

# Appendix

## The influence of identifiability and singularity in moral decision making

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# 1 Experimental instructions

## 1.1 Instructions exp. SWE I

*[Translated from Swedish]*

Before responding to the questions in this survey, please read carefully the instructions below.

An international organization “UNICEF” offers the possibility to vaccinate vulnerable children in areas where measles is widespread. **Each day, over 600 children die from measles.** Vaccination is the only way to entirely protect children against the disease, and UNICEF is the world's largest buyer of measles vaccines.

You will be presented with a specific scenario with certain specified conditions. Your task is to make a choice how to distribute measles vaccines between two alternatives. Vaccines will be funded in accordance with your decision. It is thus a REAL decision situation. Your choice will result in UNICEF providing vaccines to the featured children and other children in similar situations.

### IMPORTANT:

- The study contains two parts.
- Do not proceed to Part II before you completed Part I.
- Do not go back and change your answer in Part I when you have moved on to Part II.

Before you read the question and make your choice, fill in the background information below:

**Age:**

**Program/Course** (*specify which program and / or the course*):

**Sex:**

Female

Male

If you have questions concerning the survey, do not hesitate to contact me at:  
johanna.wiss@liu.se

## Treatment 1 (1 id vs. 5 non-id)



*Benge*

Benge is five years old and lives in Kenya. He lives in a poor and inaccessible mountain village where outbreaks of measles frequently occur. The disease can cause serious injury and even death. We will donate enough money for one dose of measles vaccine that protects Benge from the disease and its side effects. A vaccination offers him an opportunity for a better and more secure future.

For the same amount of money we can vaccinate five children living in another more accessible, poor area in Kenya.

**You can choose to deny Benge the vaccine in favor of the other children. Do you choose to give Benge the vaccine?**

YES

NO

*When you answered yes or no, please proceed to Part II.*

## **Treatment 2 (1 non-id vs. 5 non-id)**

A child is living in a poor and inaccessible mountain village in Kenya, where outbreaks of measles frequently occur. The disease can cause serious injury and even death. We will donate enough money for one dose of measles vaccine that protects the child from the disease and its side effects. A vaccination offers the child an opportunity for a better and more secure future.

For the same amount of money we can vaccinate five children living in another more accessible, poor area in Kenya.

**You can choose to deny the child in the mountain village the vaccine in favor of the other children. Do you choose to give the child in the mountain village the vaccine?**

YES

NO

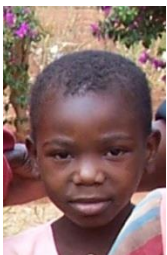
*When you answered yes or no, please proceed to Part II.*

### Treatment 3 (1 id vs. 5 id)



*Benge*

Benge is five years old and lives in Kenya. He lives in a poor and inaccessible mountain village where outbreaks of measles frequently occur. The disease can cause serious injury and even death. We will donate enough money for one dose of measles vaccine that protects Benge from the disease and its side effects. A vaccination offers him an opportunity for a better and more secure future.



*Sueva*



*Mutaka*



*Jallo*



*Maluf*



*Nelson*

For the same amount of money we can vaccinate the five-year-olds Sueva, Mutaka, Jallo, Maluf, and Nelson living in another more accessible, poor area in Kenya.

**You can choose to deny Benge the vaccine in favor of Sueva, Mutaka, Jallo, Maluf, and Nelson. Do you choose to give Benge the vaccine?**

YES

NO

*When you answered yes or no, please proceed to Part II.*

## Treatment 4 (1 non-id vs. 5 id)

A child is living in a poor and inaccessible mountain village in Kenya, where outbreaks of measles frequently occur. The disease can cause serious injury and even death. We will donate enough money for one dose of measles vaccine that protects the child from the disease and its side effects. A vaccination offers the child an opportunity for a better and more secure future.



*Sueva*



*Mutaka*



*Jallo*



*Maluf*



*Nelson*

For the same amount of money we can vaccinate the five year olds Sueva, Mutaka, Jallo, Maluf, and Nelson living in another more accessible, poor area in Kenya.

**You can choose to deny the child in the mountain village the vaccine in favor of Sueva, Mutaka, Jallo, Maluf, and Nelson. Do you choose to give the child in the mountain village the vaccine?**

YES

NO

*When you answered yes or no, please proceed to Part II.*

## Part II (all treatments)

**How difficult did you find the question was to answer?**

|                              |                          |                          |                          |                          |                          |
|------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/>     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1<br>Not at all<br>difficult | 2                        | 3                        | 4                        | 5                        | 6<br>Very<br>difficult   |

**How much sympathy did you feel for Benge [the child in the mountain village]?**

|                          |                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1<br>No<br>sympathy      | 2                        | 3                        | 4                        | 5                        | 6<br>Much<br>sympathy    |

**How much sympathy did you feel for Sueva, Mutaka, Jallo, Maluf and Nelson [the other children]?**

|                          |                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1<br>No<br>sympathy      | 2                        | 3                        | 4                        | 5                        | 6<br>Much<br>sympathy    |

**Comments on the task (optional):**



## 1.2 Instructions exp. USA and SWE II

Before responding to the questions in this survey, please read carefully the instructions below.

The United Nations Children's Fund (UNICEF) offers the possibility to vaccinate vulnerable children in areas where measles is widespread. **Each day, over 430 children die from measles.** Vaccination is the only way to entirely protect children against the disease, and UNICEF is the world's largest buyer of measles vaccine.

You will be presented with a specific scenario with certain specified conditions. Your task is to make a choice on how to distribute measles vaccines between two alternatives. We will fund vaccines in accordance with your decision. Your choice will result in UNICEF providing vaccines to children in need.

### 1. Year of birth?

|  |  |  |  |
|--|--|--|--|
|  |  |  |  |
|--|--|--|--|

### 2. Are you male or female?

- Male
- Female

**Programme/Course** (*specify which program and / or the course*):

.....

If you have any questions concerning the survey, please contact me at:  
johanna.wiss@liu.se

## Treatment 1 (1 id vs. 5 non-id)



*This is Bengé*

Bengé is five years old and lives in Kenya. He lives in an area where outbreaks of measles frequently occur. The disease can cause serious injury and even death. We will donate one dose of measles vaccine that protects Bengé from the disease and its side effects. A vaccination offers him an opportunity for a better and more secure future.

Instead of vaccinating Bengé it is possible to vaccinate five other children, living in a similar situation as Bengé.

Right now the vaccine is designated to Bengé. However, you can choose to deny Bengé the vaccine in favor of the other children.

**Do you choose to give Bengé the vaccine?**

Yes

No

## **Treatment 2 (1 non-id vs. 5 non-id)**

A child is living in Kenya, in an area where outbreaks of measles frequently occur. The disease can cause serious injury and even death. We will donate one dose of measles vaccine that protects the child from the disease and its side effects. A vaccination offers the child an opportunity for a better and more secure future.

Instead of vaccinating the single child it is possible to vaccinate five other children, living in a similar situation as the single child.

Right now the vaccine is designated to the single child. However, you can choose to deny the single child the vaccine in favor of the other children.

**Do you choose to give the single child the vaccine?**

Yes

No

### Treatment 3 (1 id vs. 5 id)



*This is Benge*

Benge is five years old and lives in Kenya. He lives in an area where outbreaks of measles frequently occur. The disease can cause serious injury and even death. We will donate one dose of measles vaccine that protects Benge from the disease and its side effects. A vaccination offers him an opportunity for a better and more secure future.



*This is: Sueva*



*Mutaka*



*Jallo*



*Maluf*



*Nelson*

Instead of vaccinating Benge it is possible to vaccinate the children Sueva, Mutaka, Jallo, Maluf, and Nelson, living in a similar situation as Benge

Right now the vaccine is designated to Benge. However, you can choose to deny Benge the vaccine in favor of Sueva, Mutaka, Jallo, Maluf, and Nelson.

**Do you choose to give Benge the vaccine?**

Yes

No

## Treatment 4 (1 non-id vs. 5 id)

A child is living in Kenya, in an area where outbreaks of measles frequently occur. The disease can cause serious injury and even death. We will donate one dose of measles vaccine that protects the child from the disease and its side effects. A vaccination offers the child an opportunity for a better and more secure future.



*This is: Sueva*



*Mutaka*



*Jallo*



*Maluf*



*Nelson*

Instead of vaccinating the single child it is possible to vaccinate the children Sueva, Mutaka, Jallo, Maluf, and Nelson, living in a similar situation as the single child.

Right now the vaccine is designated to the single child. However, you can choose to deny the single child the vaccine in favor of Sueva, Mutaka, Jallo, Maluf, and Nelson.

**Do you choose to give the single child the vaccine?**

Yes

No

## **Part II**

### **All treatments**

Do you believe that your choice will result in a real donation?

Not convinced at all-Very convinced (1-6)

How difficult did you find the question was to answer?

Not at all difficult-Very difficult (1-6)

How much sympathy did you feel for Bengé?

No sympathy-Much sympathy (1-6)

How much sympathy did you feel for the five children?

No sympathy-Much sympathy (1-6)

I felt sympathy for Bengé and used these feelings to guide my choice.

Disagree-agree (1-6)

I felt sympathy for the five children and used these feelings to guide my choice.

Disagree-agree (1-6)

My feelings for Bengé made me feel less intensely for the five children.

Disagree-agree (1-6)

My feelings for Bengé made me feel more intensely for the five children.

Disagree-agree (1-6)

My feelings for the five children made me feel less intensely for Bengé.

Disagree-agree (1-6)

My feelings for the five children made me feel more intensely for Bengé.

Disagree-agree (1-6)

I felt that Bengé should not get a "special treatment".

Disagree-agree (1-6)

I felt that the five children should not get a "special treatment".

Disagree-agree (1-6)

### **Only treatment 1 and 4**

The fact that Bengé was identified with name and picture made me feel less intensely for him than for the other five children.

Disagree-agree (1-6)

The fact that Bengé was identified with name and picture made me feel more intensely for him than for the other five children.

Disagree-agree (1-6)

The fact that the five children were not identified with names and pictures made me feel less intensely for them than for Bengé.

Disagree-agree (1-6)

The fact that the five children were not identified with names and pictures made me feel more intensely for them than for Bengé.

Disagree-agree (1-6)

### **All treatments**

Do you have any thoughts regarding the questions that you would like to share?

### 1.3 Instructions exp. USA – reversed order

#### TREATMENT 1 (reverse order)

Five children are living in Kenya, in an area where outbreaks of measles frequently occur. The disease can cause serious injury and even death. We will donate five doses of measles vaccine that protects the children from the disease and its side effects. A vaccination offers the children an opportunity for a better and more secure future.



*This is Benge*

Instead of vaccinating the five children it is possible to vaccinate the child Benge, living in a similar situation as the five children.

Right now the vaccine is designated to Benge. However, you can choose to deny Benge the vaccine in favor of the other children.

**Do you choose to give Benge the vaccine?**

Yes

No

*[The same structure was used for treatment 2-4.]*



## 2 Additional analysis

### 2.1 Interaction analysis

*Table 1: Interaction analysis of the effect of identifying the single child and location of experiment*

|                                      | USA and SWE I |        |
|--------------------------------------|---------------|--------|
|                                      | Estimate      | sig.   |
| Intercept                            | -0,2213       | 0,4856 |
| Single child identified              | 0,1871        | 0,2620 |
| Group identified                     | -0,4120       | 0,0136 |
| Age                                  | -0,0081       | 0,3479 |
| Female                               | 0,0998        | 0,5560 |
| Exp. SWE I (Exp. USA as ref)         | -0,0511       | 0,7666 |
| Single child identified * exp. SWE I | -0,6120       | 0,0002 |
| Group identified * exp. SWE I        | 0,0496        | 0,7665 |

|                                       | USA and SWE II |        |
|---------------------------------------|----------------|--------|
|                                       | Estimate       | sig.   |
| Intercept                             | -0,4937        | 0,1398 |
| Single child identified               | 0,3696         | 0,0565 |
| Group identified                      | -0,4228        | 0,0301 |
| Age                                   | -0,0010        | 0,2566 |
| Female                                | 0,0897         | 0,6401 |
| Exp. SWE II (exp. USA as ref)         | -0,4110        | 0,0310 |
| Single child identified * exp. SWE II | -0,4335        | 0,0256 |
| Group identified * exp. SWE II        | 0,0406         | 0,8340 |

|                               | USA and SWEDEN (SWE I + SWE II) |        |
|-------------------------------|---------------------------------|--------|
|                               | Estimate                        | sig.   |
| Intercept                     | -0,0462                         | 0,9138 |
| Single child identified       | 0,8116                          | 0,0004 |
| Group identified              | -0,4818                         | 0,0362 |
| Age                           | -0,0123                         | 0,1513 |
| Female                        | 0,2189                          | 0,1445 |
| SWE (USA as ref)              | -0,4604                         | 0,1487 |
| Single child identified * SWE | -1,1116                         | 0,0002 |
| Group identified * SWE        | 0,0954                          | 0,7491 |

## 2.2 Mean values for follow-up questions on perceived emotions in exp. SWE I-II and exp. USA

Table 2: Mean values for follow-up questions on perceived emotions in exp. SWE I-II and exp. USA

| Treatment 1 – 4 (T1-T4)   | SWE I |      |      |      | SWE II |      |      |      | USA  |      |      |      |
|---|-------|------|------|------|--------|------|------|------|------|------|------|------|
|   | T1    | T2   | T3   | T4   | T1     | T2   | T3   | T4   | T1   | T2   | T3   | T4   |
| How difficult did you find the question was to answer?  | 4.3   | 4.21 | 4.46 | 3.99 | 3.97   | 3.84 | 3.87 | 4.05 | 3.94 | 3.79 | 3.81 | 3.47 |
| How much sympathy did you feel for the single child [Benge]?  | 5.12  | 4.96 | 5.24 | 4.79 | 4.58   | 4.43 | 4.98 | 4.9  | 4.96 | 4.73 | 5.02 | 5    |
| How much sympathy did you feel for the five children [Sueva, Mutaka, Jallo, Maluf, and Nelson]?                                       | 4.85  | 4.44 | 4.88 | 4.65 | 4.18   | 4.25 | 4.68 | 5.02 | 4.9  | 4.86 | 4.99 | 4.89 |
| My feelings for the single child [Benge] made me feel more intensely for the five children [Sueva, Mutaka, Jallo, Maluf, and Nelson]. | .     | .    | .    | .    | 2.47   | 2.07 | 2.16 | 2.33 | 3.39 | 3.5  | 3.23 | 3.26 |
| I felt that the single child [Benge] should not get a "special treatment".  | .     | .    | .    | .    | 4.15   | 3.1  | 3.6  | 3.92 | 3.4  | 3.33 | 3.13 | 3.56 |
| Do you believe that your choice will result in a real donation?   | .     | .    | .    | .    | 3.22   | 3.3  | 2.81 | 3.45 | 3.41 | 3.51 | 3.43 | 3.46 |