Stimuli and Procedure in Study 2A	2
Stimuli and Procedure in Study 2B.....	4
Stimuli and Procedure in Study 3	6
Study S1 (allocation).....	8
Study S2 (no donation option).....	10
Study S3 (cause of disadvantage).....	12

Stimuli and Procedure in Study 1

The following presents the scenario wording that participants read.

“Thanks for your participation. As part of this study, we will donate \$100 to a charity.

On the next page, you will read about two different charities, and you will select the charity that you’d like us to donate the \$100 to. We will donate the \$100 to the charity that is selected by most participants in this study. Note that these are real, actual charities, and your decision is real. At the end of the survey we’ll give you a link to the webpage where we will publish the proof of payment.

Please proceed to read the information about the two charities and make your choice. Please read the description of these charities carefully.”

Control Condition

	The END Fund	The Schistosomiasis Control Initiative
What They Do	This charity delivers treatments for neglected tropical diseases across several countries, by partnering up with local governments and pharmaceutical companies.	This charity delivers treatments for neglected tropical diseases across several countries, by partnering up with local governments and pharmaceutical companies.
Who They Work With	In the past, the END Fund has successfully operated in Ethiopia, one of the countries with the lowest Human Development Index , providing treatments for parasitic and bacterial infectious diseases.	In the past, the SCI Foundation has operated successfully in Nigeria, one of the countries with the lowest Human Development Index , providing treatments for parasitic and bacterial infectious diseases.
About the Charity	GiveWell, an organization that compares the cost-effectiveness of donating to different charities, reports that it costs about \$2,500 to the END Fund to avert the death of an individual under five years old . Note that the lower this number is, the more cost-effective the charity is.	GiveWell, an organization that compares the cost-effectiveness of donating to different charities, reports that it costs about \$1,100 to the SCI Foundation to avert the death of an individual under five years old . Note that the lower this number is, the more cost-effective the charity is.

Disadvantage Condition

	The END Fund	The Schistosomiasis Control Initiative
What They Do	This charity delivers treatments for neglected tropical diseases across several countries, by partnering up with local governments and pharmaceutical companies.	This charity delivers treatments for neglected tropical diseases across several countries, by partnering up with local governments and pharmaceutical companies.
Who They Work With	In the past, the END Fund has successfully operated in Ethiopia , a country with a GDP per capita of \$870 and a 49% literacy rate , providing treatments for parasitic and bacterial infectious diseases.	In the past, the SCI Foundation has operated successfully in Nigeria , a country with a GDP per capita of \$1,990 and a 60% literacy rate , providing treatments for parasitic and bacterial infectious diseases.
About the Charity	GiveWell, an organization that compares the cost-effectiveness of donating to different charities, reports that it costs about \$2,500 to the END Fund to avert the death of an individual under five years old . Note that the lower this number is, the more cost-effective the charity is.	GiveWell, an organization that compares the cost-effectiveness of donating to different charities, reports that it costs about \$1,100 to the SCI Foundation to avert the death of an individual under five years old . Note that the lower this number is, the more cost-effective the charity is.

After answering the DV (The End Fund = 1, Schistosomiasis Control Initiative = 0), manipulation check, and the comprehension check (The End Fund = 0, Schistosomiasis Control Initiative = 1), we also asked participants’ Gender, Age, and Nationality. At the end of the study, we thanked participants and told them that the proof of the donation will be available online (<https://tinyurl.com/y9lbwh2n>) in the following weeks.

Stimuli and Procedure in Study 2A

The following presents the scenario wording that participants read.

“Please read the scenario below, imagine you are in the situation and answer the questions as realistically as possible.

Imagine that you are on your way to the city center. You pass by a charity donation stand of Help². Help² is a well-known charity which initiates donation projects to provide aid for developing countries in Africa. You saw posters displayed and stopped by to read what each donation project is about.

You found out that Help² is collecting money for two donation campaigns to fight a new type of virus (virus #A95421.674). Two neighboring countries in the third-world (Sangala and Naruba) recently experienced a major outbreak of this virus, which is transmitted through bites of a rare subspecies of *Aedes aegypti* mosquitos.

The virus does not spread from person to person and both countries successfully got rid of the mosquitos that initiated the disease. However, there are thousands of people who are currently infected and need an antidote to prevent almost certain death. Unfortunately, both Sangala and Naruba found themselves completely unprepared to deal with this emergency, and no citizen has immediate access to antidotes independent of their geographic location or financial situation.

Help² is collecting money from citizens of the first world to buy and ship antidotes to Sangala and Naruba. On the next page, you will see two tables which display information on both donation campaigns. The tables also include some basic information about these countries.

The tables on the next page show information about the two donation projects. Please note:

- For each project, the money collected by Help² will go exclusively towards buying and shipping antidotes for that specific country in the next month.
- Starting in January 2020, the UN will be able to provide free antidotes to both countries. However, in the meantime, the recently developed antidotes that charities will ship are the only one option available for citizens in both countries.
- The impact of your \$10 donation in terms of the number of antidotes (and thus lives saved) may differ between the two projects--some healthcare facilities are harder to reach, which increases shipping costs.
- So far, the two projects received about the same amount of money.

Please proceed when you've understood these instructions.”

Control Condition

	Sangala	Naruba
About the Country	Sangala is one of the countries with the lowest Human Development Index.	Naruba is one of the countries with the lowest Human Development Index.
About the Donation Project	Every 10 dollars donated to Sangala saves 2 to 4 lives on average.	Every 10 dollars donated to Naruba saves 4 to 6 lives on average.

Disadvantage condition

	Sangala	Naruba
About the Country	Sangala is a third-world country with a GDP per capita of \$870 and a 49% literacy rate.	Naruba is a third-world country with a GDP per capita of \$1,990 and a 60% literacy rate.
About the Donation Project	Every 10 dollars donated to Sangala saves 2 to 4 lives on average.	Every 10 dollars donated to Naruba saves 4 to 6 lives on average.

After choosing whom to donate their \$10 to (Sangala = 1, Naruba = 0), participants filled out the following perceived conflict measures: “How difficult was it for you to decide between the two projects?”, “How certain were you about which project to choose?” (reverse-coded), “How conflicted did you feel while choosing between the two projects?”. Scores on the three items were averaged ($\alpha = .86$). These three items used a 9-point Likert scale (1 = not at all difficult/very certain/not at all conflicted to 9 = very difficult/not at all certain/very conflicted). Finally, participants stated their Gender and Age.

Amendment: Upon submission we noticed that our preregistration form erroneously stated that “participants will be informed that a company is planning to support a donation project and want their customers to choose which project to support”. This reflected an alternative company/customers scenario we had considered. The actual study referred instead to a non-profit organization and to donors.

Stimuli and Procedure in Study 2B

The following presents the scenario wording that participants read.

“Please read the scenario below, imagine you are in the situation and answer the questions as realistically as possible.

Imagine that you are on your way to the city center. You pass by a charity donation stand of Help². Help² is a well-known charity which initiates donation projects to provide aid for developing countries in Africa. You saw posters displayed and stopped by to read what each donation project is about.

You found out that Help² is collecting money for two donation campaigns to fight a new type of virus (virus #A95421.674). Two neighboring countries in the third-world (Sangala and Naruba) recently experienced a major outbreak of this virus, which is transmitted through bites of a rare subspecies of *Aedes aegypti* mosquitos.

The virus does not spread from person to person and both countries successfully got rid of the mosquitos that initiated the disease. However, there are thousands of people who are currently infected and need an antidote to prevent almost certain death. Unfortunately, both Sangala and Naruba found themselves completely unprepared to deal with this emergency, and no citizen has immediate access to antidotes independent of their geographic location or financial situation.

Help² is collecting money from citizens of the first world to buy and ship antidotes to Sangala and Naruba. On the next page, you will see two tables which display information on both donation campaigns. The tables also include some basic information about these countries.

The tables on the next page show information about the two donation projects. Please note:

- For each project, the money collected by Help² will go exclusively towards buying and shipping antidotes for that specific country in the next month.
- Starting in 2019, the UN will be able to provide free antidotes to both countries. However, in the meantime, the recently developed antidotes that charities will ship are the only one option available for citizens in both countries.
- The impact of your \$10 donation in terms of the number of antidotes (and thus lives saved) may differ between the two projects--some healthcare facilities are harder to reach, which increases shipping costs.

Please proceed when you've understood these instructions.”

Control Condition

	Sangala	Naruba
About the Country	Sangala is one of the countries with the lowest Human Development Index.	Naruba is one of the countries with the lowest Human Development Index.
About the Donation Project	Every 10 dollars donated to Sangala saves 2 to 4 lives on average.	Every 10 dollars donated to Naruba saves 4 to 6 lives on average.

Disadvantage condition

	Sangala	Naruba
About the Country	Sangala is a third-world country with a GDP per capita of \$870 and a 49% literacy rate.	Naruba is a third-world country with a GDP per capita of \$1,990 and a 60% literacy rate.
About the Donation Project	Every 10 dollars donated to Sangala saves 2 to 4 lives on average.	Every 10 dollars donated to Naruba saves 4 to 6 lives on average.

After choosing whom to donate their \$10 to (Sangala = 1, Naruba = 0), participants filled out the following process measures: “Donating to which campaign, if any, would make the third world a more equal place?”, “Donating to which campaign, if any, would make the third world a fairer place?”, and “Donating to which campaign, if any, would most reduce inequality?”. These three items used a 7-point Likert scale (1 = Sangala, 7 = Naruba). Finally, participants stated their Gender and Age.

Stimuli and Procedure in Study 3

The following presents the scenario wording that participants read. The part in brackets is only shown to the participants in the Ranking first condition. All the remaining parts of the survey were shown to all participants.

“Imagine that you are on your way to the city center. You pass by a charity donation stand of Help². Help² is a well-known charity which initiates donation projects to provide aid for developing countries in Africa. You saw posters displayed and stopped by to read what each donation project is about.

You found out that Help² is collecting money for two donation campaigns to fight a new type of virus (virus #A95421.674). Two neighboring countries in the third-world (Sangala and Naruba) recently experienced a major outbreak of this virus, which is transmitted through bites of a rare subspecies of *Aedes aegypti* mosquitos.

The virus does not spread from person to person and both countries successfully got rid of the mosquitos that initiated the disease. However, there are thousands of people who are currently infected, and need an antidote to prevent almost certain death. Unfortunately, both Sangala and Naruba found themselves completely unprepared to deal with this emergency, and no citizen has immediate access to antidotes independent of their geographic location or financial situation.

Help² is collecting money from citizens of the first world to buy and ship antidotes to Sangala and Naruba. You decided to donate \$10. People interested in donating can choose whether to donate to one project or the other. Note that:

- For each project, the money collected by Help² will go exclusively towards buying and shipping antidotes for that specific country in the next month. Starting February 2019, the UN will be able to provide free antidotes to both countries. However, in the meantime, the recently developed antidotes that charities will ship are the only one option available for citizens in both countries.
- The impact of a donation in terms of number of antidotes (and thus lives saved) may differ between the two projects--some healthcare facilities are harder to reach, which increases shipping costs and thus decrease the lives-saved impact of a given donation.
- So far, the two projects received about the same amount of money.

Please proceed when you've understood these instructions.”

In choice only condition, participants directly proceeded to make a choice between these two projects whereas in the experimental condition, participants were given the text in brackets prior to making a choice:

[We want to understand how you would make a decision about which project to donate to. In particular, Help² describes the two projects and the two countries along a few factors, and we are interested in how important each factor is in the decision of which project to donate to. In other words, if you had to decide where to ship the antidotes that your \$10 donation would allow buying, how would you go about that decision? Please rank the five factors below from 1 (most important factor in my decision) to 5 (least important factor in my decision).

- Lives saved per donation
- Population of the country
- Unemployment rate of the country
- Literacy rate of the country
- Average income in the country

Please explain how you decide on this ranking, i.e., why you think certain factors are more important than others. Please take your time in providing your explanation.] [RANKING FIRST CONDITION]

Participants were asked which campaign to donate their 10 dollars to (Sangala = 1, Naruba = 0).

They then proceeded with the comprehension check (can be found below), Gender, Age, and

Country of residence.

“Based on the donation projects that you read about, what will the collected donation be used for? Your honesty is appreciated, and your answer will not affect your payment. Please select the one(s) that apply.

- For buying and shipping antidotes (1)
- For improving the literacy rate (2)
- For lowering the unemployment rate (3)
- I'm not sure (4)
- Other, please specify (5)”

Study S1 (allocation, reported in the discussion of Study 2A)

We conducted Study S1 to replicate our effect when participants are asked to allocate \$10 across projects instead of choosing one donation project. We recruited 202 participants (60.9% female, mean age = 34.0, English as first language) from Prolific.

Methods

The following presents the scenario wording that participants read.

“Imagine that you are on your way to the city center. You pass by a charity donation stand of Help². Help² is a well-known charity which initiates donation projects to provide aid for developing countries in Africa. You saw posters displayed and stopped by to read what each donation project is about.

You found out that Help² is collecting money for two donation campaigns to fight a new type of virus (virus #A95421.674). Two neighboring countries in the third-world (Sangala and Naruba) recently experienced a major outbreak of this virus, which is transmitted through bites of a rare subspecies of *Aedes aegypti* mosquitos.

The virus does not spread from person to person and both countries successfully got rid of the mosquitos that initiated the disease. However, there are thousands of people who are currently infected, and need an antidote to prevent almost certain death. Unfortunately, both Sangala and Naruba found themselves completely unprepared to deal with this emergency, and no citizen has immediate access to antidotes independent of their geographic location or financial situation.

Help² is collecting money from citizens of the first world to buy and ship antidotes to Sangala and Naruba. You decided to donate \$10. People interested in donating can choose how to allocate the money across projects (entirely to either project or split in any way). Note that:

- For each project, the money collected by Help² will go exclusively towards buying and shipping antidotes for that specific country in the next month. Starting 2018, the UN will be able to provide free antidotes to both countries. However, in the meantime, the recently developed antidotes that charities will ship are the only one option available for citizens in both countries.
- The impact of a donation in terms of number of antidotes (and thus lives saved) may differ between the two projects--some healthcare facilities are harder to reach, which increases shipping costs and thus decrease the lives-saved impact of a given donation.
- So far, the two projects received about the same amount of money.

Please proceed when you've understood these instructions.”

Instead of asking participants to choose a project (Sangala versus Naruba), in Study S3, we instead used an allocation question as our dependent variable:

“How do you want to allocate your \$10? You can allocate your \$10 across the Sangala and Naruba projects in any way you prefer. The money that you will give to each project will go exclusively towards the antidotes. For each of the projects, please type a number between 0 and 10. The total needs to be 10.”

Sangala Project		Naruba Project	
Lives saved per \$10	2-4	Lives saved per \$10	4-6
Population	8.2 million	Population	8.5 million
Unemployment rate	18%	Unemployment rate	8%
Literacy Rate	55%	Literacy Rate	67%
Average income	125 per month	Average income	300 per month

Finally, we asked participants to complete the comprehension check (the same measure used in Study 4), and several demographics measures (i.e., Gender, Age, and Country).

Results

86.6% of the participants did not donate the entire \$10 to the donation project which would save more lives. On average, participants donated \$4.56 (SD = \$2.51) to the least effective project, saving fewer lives than they could. This conclusion also held when the analysis was run on participants who correctly answered the comprehension check (N = 184, M = \$4.45, SD = \$2.50).

Study S2 (No donation option, reported in the discussion of Study 2A)

Across Studies 1-3, we always asked participants to choose one project over the other one (e.g., Sangala versus Naruba). The objective of Study S2 was to show evidence for benevolent partiality when the participants were given an option not to donate. We recruited 202 participants (63.4% female, mean age = 33.3, English as first language) from Prolific.

Methods

The following presents the scenario wording that participants were given.

“Imagine that you are on your way to the city center to attend your friend's birthday party. You have no wallet and only \$10 with you, that you planned on using to buy your friend a small gift. You pass by a charity donation stand of Help². Help² is a well-known charity which initiates donation projects to provide aid for developing countries in Africa. You saw posters displayed and stopped by to read what each donation project is about.

You found out that Help² is collecting money for two donation campaigns to fight a new type of virus (virus #A95421.674). Two neighboring countries in the third-world (Sangala and Naruba) recently experienced a major outbreak of this virus, which is transmitted through bites of a rare subspecies of *Aedes aegypti* mosquitos.

The virus does not spread from person to person and both countries successfully got rid of the mosquitos that initiated the disease. However, there are thousands of people who are currently infected, and need an antidote to prevent almost certain death. Unfortunately, both Sangala and Naruba found themselves completely unprepared to deal with this emergency, and no citizen has immediate access to antidotes independent of their geographic location or financial situation.

Help² is collecting money from citizens of the first world to buy and ship antidotes to Sangala and Naruba. You think that you can donate 10 dollars. People interested in donating can choose whether to donate to one project or the other. Note that:

- For each project, the money collected by Help² will go exclusively towards buying and shipping antidotes for that specific country in the next month. Starting 2018, the UN will be able to provide free antidotes to both countries. However, in the meantime, the recently developed antidotes that charities will ship are the only one option available for citizens in both countries.
- The impact of a donation in terms of number of antidotes (and thus lives saved) may differ between the two projects--some healthcare facilities are harder to reach, which increases shipping costs and thus decrease the lives-saved impact of a given donation.
- So far, the two projects received about the same amount of money.

Please proceed when you've understood these instructions.”

Then, participants proceeded to the dependent measure and were asked to choose what they want to do with their 10 dollars:

- donating antidotes to the Sangala project (1)
- donating antidotes to the Naruba project (0)
- buy the gift for your friend on the way to the party (2)”

Sangala Project	
Lives saved per \$10	2-4
Population	8.2 million
Unemployment rate	18%
Literacy Rate	55%
Average income	125 per month

Naruba Project	
Lives saved per \$10	4-6
Population	8.5 million
Unemployment rate	8%
Literacy Rate	67%
Average income	300 per month

Finally, participants complete the comprehension check (the same measure used in Study 4), and several demographics measures (i.e., Gender, Age, and Country).

Results

We were interested whether, among people who chose to donate, a substantial portion would choose to donate towards more disadvantaged Sangala, despite the fact that donating to Naruba would allow saving more lives. We found that 22.8% of participants chose to donate to Sangala, which is in fact more than the 18.8% of the participants who donated to Naruba (We speculate that among the 58.4% of participants who chose to donate, many reasoned that they could donate money other than the one they designated towards the gift). These results did not change when we ran the analysis only with participants who passed the comprehension check (N = 183) as 23.0% donated to Sangala and 18.6% donated to Naruba.

Study S3 (Cause of disadvantage, reported in the General Discussion)

Study S3 tested whether consumers' partiality towards the disadvantaged depends on whether disadvantage is due to controllable or uncontrollable causes. We recruited 201 participants (59.7% female, mean age = 32.9, English as first language) from Prolific.

Methods

The following presents the scenario wording that participants were given.

“Imagine that you are on your way to the city center. You pass by a charity donation stand of Help². Help² is a well-known charity which initiates donation projects to provide aid for developing countries in Africa. You saw posters displayed and stopped by to read what each donation project is about.

You found out that Help² is collecting money for two donation campaigns to fight a new type of virus (virus #A95421.674). Two neighboring countries in the third-world (Sangala and Naruba) recently experienced a major outbreak of this virus, which is transmitted through bites of a rare subspecies of *Aedes aegypti* mosquitos.

The virus does not spread from person to person and both countries successfully got rid of the mosquitos that initiated the disease. However, there are thousands of people who are currently infected, and need an antidote to prevent almost certain death. Unfortunately, both Sangala and Naruba found themselves completely unprepared to deal with this emergency, and no citizen has immediate access to antidotes independent of their geographic location or financial situation.

Help² is collecting money from citizens of the first world to buy and ship antidotes to Sangala and Naruba. You decided to donate \$10. People interested in donating can choose whether to donate to one project or the other. Note that:

- For each project, the money collected by Help² will go exclusively towards buying and shipping antidotes for that specific country in the next month. Starting 2018, the UN will be able to provide free antidotes to both countries. However, in the meantime, the recently developed antidotes that charities will ship are the only one option available for citizens in both countries.
- So far, the two projects received about the same amount of money.

Please proceed when you've understood these instructions.”

In a between participants design, the cause of socioeconomic differences was either described as controllable (i.e., one country over-harvested the soil, the other was conscientious) or as uncontrollable (i.e., the two countries had soils of different quality). Note that the text that was used for uncontrollable condition was shown in brackets.

“Please note that:

-Sangala and Naruba are similar in most ways, although their socioeconomic situation is somewhat different. Both economies depend very strongly on agriculture, but the two countries used their natural resources in different ways.

In particular, whereas Naruba followed closely the guidelines provided by the World Agricultural Outlook Board, Sangala did not. For instance, Naruba closely observed the recommended minimum length of time that must elapse between applying agricultural chemicals to a crop and the harvest. This allowed for high soil productivity and higher returns from agricultural activities. In Sangala, instead, people over-harvested the soil, which over the years resulted in soil degradation and decreased productivity. In sum, the socioeconomic differences between the two countries are an effect of how conscientious the two countries were in using their natural resources.

[In particular, whereas Naruba has a natural soil type that is rich and fertile, Sangala does not. Naruba’s natural soil is rich in organic matter and has high calcium levels. This results in high soil productivity and higher returns from agricultural activities. In Sangala, instead, the natural soil is dry and low in calcium level, which results in low soil productivity. The socioeconomic differences between the two countries are an effect of where they are geographically located.]

- The impact of a donation in terms of number of antidotes (and thus lives saved) may differ between the two projects--some healthcare facilities are harder to reach, which increases shipping costs and thus decrease the lives-saved impact of a given donation.”

Participants then proceeded to select which campaign to donate their 10 dollars to (Sangala = 1, Naruba = 0), manipulation check (“Based on the two countries' description, do you think their socioeconomic differences were more due to luck or to their own actions?”, 1 = more to luck, 7 = more to their actions), comprehension check (the same measure used in Study 4), and several demographics measures (i.e., Gender, Age, and Country of residence).

Results

The manipulation was successful, with participants indicating that socioeconomic differences were more due to the countries’ actions (vs. luck) in the controllable cause condition ($M = 3.90$, $SD = .97$) than in the uncontrollable cause condition ($M = 2.30$, $SD = 1.16$, $t(199) = 10.62$, $p < .001$, $d = 1.50$).

We found that benevolent partiality responded to the controllability of disadvantage, i.e., participants were less likely to donate to the project that saved more lives when the cause of disadvantage was controllable (44.6%) than when it was uncontrollable (62.0%; $\chi^2(1) = 5.46, p = .019, \varphi = .19$). This result held when restricting the analysis to participants who passed the comprehension check ($N = 183$; 45.16% vs. 66.3%; $\chi^2(1) = 5.37, p = .02, \varphi = .17$).