Warm Glow and Evaluation Modes: Effects of Separate and Joint Evaluation on Anticipated Warm Glow from Charitable Giving

John Nyzell

Supervisors: Fredrik Björklund, Arvid Erlandsson
Abstract

The present research tests how different evaluation modes (separate and joint) affect anticipated warm glow resulting from helping behavior. Warm glow can be defined as the positive feelings that arise from helping behavior. In two survey studies, participants were asked to anticipate how strongly they thought they would experience warm glow-related feelings in different situations in which they donated different amounts of money to charity. Half of the participants of each study only saw one specific amount of money (separate evaluation mode) while the other half saw several different amounts of money (joint evaluation mode). When the participants were in joint evaluation mode, both studies found significant differences in anticipated warm glow between all the different amounts of money donated. In separate evaluation mode, only the difference in anticipated warm glow between donating nothing and donating something was significant. The studies also indicated that imagining relatively large donations (200, 400 and 600 SEK) leads to higher anticipated warm glow in joint than in separate evaluation mode, while the reverse is true when the donations are smaller (20, 40 and 60 SEK). These results show us that the way information is presented can affect the affective rewards of generous behavior significantly.

Keywords: General Evaluability Theory, warm glow, evaluation modes, giving, charity
Warm Glow and Evaluation Modes: Effects of Separate and Joint Evaluation on Anticipated Warm Glow from Charitable Giving

In this introduction, we will first take a look at the various psychological theories put forth to explain why humans engage in helping behavior, with focus on the negative state relief model and the warm glow model of giving – the theory that people largely donate money because of the positive emotions they get out of it. I will then briefly explain the concept of evaluability, focusing on general evaluability theory (Hsee & Zhang, 2010) and a study which measured anticipated happiness in a non-giving situation (Hsee & Zhang, 2004).

Finally, I will combine the concept of warm glow with the concept of evaluability and briefly explain the two studies and their hypotheses. The main hypothesis is that people's anticipated warm glow will be more affected by the size of their donations when they are in a high evaluability state (joint evaluation) than when they are in a low evaluability state (separate evaluation mode.)

Helping

The main purpose of the studies contained within this paper is to explore how different evaluation modes affect anticipated warm glow resulting from helping behavior. The concepts of evaluation and evaluation modes will be more thoroughly explored in the next part of this introduction. Focus will now be on the issues of helping in general and warm glow in particular.

Helping behavior and altruistic behavior are not synonyms, as one can help other people without having the actual welfare on the person as the ultimate goal of one's actions. Social recognition, respect and the prospect of being helped in turn (Reddy, 1980; Dovidio & Penner, 2001) are all factors that might explain helping behavior. Even helping people because we feel good about it can be said to be fundamentally egoistic (Batson, 2010). People are often not aware of what actually motivates them and might make up post hoc explanations for their behavior (Ross & Nisbett, 1991).

According to the theory of psychological egoism, all human behavior is motivated by self-interest in one form or another. Seemingly selfless acts of altruism are therefore as egoistic as any other acts, as altruism itself is a psychological impossibility (May, 2011). But psychological egoism in itself has little explanatory power since different selfish motives imply different things about when and how we choose to help. It is also not obvious exactly where the line between egoism and altruism is drawn. Some researchers (Piliavin & Charng, 1990; Batson & Oleson, 1991) believe that there is indeed such a thing as real altruism, while others believe that all helping behavior is motivated by fundamentally egoistic motives (Dovidio et al., 2006), in one form or another.

Seemingly altruistic but fundamentally selfish behavior might be motivated by affective rewards. Different emotions naturally affect helping behavior in different ways, but two broad categories of
emotions related to helping have been identified for hundreds of years – desirable emotions we want to experience and undesirable emotions we want to avoid.

As Jeremy Bentham expressed it (Bentham, 1907, p. 1): “Nature has placed mankind under the governance of two sovereign masters, pain and pleasure. It is for them alone to point out what we ought to do, as well as to determine what we shall do.” In more modern psychological terms, “pain” and “pleasure” could be replaced with the more general terms “negative affect” and “positive affect”. However, it should be noted that recent research has complicated Bentham's theory a bit, and that a more instrumental approach to understanding why and when people want to experience certain emotions has been suggested (Tamir, 2009).

According to the negative state relief model (Cialdini, Kenrick & Baumann, 1982; Cialdini et al., 1987), seeing fellow human beings being harmed produces negative feelings that we are then motivated to rid ourselves of. Our experiences have told us that helping is an excellent way to get rid of negative emotions. In other words, according to this model, the primary reason we help others is not to help others, nor is it to appear to be moral, it is to put the lid on the negative feelings we experience when we see suffering in the world. This is a fundamentally egoistic theory of helping behavior, as the actual results of our actions are not all that important.

One study (Cialdini, Darby & Vincent, 1973) has shown that both harming someone else and seeing someone else being harmed increases the chance that a person will help someone in an entirely unrelated situation – except when they experience a positive event (in this case, being praised) between causing or seeing harm and being asked to help someone. In the latter situation, the probability that the person will help someone else actually decreases compared to a person who has experienced neither causing nor seeing harm. In other words, once relieved of their negative feelings, it appears that the participants of the study had little incentive to do good.

This model suggests that people will not help others if they do not believe that helping will relieve them of negative feelings, and indeed there are studies that suggest this to be true. In one study (Manucia, Baumann & Cialdini, 1984) participants were given a placebo they were told would artificially extend their emotions, so that people who were sad when they took the substance would feel sad for about 30 minutes, no matter what, while happy people would feel happy the same amount of time. A control group wasn't told this. Those in the control group acted like predicted by the negative state relief model (sad people were more likely to help than others) while those who were told the substance had an emotion-extending effect weren't more likely to help others if they were in a negative mood. This corroborates the theory that people help because they want to get rid of negative emotions. It also shows the effect of anticipated emotions on helping behavior, which is of some importance to the studies in this paper.
Finally, we come to the theory of warm glow. Closely related to the negative state relief model, it is another fundamentally “egoistic” theory of helping behavior. Warm glow can simply be described as the positive feelings one gets from helping others (Andreoni, 2006; Slovic & Västfjäll, 2010). These feelings are unrelated to other possible sources of positive emotions, like social prestige and the benefits of appearing to be a generous person, but instead purely come from the helping act itself (Cappellari et al., 2011). According to the warm glow theory of helping, being good feels good. People can help others not only to relieve themselves of unpleasant feelings but also to experience the pleasant emotion of having done something good, or being a good person.

The economist James Andreoni put forth the theory that the utility people get from donating to public goods is not restricted to the increase in the public good itself but may also include the very act of giving (Andreoni, 1990). Later research has shown that people are willing to “purchase” moral satisfaction by giving more money to causes associated with more moral satisfaction (Kahneman & Knetsch, 1992), just like they would purchase any other good.

The differences between the negative state relief model and the warm glow theory can be clearly illustrated by looking at Peter Singer's famous “drowning child” scenario (Singer, 2009). In this hypothetical, Singer asks us to imagine that we're walking in a park with a shallow pond. When we walk past the pond, we see that a small child struggling in it, clearly about to drown. We could easily choose to save the child, without risking our own safety, by wading into the pond and dragging the child out of the water. However, we are also asked to imagine that we have our nicest pair of shoes on, and that wading into the pond would completely ruin them. Singer then asks us to compare this situation to one that most people in the richer parts of the world face; one where they could save a child's life by donating a comparatively trivial sum of money that would mean the difference between life and death for a child in the poorest parts of the world but which would only mean some fewer luxuries for the relatively rich donator – perhaps, for example, the difference between buying a really nice pair of shoes or not. Singer argues that the difference between these two situations is ethically irrelevant.

Even if one agrees with Singer that there is no ethical difference between the two scenarios, there is a clear psychological difference present. The typical behavior of a person faced with the first scenario, the child in the pond, can be easily explained by the negative state relief model. Seeing a child in danger causes great distress in most people, and in an attempt to get rid of these negative feelings people aim to get rid of the source of those feelings, the endangered child.

However, in the second scenario the same amount of emotional distress isn't present. To imagine the suffering of a child in another continent can be painful, but very few people, if any, can picture that suffering with the same degree of vividness that they experience suffering right in front of
them. It is also much easier to simply ignore suffering far away than to ignore a flailing child in a pond right in front of you. In addition to this, it is rather easy to care when there's one easily identifiable victim, while a whole mass of victims are harder to care about (Slovic, 2007). If it is so easy to not care about the suffering of a person in another continent, why do many people still choose to donate money, time or other goods to alleviate that suffering? The warm glow theory gives us the answer that people choose to do it because they get positive emotions out of it, not merely the absence of negative emotions. When someone chooses, for example, to donate money to help people, they may experience a plethora of pleasant emotions related to feeling like a good, generous, moral person. According to the warm glow theory of giving, these emotions, known as “warm glow”, motivate giving behavior.

If the promise of affective rewards is what motivates us to help others, it is valuable to know how much warm glow people anticipate they would get out of different scenarios. If a person thinks he or she will get more warm glow out of situation A than situation B, that person is more likely to pursue situation A than situation B. (Other factors might of course influence this decision, but according to warm glow theory, all other things being equal, situation A will always be preferable.) For that reason, the studies in this paper will focus on measuring anticipated warm glow in different giving scenarios.

**Evaluability**

How much is a reasonable price for a camel? Would you be willing to pay 500 US dollars? 1000? 5000? 10 000? And would you be willing to pay more for a 7-year old camel than for a 14-year old one? How about a 28-year old camel? Predicting how different people will answer those questions brings up the topic of value sensitivity. If a person is willing to pay as much for a 7-year old camel as a 28-year old camel, that person is insensitive to the value of “camel's age”. The more closely correlated the price the person is willing to pay for the camel and the camel's age are, the higher that person's value sensitivity to that particular value is. Phrased another way, value sensitivity describes how responsive a person's evaluation is to variation in value.

In an article titled *General Evaluability Theory*, Christopher Hsee and Jiao Zhang (2010) outlined a theory meant to define and organize evaluability levels, the factors that create them and their effects on human evaluation and decision-making. Based on over a decade of evaluability-research, they present three basic propositions based around the core tenet that value sensitivity depends on evaluability. Evaluability, in this context, simply means the extent to which a person has reference information relevant to the values under evaluation and the ability to judge the desirability of those values.
A low level of evaluability thus results in low-sensitivity evaluations, while a high level of evaluability results in high-sensitivity evaluations. We call the first high-sensitivity evaluations because they are very sensitive to differences in the relevant values of the thing being evaluated, while low-sensitivity evaluations are characterized by being less sensitive to those values.

On a more concrete plane, level of evaluability is associated with three primary factors. These factors are knowledge, nature and mode.

Knowledge simply refers to what we know of the attribute targeted for evaluation. More specifically, it refers to what we know of the distribution of the relevant attribute. If we know that a certain value of a desirable attribute falls on the lower end of the distribution of all values of that attribute, we are very likely to value it less than if we know nothing at all of the distribution of values. For example, a cameleer (a person who drives or rides a camel) has a wider knowledge about camels and the desirable traits of camels than a normal person, as well as the usual prices for camels. He or she is therefore more likely to make a high-sensitivity evaluation when it comes to buying or selling a camel than a person who has only a passing familiarity with the animals. Naturally, cultural background features heavily into our knowledge. A person from Saudi Arabia is more likely to have a good idea of what a camel is worth than a person from Norway. (The situation is likely reversed when it comes to appraising reindeer, however.)

Nature refers to the presence or absence of a natural, innate value reference system for various attributes. This reference system can be physiological or psychological in nature. Our bodies and minds are very good at detecting amount of sleep, dehydration and the amount of time that has passed since we last ate as well as attributes like social distance from other people and depression. We are less good at intuitively evaluating both the worth of money and the quality of different camels. Hsee and Zhang call the first kind of attributes inherently evaluable and the second inherently inevaluable. This means that evaluation about values on an inherently evaluable attribute is more likely to be on a high-evaluability level than evaluation about values on an inherently inevaluable attribute.

Our sensitivity to differences in values is also affected by the kinds of differences we are faced with. All else being equal, evaluability is higher when there are categorical differences involved than when the differences are incremental. The difference between losing money and making money is a categorical one, a difference in kind, as is the difference between owning a camel and owning a goat. The difference between losing two different amounts of money and the difference between having two camels of different age or in different states of health are incremental differences, differences in nothing but degree.
Finally we have mode, which will be the focus of this study. All evaluations are done in either separate evaluation mode or joint evaluation mode. An evaluation is done in separate evaluation mode when a single value of an attribute is presented, without any other values to be compared to. When the value is presented with other values on the same attribute that the person doing the evaluation can compare the first value to, the evaluation is being done in joint evaluation mode. Participants of a study with a between-subjects design can thus be said to be in separate evaluation mode, while participants of a study with a within-subjects design can be said to be in joint evaluation mode. Joint evaluation mode enables the use of one value as a reference point for evaluation of the other values, something which cannot be done in separate evaluation mode. For example, if we are only presented with one camel (separate evaluation mode), we cannot compare that camel to any other camel. If we are presented with two camels, then we can use the first camel as a reference point when evaluating the second camel, and vice versa. Evaluability and value sensitivity will be greater in joint evaluation mode than in separate evaluation mode for this reason.

The differences in cognition can be great between joint evaluation mode and separate evaluation mode. It has been shown that there's correlation between activation of emotional processes and separate evaluation mode and correlation between cognitive processes and joint evaluation mode (Ritov & Baron, 2011).

In the field of moral psychology, studies have also shown that people faced with ethical dilemmas are more likely to think in terms of moral rules and a distinction between letting something happen and doing something (which could roughly be called “deontological” thinking) when in separate evaluation mode, while people in joint evaluation mode are much more likely to weight the total amount of harm caused by different options (“consequentialist” thinking; Bartels, 2008).

Moral judgments about harmful actions carried out either personally or through someone else is also affected by evaluation modes. People in separate evaluation mode tend to judge those who cause harm indirectly less harshly than those who cause harm directly even when the person causing harm is aware of what is going to happen and have control of the situation. People in joint evaluation mode tend to consider those who cause harm indirectly and those who cause harm directly equally guilty of unethical actions, provided that those who cause harm have foreknowledge and control (Paharia, 2009).

Different evaluation modes also affect if people think it is appropriate for others to receive aid or not, and if they deserve sympathy or not. In joint evaluation mode, people tend to think that a person who has been struck by blindness recently is equally deserving of help as a person who has been blind her entire life, and that they both deserve sympathy. However, in separate evaluation
mode people think that a person struck by blindness recently is more deserving of both aid and sympathy than a chronic sufferer (Small, 2010).

People's willingness to donate money to charitable causes are also greatly affected by evaluation modes. If presented with a single victim, people in separate evaluation mode are willing to donate more money than those in the same mode who are instead presented with a group of victims. If people are instead presented with both the single victim and the group of victims (joint evaluation mode), the preference order is reversed and the group receives more money than the single victim (Kogut & Ritov, 2005).

Most importantly for the current studies, Hsee and Zhang (2004) have shown that there's a great difference between people's anticipation of emotions in separate evaluation mode and joint evaluation mode. In one of their studies, the participants (university students) were asked to imagine that they had written a poem book that they were trying to sell on campus. The participants were divided into five conditions, four in separate evaluation mode and one in joint evaluation. Those in the separate evaluation conditions were either told to imagine that they had sold no books at all, 80 books, 160 books or 240 books. They were then asked to predict how they would feel in such a scenario. Those in the joint evaluation condition were presented with all four scenarios and asked to predict how they would feel in each of them. All participants were asked to rate their anticipated feelings on a scale from 1 (extremely unhappy) to 9 (extremely happy).

Figure 1: Results of Hsee and Zhang's poem book study. From Zhee & Zhang, 2004.
In accordance with the general evaluability theory, in separate evaluation the differences in anticipated happiness between selling 80, 160 and 240 books were not significant. However, in joint evaluation mode the participants anticipated significantly more happiness the more books they sold. However, the difference in anticipated happiness between selling any books at all and selling no books was significant for participants in both separate and joint evaluation modes.

**Warm Glow and Evaluability**

The difference between selling no books and selling any books is a *categorical* difference, or a *qualitative* difference. The difference between selling 80 books and selling 160, or between selling 160 books and 240, is merely an *incremental* difference, or a *quantitative* difference. In Hsee and Zhang's study, even people in separate evaluation mode were sensitive to categorical differences, as were people in joint evaluation mode. However, only the participants who were in joint evaluation mode showed value sensitivity for the incremental difference between selling different amount of books. Separate evaluation mode is associated with too low an evaluability level for the participants in those conditions to be sensitive to merely incremental differences.

The studies in this paper closely follow Hsee and Zhang's example. But instead of anticipated happiness, these studies aim to test anticipated warm glow as a result of charitable giving. This paper contains two studies, dividing the participants of each study into five groups. The groups are, similarly to the Hsee and Zhang study, four separate evaluation groups and one joint evaluation group. The studies measure anticipated warm glow by asking the participants to rate a number of feelings they think they would feel in different situations where they donate different amounts of money. In the first study, these amounts are 0 SEK, 200 SEK, 400 SEK and 600 SEK. In the second study, the amounts are 0 SEK, 20 SEK, 40 SEK and 60 SEK. The separate evaluation groups will only be presented with one of the four scenarios each. In all other ways, the questions are identical.

The hypothesis of the first study is that a similar pattern to the one in Hsee and Zhang's 2004 study will emerge in the difference between the results in joint evaluation mode and the ones in separate evaluation mode. The difference between donating no money and donating some money is a qualitative, categorical one, and one that will result in different values of attributes related to warm glow in both joint evaluation mode and separate evaluation mode. The difference between donating 200 SEK and 400 SEK, or the difference between donating 400 SEK and 600 SEK, is a difference in degree only. People in joint evaluation mode should therefore be significantly more sensitive to this difference than people in separate evaluation mode, as predicted by the general evaluability theory.
One potential source of error in Hsee and Zhang's first 2004 study is that only one set of quantities were tested. The options were no books sold, 80 books sold, 160 books sold and 240 books sold. It is possible that the result pattern would be another if conditions like no books sold, 8 books sold, 16 books sold and 24 books sold were used, or if the amounts of books were larger, with 800, 1600 and 2400 books replacing the amounts used in the published study. Even if no such effect exists when the question revolves around feeling happy about selling books, it is highly likely that the mechanisms surrounding warm glow may behave in a different way. For example, there may be a “threshold” below which people experience little warm glow at all, and the difference between, say, donating 20 SEK and donating 40 SEK may feel too “small” for any significant increase in warm glow.

However, the hypothesis remains the same for the second study using 0 SEK, 20 SEK, 40 SEK and 60 SEK donations as for the first study. There will be no significant difference between the solely quantitatively different sums (20 SEK, 40 SEK and 60 SEK) in separate evaluation, but there will be a difference between the qualitatively different sums (0 SEK and the rest). In joint evaluation, there will be a significant difference between the results for the quantitatively different sums and between the qualitatively different sums.

It is not only the direction of the anticipated warm glow-curve in joint evaluation mode that is relevant, but also its relation to the separate evaluation curve. If, like in Hsee and Zhang's 2004 study, the anticipated emotions are stronger in joint evaluation mode than in separate evaluation mode, this speaks in favor of giving potential donors information in joint evaluation mode. A person only faced with one option (separate evaluation mode) could, for example, feel only 5 warm glow (on a scale from 1 to 10) no matter what amount of money that option is. If 5 warm glow is not enough to motivate that person to give, then the charitable organization is not getting a donation from that person unless something other than warm glow manages to motivate him or her. If several options are given, that person might feel 5 warm glow from one option but, for example, 7 from another. Such strong warm glow might be enough to motivate that person to give money.

However, if people sometimes or often feel less warm glow when in joint evaluation mode than when in separate evaluation mode, it might actually be better to give potential donors information in separate evaluation mode.

**Study 1**

This study closely resembles Hsee and Zhang's 2004 study of anticipated happiness when selling different amounts of books. Anticipated happiness was replaced with items meant to measure anticipated warm glow while different amounts of sold books were replaced with different amounts
of money donated to a charitable organization. The purpose of keeping the design close to Hsee and Zhang's study was to minimize the amount of confounding factors that could change the result apart from the switch from anticipated happiness to anticipated warm glow and from selling books to giving money.

**Participants**

The first study involved 200 people, 40 for each of the five experimental groups. The participants were approached on the Lund University campus, primarily in buildings belonging to the Faculty of Engineering (LTH), but also in some belonging to other faculties. The ages of the participants ranged from 19 to 31 years, with 22 years being the median age and 22.33 the mean age ($SD = 2.34$). 103 of the participants were men and 96 were women. (One participant failed to note his or her sex.)

**Material**

The participants were given a questionnaire. Participants first read two short texts about malaria and the Against Malaria Foundation, a charitable organization focused on distributing insecticide-treated bed nets to areas with widespread malaria. After each of the two texts the participants rated a few statements about how upset, happy, hopeful and sad they felt (example: “I feel upset”) on a scale from 1 (not true at all) to 7 (completely true). This was to identify potential emotional outliers and to see if there were any differences between the five groups of participants before they were exposed to the different evaluation modes.

The first two texts and questions were the same for all participants, but the third part of the questionnaire was different for each of the five different groups. The joint evaluation group were told to imagine themselves in a situation where they had acquired the number to Against Malaria Foundation's bank account and could choose to donate an amount of money to that charitable organization. They were then presented with four scenarios: (a) They choose to donate no money at all, (b) they choose to donate 200 SEK, (c) they choose to donate 400 SEK and (d) they choose to donate 600 SEK. After reading this, they were asked to rate the truth of a few statements about the emotions they anticipated they would feel in each of the four scenarios. Those statements were: (a) I would feel like a good person, (b) I would feel generous, (c) I would feel like a moral person, (d) I would feel happy with myself, (e) I would feel selfless and (f) I would feel that I had done something meaningful. The same scale as the one used in the first two questions was used, going from 1 (not true at all) to 7 (completely true). These questions were all meant to measure anticipated warm glow in the different scenarios.
The other four groups, with the four different separate evaluation conditions, were only given one of the four scenarios each. That is, one group got to rate the truth of the statements in a situation where they had given no money, another got to rate them if they had given 200 SEK and so forth. On the last page of the questionnaire the participants were given the opportunity to write down comments and what they thought the purpose of the study was, as well as their age and sex. In addition to that, all participants who wanted more information about the study could write down their e-mail addresses to get additional information about the study.

The questionnaire itself was in Swedish, and students who did not speak Swedish or said that they had trouble with the language were not given the questionnaire. (See the appendix for the complete questionnaire.)

**Procedure**

The participants, who were approached in or around university buildings in Lund, were given questionnaires in randomized order. The participants were asked if they would like to answer a questionnaire and informed that it would take approximately five minutes. No debriefing was given on the spot, as several other participants could be taking the test in the vicinity at the same time. The opportunity to give comments in written form and be sent information about the study after it was done was deemed sufficient.

**Results**

The answers to the first two questions did not differ significantly between the five different experimental groups. This indicates that there were no relevant differences between the groups of participants before they were exposed to the different evaluation modes.

A series of Cronbach's alpha tests for internal reliability in both groups reveals good internal consistency for all the conditions ($\alpha > .80$). However, in the joint evaluation group, the squared multiple correlation for the last item, “I would feel that I had done something meaningful if I donated...”, is fairly low ($R^2 < .4$) for all amounts. If we remove that item from the Cronbach's alpha test and leave the remaining five items, the reliability increases. For this reason, the sixth item was removed from all following analysis of the data from this study.

The results of the first study are summarized in Figure 2. Just looking at the figure, we see that the separate evaluation curve rises between 0 SEK and 200 SEK but then remains on roughly the same level for the 400 SEK and 600 SEK conditions. The joint evaluation curve, on the other hand, continues to rise as the amount of money increases. For a more accurate assessment of the relations between the anticipated warm glow in various conditions, a series of independent and paired samples t-tests is conducted.
In the separate evaluation groups, a t-test for independent means reveals the difference between the 0 SEK condition and the 200 SEK condition to be statistically significant. The same kind of test shows the difference between the 200 SEK and 400 SEK conditions as well as the difference between the 400 SEK and 600 SEK conditions to be non-significant in separate evaluation mode, as seen in Table 2.

![Figure 2: Results of Study 1.](image)

**Table 1**

*Mean anticipated warm glow in Study 1*

<table>
<thead>
<tr>
<th>Donation size</th>
<th>0 SEK</th>
<th>200 SEK</th>
<th>400 SEK</th>
<th>600 SEK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separate evaluation mode:</td>
<td>3.10 (1.52)</td>
<td>4.51 (1.33)</td>
<td>4.48 (1.27)</td>
<td>4.73 (1.26)</td>
</tr>
<tr>
<td>Joint evaluation mode:</td>
<td>2.46 (1.45)</td>
<td>4.65 (1.48)</td>
<td>5.11 (1.46)</td>
<td>5.44 (1.56)</td>
</tr>
</tbody>
</table>

*Note:* Standard deviations in parentheses.

We then turn to the joint evaluation group. Using a paired samples t-test, we see that the difference between 0 SEK and 200 SEK is significant, as is the difference between 200 SEK and 400 SEK and the difference between 400 SEK and 600 SEK.

The difference in anticipated warm glow between the 0 SEK donation in separate and in joint evaluation mode is non-significant, although a clear tendency towards less anticipated warm glow.
in joint evaluation mode can be found. No significant difference between the 200 SEK donation in separate and joint evaluation mode can be found. However, there is a significant difference between the 400 SEK donation in the different evaluation modes. There is also a significant difference between the 600 SEK donation in separate evaluation mode and the one in joint evaluation mode. In both these cases, anticipated warm glow is higher in joint evaluation mode.

Some sex differences can also be observed. In the joint evaluation condition, the mean anticipated warm glow for men when giving no money at all is 3.10 (SD = 1.04) while the women's mean is 1.74 (SD = 1.48). This difference is significant, \( t(38) = 3.35, p = .002 \). No other significant sex differences was found in the data relevant for the main hypothesis.

### Table 2

**Results of t-tests for Study 1**

<table>
<thead>
<tr>
<th>Separate evaluation mode</th>
<th>( t(78) )</th>
<th>( p )</th>
<th>( d )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 SEK/200 SEK:</td>
<td>-4.45</td>
<td>&lt;.001***</td>
<td>.989</td>
</tr>
<tr>
<td>200 SEK/400 SEK:</td>
<td>.12</td>
<td>.904</td>
<td>.023</td>
</tr>
<tr>
<td>400 SEK/600 SEK:</td>
<td>.90</td>
<td>.370</td>
<td>.198</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Joint evaluation mode</th>
<th>( t(39) )</th>
<th>( p )</th>
<th>( d )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 SEK/200 SEK:</td>
<td>-10.35</td>
<td>&lt;.001***</td>
<td>1.633</td>
</tr>
<tr>
<td>200 SEK/400 SEK:</td>
<td>-5.52</td>
<td>&lt;.001***</td>
<td>.861</td>
</tr>
<tr>
<td>400 SEK/600 SEK:</td>
<td>-5.04</td>
<td>&lt;.001***</td>
<td>.814</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comparison between modes</th>
<th>( t(78) )</th>
<th>( p )</th>
<th>( d )</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE 0 SEK/JE 0 SEK:</td>
<td>-1.91</td>
<td>.059</td>
<td>.431</td>
</tr>
<tr>
<td>SE 200 SEK/JE 200 SEK:</td>
<td>.43</td>
<td>.668</td>
<td>.100</td>
</tr>
<tr>
<td>SE 400 SEK/JE 400 SEK:</td>
<td>2.08</td>
<td>.041*</td>
<td>.462</td>
</tr>
<tr>
<td>SE 600 SEK/JE 600 SEK:</td>
<td>2.24</td>
<td>.028*</td>
<td>.504</td>
</tr>
</tbody>
</table>

**Notes:** *Significant at cutoff = .05. **Significant at cutoff = .005 ***Significant at cutoff = .001

### Discussion

The results of the first study were in line with the main hypothesis. People were more sensitive to differences in the amount of money given when in joint evaluation mode than when in separate evaluation mode. In joint evaluation mode, the larger the donation, the higher the anticipated warm glow. Such was not the case in the separate evaluation mode, where the difference between giving no money and giving some money was significant but where further increases in money given had no significant effect on anticipated warm glow.
To see if the same pattern emerges when the donations the participants were asked to imagine themselves giving are smaller, Study 2 will now be presented. As mentioned previously, the purpose of this second study is to identify potential factors that might influence anticipated warm glow which do not show up when the donations are comparatively large, such as a warm glow “threshold” beneath which increasing imagined generosity does not equal increasing anticipated warm glow. Using two studies also allows identification of mechanisms which do not change depending on the size of the imagined donations.

Study 2

The second study was identical to the first study apart from a change in the amounts of money the participants were asked to imagine that they had donated.

Participants
Study 2 involved 200 participants (that did not participate in Study 1) divided into five experimental groups, four separate evaluation mode and one joint evaluation mode group. Each group consisted of 40 participants. The participants were approached on the same campus as the participants of Study 1. The ages of the participants ranged from 18 to 39 years, with the median age being 22 and the mean age being 22.16 ($SD = 2.73$). The number of male participants were 96, while the number of women were 103. (One participant failed to note his or her sex.)

Material
The second study was identical in all respects to the first, except for the amount of money the participants were asked to imagine themselves donating in question three. In both the joint evaluation group and the separate evaluation groups, 200 SEK, 400 SEK and 600 SEK were replaced with 20 SEK, 40 SEK and 60 SEK.

Procedure
The procedure of Study 2 was identical to that of Study 1.

Results
Similar to the first study, the answers to the first and second question did not differ significantly between the different experimental groups. This indicates that there were no relevant differences between the groups of participants before they were exposed to the different evaluation modes.

As in the analysis of the first study, we conduct a series of Cronbach's alpha tests to check internal consistency reliability, which is good in all groups ($\alpha > .8$). However, in the joint evaluation group, the last item (“I would feel that I had done something meaningful if I donated...”) remains a slight problem as its squared multiple correlation is still rather low ($R^2 < .4$) for all but one amount. For
that reason (and to make comparison with the first study possible), we remove the last item before doing any further analysis of the data.

A summary of the results of Study 2 can be seen in Figure 3. Similar to the first study, we can see that the joint evaluation curve is steeper than the separate evaluation curve. However, a clear difference between the first study and the second one is obvious: While most of Study 1's joint evaluation curve was above that study's separate evaluation curve, the entire joint evaluation curve is below the separate evaluation curve in Study 2.

Using a t-test for independent means, we see that the difference in anticipated warm glow between the 0 SEK condition and the 20 SEK condition in the separate evaluation groups is statistically significant. However, the difference between the 20 SEK and 40 SEK conditions and the difference between the 40 SEK and 60 SEK conditions are non-significant.

![Figure 3: Results of Study 2.](image)

**Table 3**

*Mean anticipated warm glow in Study 2*

<table>
<thead>
<tr>
<th>Donation size</th>
<th>0 SEK</th>
<th>20 SEK</th>
<th>40 SEK</th>
<th>60 SEK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separate evaluation mode:</td>
<td>2.81 (1.48)</td>
<td>3.62 (1.36)</td>
<td>4.10 (1.23)</td>
<td>4.23 (1.07)</td>
</tr>
<tr>
<td>Joint evaluation mode:</td>
<td>1.86 (1.19)</td>
<td>2.96 (1.48)</td>
<td>3.52 (1.31)</td>
<td>3.97 (1.35)</td>
</tr>
</tbody>
</table>

*Note:* Standard deviations in parentheses.
With the joint evaluation group, a paired samples t-test shows us that the difference between the 0 SEK and the 20 SEK donations is significant. The same is true for the difference between 20 SEK and 40 SEK and the difference between the 40 SEK and the 60 SEK donations.

Next up is the differences between the donations in the separate and joint evaluation modes. Unlike the situation in Study 1, the difference between the 0 SEK donation in separate and joint evaluation mode is significant (although a clear tendency existed in the first study). So is the difference between the 20 SEK donation in the different modes and the difference between the 40 SEK donation in the two modes as well. There is no significant difference when we turn to the 60 SEK donation. The reason for this difference compared to the first study is obvious – while the greater increases in anticipated warm glow in the joint evaluation group of Study 1 made the gap between the joint evaluation and the comparatively flat separate evaluation curve larger, in the second study these increases instead close the gap. See Table 4 for more information.

As in the first study, we also have some sex differences. In the joint evaluation condition, the men's mean when donating 40 SEK is 3.92 (SD = 1.19) while the women have a mean of 3.03 (SD = 1.30). The difference is significant, t(38) = 2.24, p = .031. When donating 60 SEK, the men's mean is 4.38 (SD = 1.30) and the women's mean is 3.47 (SD = 1.26) which is another significant difference, t(38) = 2.24, p = .031.

Table 4

<table>
<thead>
<tr>
<th>Results of t-tests for Study 2</th>
<th>t(78)</th>
<th>p</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separate evaluation mode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 SEK/20 SEK:</td>
<td>-2.53</td>
<td>.013*</td>
<td>.570</td>
</tr>
<tr>
<td>20 SEK/40 SEK:</td>
<td>-1.66</td>
<td>.102</td>
<td>.371</td>
</tr>
<tr>
<td>40 SEK/60 SEK:</td>
<td>.50</td>
<td>.615</td>
<td>.113</td>
</tr>
<tr>
<td>Joint evaluation mode</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 SEK/20 SEK:</td>
<td>-8.91</td>
<td>&lt; .001***</td>
<td>1.412</td>
</tr>
<tr>
<td>20 SEK/40 SEK:</td>
<td>-5.54</td>
<td>&lt; .001***</td>
<td>.875</td>
</tr>
<tr>
<td>40 SEK/60 SEK:</td>
<td>-6.08</td>
<td>&lt; .001***</td>
<td>.961</td>
</tr>
<tr>
<td>Comparison between modes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE 0 SEK/JE 0 SEK:</td>
<td>-3.18</td>
<td>.002**</td>
<td>.712</td>
</tr>
<tr>
<td>SE 20 SEK/JE 20 SEK:</td>
<td>-2.22</td>
<td>.030*</td>
<td>.500</td>
</tr>
<tr>
<td>SE 40 SEK/JE 40 SEK:</td>
<td>-2.03</td>
<td>.046*</td>
<td>.457</td>
</tr>
<tr>
<td>SE 60 SEK/JE 60 SEK:</td>
<td>-.94</td>
<td>.352</td>
<td>.215</td>
</tr>
</tbody>
</table>

Notes: *Significant at cutoff = .05. **Significant at cutoff = .005 ***Significant at cutoff = .001
Discussion
As in the first study, the participants were more sensitive to differences in donation size in joint evaluation mode. However, a new effect appears when all the donations are comparably low. Instead of participants in joint evaluation mode anticipating more warm glow (provided they imagine themselves giving any money at all), the participants in joint evaluation mode anticipated less warm glow on all items, compared to the participants in separate evaluation mode. An analysis of why this happened will follow in the general discussion.

Comparison of Study 2 and Study 1
Finally, we can take a look at the differences between the two studies. First of all, it should be noted that the data in Study 1 was collected before the data in Study 2, so no proper randomization took place and we can't assume that factors such as the difference in time have not confounded the data. The population from which the participants of both studies were drawn was homogenous in all other ways, however.

For the sake of brevity, shown comparisons between the two studies will be limited to donations of the same relative sizes (smallest, second smallest, second largest and largest) in the same evaluation modes. See Table 5.

Table 5
Results of t-tests comparing Study 2 and Study 1

<table>
<thead>
<tr>
<th>Separate evaluation mode</th>
<th>t(78)</th>
<th>p</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 2 0 SEK/Study 1 0 SEK:</td>
<td>-0.83</td>
<td>.407</td>
<td>.187</td>
</tr>
<tr>
<td>Study 2 20 SEK/Study 1 200 SEK:</td>
<td>-2.98</td>
<td>.004*</td>
<td>.662</td>
</tr>
<tr>
<td>Study 2 40 SEK/Study 1 400 SEK:</td>
<td>-1.36</td>
<td>.177</td>
<td>.304</td>
</tr>
<tr>
<td>Study 2 60 SEK/Study 1 600 SEK:</td>
<td>-1.93</td>
<td>.057</td>
<td>.426</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Joint evaluation mode</th>
<th>t(39)</th>
<th>p</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 2 0 SEK/Study 1 0 SEK:</td>
<td>-2.03</td>
<td>.046*</td>
<td>.455</td>
</tr>
<tr>
<td>Study 2 20 SEK/Study 1 200 SEK:</td>
<td>-5.45</td>
<td>&lt;.001***</td>
<td>1.225</td>
</tr>
<tr>
<td>Study 2 40 SEK/Study 1 400 SEK:</td>
<td>-5.13</td>
<td>&lt;.001***</td>
<td>1.148</td>
</tr>
<tr>
<td>Study 2 60 SEK/Study 1 600 SEK:</td>
<td>-4.51</td>
<td>&lt;.001***</td>
<td>1.010</td>
</tr>
</tbody>
</table>

Notes: *Significant at cutoff = .05. **Significant at cutoff = .005 ***Significant at cutoff = .001

It is clear from this comparison that participants in joint evaluation mode were more sensitive to the actual size of the donations (not only the relative size compared to the other donations presented) than the participants in separate evaluation mode. While the relationship between anticipated warm
glow and donation size in joint evaluation mode is far from perfectly linear, anticipated warm glow does increase as the amount of money the participants were asked to imagine themselves donating increase. In joint evaluation mode, the participants of Study 1 anticipated more warm glow from donating 200 SEK than the participants of Study 2 anticipated from donating 60 SEK, even though 200 SEK was the smallest non-zero amount of money the participants of Study 1 saw while 60 SEK was the largest donation presented in Study 2. The position of a donation size relative to the positions of the other donation sizes therefore seems to have little effect on anticipated warm glow.

The situation is entirely different when it comes to separate evaluation mode. The size of the donations had little effect on the anticipated warm glow, and a tenfold increase in donation size led to no significant increase in anticipated warm glow whatsoever.

General Discussion

The main hypothesis for both Study 1 and Study 2 was that estimated warm glow when giving would be more closely correlated to the size of the donation in joint evaluation mode than in separate evaluation mode. The difference in anticipated warm glow between giving something and giving nothing would be significant in both evaluation modes, while the difference between giving different non-zero amounts of money would be significant only in joint evaluation mode. As we've seen, the results of the two studies lined up with this hypothesis. In Study 1 the differences between estimated warm glow when giving 200 SEK, 400 SEK and 600 SEK were significant in joint evaluation mode but not in separate evaluation mode. Similarly, only in Study 2's joint evaluation mode were the differences in estimated warm glow between giving 20 SEK, 40 SEK and 60 SEK significant. The difference in anticipated warm glow from giving 0 SEK and giving any amount on money was significant in both modes, in both studies.

The results were like predicted by Hsee and Zhang's general evaluability theory. The difference between giving no money and giving some money is a qualitative one, which means that the evaluability level is high enough in both separate and joint evaluation for a significant difference in estimated warm glow to appear in both evaluation modes. However, the difference between giving 20 SEK and 40 SEK, or 200 SEK and 400 SEK, is merely a quantitative difference. This means that the evaluability level needed for a significant difference in estimated warm glow to appear is only reached in joint evaluation mode, not in separate evaluation mode. Thus far, the results can be explained with the general evaluability theory.

Not predicted by the main hypothesis or the general evaluability theory was the dramatic difference in estimated warm glow in joint evaluation between the two different studies. How come the participants of study 2 estimated far more warm glow in separate evaluation mode than in joint
evaluation mode, while the participants of study 1 estimated more warm glow in joint evaluation than in separate evaluation for all sums except 0 SEK?

One possible explanation for this situation is that joint evaluation mode encourages cognition and deliberation, rather than intuition and “gut feelings” (Ritov & Baron, 2011). This might have caused the participants in the joint evaluation condition to think about how much money 20, 40 and 60 SEK really is, and what they “should” give if they want to be moral or generous. Since the participants formed a fairly homogenous group, all being university students, most in their early 20's, it's fairly likely that there's a line somewhere between 60 SEK and 200 SEK where thinking about your donation makes you feel more good, generous and so forth than if you were simply trusting your intuition to tell you if it was a generous donation or not.

The reason for this could be that most university students have a rather similar idea of what is considered a “small” amount of money and what is considered a “large” amount of money (based on common expenses and so forth), and that cognition makes this distinction more accessible than more intuitive thinking. That is, people anticipate pretty much the same warm glow when they intuitively feel that they have donated something rather than nothing, with relatively little attention paid to the actual amount (Hsee & Zhang, 2010), but they anticipate more warm glow from giving a “large” amount of money to charity and less warm glow from giving a “small” amount of money. This would also neatly explain why participants in both joint evaluation conditions rate the anticipated warm glow from giving 0 SEK lower than those in the separate evaluation 0 SEK condition: 0 SEK is clearly a “small” amount of money.

However, more research is needed to test this rather speculative explanation and to see how well it fits reality. One way to test this would be to simply ask university students in the same country and age bracket as the ones tested in the current studies how much money they would consider a “large” amount of money, how much they would consider a “small” amount and roughly where the line between the two is located.

Rational, analytical thinking and evaluation are exceptionally useful tools to help us figure out what we should do, provided that we know what we want to achieve. If our goal is to save human lives, the option that saves 10 000 rather than 1000 lives is the objectively preferable one. If our goal is to make as much money as possible, the job that will bring in 10 000 dollars a month is better than the one with a less generous paycheck. If our goal is instead to create for ourselves as happy a life as possible, we might instead choose to get by with a lesser salary if it means having a more stimulating job, or a shorter ride home.

In the studies this paper has presented, things are less clear-cut. It is fairly obvious that choosing to give 600 SEK is preferable to giving 400 SEK, provided our goal is to decrease the amount of
people dying of malaria, but can we talk about what emotions people should experience? If we accept two premises, it could be argued that we can. The first premise is simply that it's better to give more to charity than to give less to charity. The second premise is that charitable giving is primarily, or to a large degree, motivated by warm glow and other affective motivations related to seemingly altruistic behavior. Assuming this, we should make people experience more warm glow when they give more to charity. This would be a very efficient way to increase the amount of money people would donate as their attempts to feel more warm glow would lead them to engage in behavior that would increase the amount of warm glow they experience.

If the results of this study are to be believed, tying the strength of our positive emotions to the positive impact of our actions might be as easy as presenting our options in the right way. This has obvious implications for charitable organizations and the methods they use to collect donations. For example, on SOS Barnbyar's website (SOS Barnbyar Sverige, n.d.) the options for donations via SMS are given in joint evaluation mode; one can choose to give 10, 20, 30, 40, 50, 100 or 150 SEK. (Although it should be noted that 50 SEK is clearly presented as the “default” option.) Many banner-advertisements for blogs provided by UNICEF (UNICEF, n.d.) also ask people to donate money via SMS. However, in these advertisements the option is given in separate evaluation mode as the only option provided is to give 50 SEK.

According to the current studies, SOS Barnbyar's method might be more efficient than UNICEF's. If one's goal is to feel as much warm glow as possible and one is presented with several options for charitable giving one will, if rational, pick the option that hurts the wallet the most provided it also rewards the “heart” the most. If UNICEF presented the option to give, say, 100 SEK together with the option to give 50 SEK, charitable people might prefer to give 100 SEK as doing so would likely create more warm glow than the less generous action of giving 50 SEK.

At the same time, the hedonists among us shouldn't worry that a high level of evaluability will ruin the warm glow they get out of comparatively small donations, as long as they are not too small. According to Study 1, evaluation mode has no significant effect on the warm glow people anticipate they would feel in a situation where they would give 200 SEK to charity. However, people in joint evaluation mode anticipate that they would feel significantly more warm glow when giving 400 SEK compared to the people who only see the 400 SEK option. The difference between 600 SEK in joint evaluation mode and 600 SEK in separate evaluation mode is even greater. In other words, if you want to feel more warm glow than the “baseline” (the amount you would feel when donating 200 SEK) being given an option to donate more money in separate evaluation mode isn't likely to help you. If people's attempts to anticipate their feelings are reasonably accurate, people need to see other options to reap the greater affective benefits of being charitable.
Study 2 paints a more complicated picture, however. If the amount donated is sufficiently low, the participants estimated that the donor would get more warm glow in separate evaluation mode than in joint evaluation mode. A person is better off, emotionally speaking, if that person is only given the option to donate 20 SEK than if he or she sees the options to not donate at all, to donate 40 SEK and to donate 60 SEK – even if that person chooses to donate 60 SEK.

With regards to the methods used in the studies, one of the main problems is that it is hard to define what warm glow actually is and what it translates to in more common psychological terms, like “pride” or “self-esteem”. In the studies in this paper, warm glow was translated into “feeling moral”, “feeling generous”, “feeling like a good person” and so on. “Feeling like one had done something meaningful” turned out to be relatively loosely correlated with the other items in joint evaluation, leading to it being dropped from the analysis. The other items correlated fairly well with each other. However, it is highly likely that other items would fit even better.

The study of warm glow would benefit greatly from a more widespread consensus of how the very concept should be defined. It would also benefit from studies attempting to map correlation between many different items related to warm glow in one way or another. How well is, for example, high “self-esteem” correlated with some of the items used in the current studies? How well does “pride” fit into the idea of warm glow?

For a better understanding of warm glow, we also need a better understanding of the difference between the warm glow model of giving and the negative state relief model. It is certainly possible that the current studies could be explained with references to the negative state relief model. For example, the texts about malaria and the Against Malaria Foundation might have put the participants in a negative mood, which they then wanted to relieve. Anticipated warm glow might in this case simply be the anticipated relief from negative emotions. This would imply that different information texts would give different levels of anticipated warm glow, since some texts might lead to weaker negative emotions than the texts in the current studies, while some might lead to even stronger negative emotions.

One way to test this hypothesis would be to conduct another study with at least two different conditions, one where the text or texts the participants have to read before answering the warm glow-questions is about something neutral that is unlikely to lead to negative emotions, and one where the text or texts have heartstring-tugging content likely to lead to negative emotions.

The most obvious problem is of course that the current studies merely measured anticipated warm glow, not actual warm glow. As Hsee and Zhang have shown (2004), the difference between the two can be great. In most real-world situations, people are in separate evaluation mode since they relatively seldom have their options neatly arranged in front of them, waiting for their choice. For
that reason, people in joint evaluation mode often fail to predict their actual reactions to a given scenario in “real life”, while those in separate evaluation mode predict reactions closer to reality (Hsee & Zhang, 2004). It is therefore reasonable to assume that in an experiment measuring actual warm glow, the results will be fairly close to those given by participants in separate evaluation mode. However, if the participants of the actual warm glow-experiment are in joint evaluation mode as well, the results are of course likely to be closer to the results from the participants in the joint evaluation conditions in the current studies.

It would therefore be interesting to do a follow-up study attempting to replicate the scenarios in the current studies closely, at least to such a degree that there is one separate evaluation and one joint evaluation group. If such a study could also test for differences in actual warm glow when giving high amounts and low amounts of money (for example, 200/400/600 SEK and 20/40/60 SEK, like in the current studies.) the results could be even more closely compared to those of the current studies.
References


Appendix

The following five pages contain the joint evaluation condition survey for Study 1. All pages except the fourth were identical in all conditions in both Study 1 and Study 2. For information about the survey differences between the studies and conditions, please refer to the main paper.
Tack för din medverkan!

Du kommer att läsa två korta texter. Efter att du har läst färdigt ska du få svara på ett par frågor genom att gradera hur mycket du instämmer med några påståenden.

Du är naturligtvis helt anonym och kan avbryta ditt deltagande närhelst du vill.

Undvik att prata med andra under tiden du svarar på enkäten. Du ska förstås heller inte titta på vad andra svarar.

Institutionen för psykologi, Lunds universitet
Arvid Erlandsson och John Nyzell
**Malaria**

Malaria är en parasitsjukdom som sprids genom bett från myggor av släktet Anopheles, även kallade malariamyggor. Sjukdomen är mest utbredt i Afrika, södra Asien och Latinamerika.

Den allvarligaste formen av malaria kallas cerebral malaria och angriper hjärnan, vilket kan leda till ett livshotande tillstånd. Även de som överlever cerebral malaria kan drabbas av allvarliga hjärnskador som leder till inlärningssvårigheter.

De som drabbast värst av malaria är små barn. Världshälsoorganisationen (WHO) uppgjer att över 80 procent av de som dör av sjukdomen är barn under fem års ålder.

Exakt hur många som dör på grund av malaria är svårt att bedöma. Forskare bedömer att det rör sig om mellan 600 000 och 1,2 miljoner dödsfall per år. Det innebär att det dör mellan ett och två barn i minuten av malaria.

---

**Fråga 1**

Nedan ser du några påståenden om vad du känner just nu. Efter varje påstående ska du ringa in den siffra, från 1 (stämmer inte alls) till 7 (stämmer helt), som du tycker bäst överensstämmer med dina nuvarande känslor.

**Jag känner mig upprörd.**

Stämmer...

<table>
<thead>
<tr>
<th>inte alls</th>
<th>knappt</th>
<th>lite</th>
<th>delvis</th>
<th>ganska väl</th>
<th>mycket väl</th>
<th>helt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

**Jag känner mig glad.**

Stämmer...

<table>
<thead>
<tr>
<th>inte alls</th>
<th>knappt</th>
<th>lite</th>
<th>delvis</th>
<th>ganska väl</th>
<th>mycket väl</th>
<th>helt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

**Jag känner mig hoppfull.**

Stämmer...

<table>
<thead>
<tr>
<th>inte alls</th>
<th>knappt</th>
<th>lite</th>
<th>delvis</th>
<th>ganska väl</th>
<th>mycket väl</th>
<th>helt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

**Jag känner mig ledsen.**

Stämmer...

<table>
<thead>
<tr>
<th>inte alls</th>
<th>knappt</th>
<th>lite</th>
<th>delvis</th>
<th>ganska väl</th>
<th>mycket väl</th>
<th>helt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>
Against Malaria Foundation

Trots att så många fortfarande dör av malaria så sjönk antalet dödsfall med runt 26 procent mellan 2000 och 2010.

Forskare bedömer att den främsta anledningen till minskningen är den ökade tillgången på insekticidbehandlade myggnät, det vill säga nät som inte bara stänger ute utan även dödar mygg.

Against Malaria Foundation (AMF) är en brittisk välgörenhetsorganisation som ser till att insekticidbehandlade myggnät kommer till områden där folk lider hög risk att drabbas av malaria, främst Afrika.

AMF använder 100 procent av de pengar de får in via donationer till att köpa myggnät, utan att lägga några pengar på administrativa utgifter eller liknande. Detta, och det faktum att organisationen är så transparent som möjligt med sina inkomster och utgifter, har lett till att flera oberoende organisationer har rankat AMF som världens bästa, mest effektiva välgörenhetsorganisation.

Fråga 2

Nedan ser du några påståenden om vad du känner just nu. Efter varje påstående ska du ringa in den siffra, från 1 (stämmer inte alls) till 7 (stämmer helt), som du tycker bäst överensstämmer med dina nuvarande känslor.

**Jag känner mig upprörd.**

Stämmer...

<table>
<thead>
<tr>
<th>inte alls</th>
<th>knappt</th>
<th>lite</th>
<th>delvis</th>
<th>ganska väl</th>
<th>mycket väl</th>
<th>helt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

**Jag känner mig glad.**

Stämmer...

<table>
<thead>
<tr>
<th>inte alls</th>
<th>knappt</th>
<th>lite</th>
<th>delvis</th>
<th>ganska väl</th>
<th>mycket väl</th>
<th>helt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

**Jag känner mig hoppfull.**

Stämmer...

<table>
<thead>
<tr>
<th>inte alls</th>
<th>knappt</th>
<th>lite</th>
<th>delvis</th>
<th>ganska väl</th>
<th>mycket väl</th>
<th>helt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

**Jag känner mig ledsen.**

Stämmer...

<table>
<thead>
<tr>
<th>inte alls</th>
<th>knappt</th>
<th>lite</th>
<th>delvis</th>
<th>ganska väl</th>
<th>mycket väl</th>
<th>helt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>
Fråga 3

Föreställ dig att du tar reda på kontonumret till Against Malaria Foundations (organisationen du
nyss läste om) bankkonto för donationer. Du kan helt anonynt välja att skänka en summa pengar
som kommer användas till inköp av myggnät mot malaria.

Föreställ dig nu följande fyra olika scenarier:
• Du väljer att inte donera några pengar till Against Malaria Foundation.
• Du väljer att donera 200 kronor till Against Malaria Foundation.
• Du väljer att donera 400 kronor till Against Malaria Foundation.
• Du väljer att donera 600 kronor till Against Malaria Foundation.

Hur tror du att du skulle känna dig efter att ha skickat 0, 200, 400 eller 600 kronor till organisatio-
nens bankkonto? Jämför de olika scenarierna.

Använd nedanstående skala från 1 (stämmer inte alls) till 7 (stämmer helt) och skriv i den sifra som
bäst beskriver hur du tror att du skulle känna dig efter att anonynt ha skänkt 0, 200, 400 eller 600
kronor till Against Malaria Foundation.

<table>
<thead>
<tr>
<th>Stämmer...</th>
<th>inte alls</th>
<th>knappt</th>
<th>lite</th>
<th>delvis</th>
<th>ganska väl</th>
<th>mycket väl</th>
<th>helt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 kronor:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200 kronor:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>400 kronor:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>600 kronor:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Jag skulle känna mig som en god människa om jag skänkte... (skriv en sifra från 1 till 7 i rutorna):

Jag skulle känna mig givmild om jag skänkte... (skriv en sifra från 1 till 7 i rutorna):

Jag skulle känna mig som en moralisk person om jag skänkte... (skriv en sifra från 1 till 7 i rutorna):

Jag skulle känna mig nöjd med mig själv om jag skänkte... (skriv en sifra från 1 till 7 i rutorna):

Jag skulle känna mig osjälvisk om jag skänkte... (skriv en sifra från 1 till 7 i rutorna):

Jag skulle känna att jag hade gjort något meningsfullt om jag skänkte... (skriv en sifra från 1 till
7 i rutorna):

0 kronor:   200 kronor:  400 kronor:  600 kronor:  

Fråga 4

Vad tror du att vi vill undersöka med den här studien? Övriga kommentarer är också välkomna.

Klart!

Slutligen vill vi bara att du fyller i ålder och kön.

Ålder: __________  Kön: [ ] Kvinna  [ ] Man

Om du vill ha mer information om den här studien när den är klar så skriv upp din e-mailadress nedan. Tack för hjälpen!