Exploring the influence of a smartphone application, with incorporated social proof and similarity mechanisms, on the donation behaviour of individuals to non-profit organisations

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ABSTRACT,

Nowadays more young people seem to spend an increased amount of time in their own social media bubble (Perrin, 2015). This research set out an experiment with the intention of trying to motivate individuals to donate to non-profit organisations. A vignette scenario was introduced to the respondents regarding the fictional "Koala Habitat Organisation". A willingness to donate to this fictional organisation was later asked to the respondents. In order to stimulate this donating behaviour, a smartphone application was replicated by the use of screenshots. Different screenshots were fabricated with social proof and similarity mechanisms incorporated in different intensities, in order to influence charitable giving. In total, the results of 131 respondents were analysed. A majority of this sample was highly educated and had a low monthly gross income. Additionally, a majority of the respondents took part in the Dutch version of the experiment, meaning that most respondents were from the same area. An analysis of covariance showed no statistically significant differences between the different conditions. Additionally, a marginally statistically significant positive relationship between the willingness to donate and one of the control variables, environmental awareness of need, was found. Although the experiment in itself did not produce statistically significant differences between the different conditions, this can be partly due to the differently manipulated groups not showing significant differences within the manipulation checks. Additionally, this implicates that there is a lot of room for future research in this field. Arguably, a real smartphone application consisting of these social proof and similarity mechanisms might produce different results in the future.

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Keywords

Donation behaviour, smartphone application, non-profit organisations, environmental non-profits, slacktivism, social proof, experimental behavioural research

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1. INTRODUCTION

Nowadays more young people seem to be less invested in actively seeking out ways to contribute to good causes in society, and seem to be spending more time in their social media bubble (Perrin, 2015). This trend is important since it is a transition which cannot be easily compared to the past. In earlier days, young people would not have access to these so-called personalised social media bubbles, and young people would donate to charities, or contribute to other good causes because they felt the need to help others.

However, nowadays these social media bubbles may become of even greater influence on individuals, especially younger ones. Donating to charities or contributing to good causes might no longer be interesting just because it is the right thing to help others. Intrinsic and extrinsic rewards like social recognition and physical gifts are also (in)directly advertised as important due to the increased usage of social media.

This trend brings additional difficulties for charities and other non-profit organisations to try to persuade especially the younger age groups with these additional factors influencing an individual's decision on whether to contribute in one way or another.

Imaizumi (2014) discusses online activism, and on a deeper level, the role slacktivists play in this. He believes that activism in itself is taking action to effect social change, and can occur in many ways. Ultimately he states that activism is not about how someone is defined, but what an individual has actually done. Imaizumi also describes the shift that is taking place, no longer being it necessary to meet face-to-face or hand out leaflets due to the increases options provided by internet-based mediums. Merely looking at the statistics alone it becomes clear that social media platforms host a lot of people. Imaizumi concludes by stating that the "online realm has dramatically changed the environment in which activism operates" (Imaizumi, 2014). Furthermore, he states that this is not necessarily good or bad, but should be handled as a tool with the capacity of enabling meaningful action.

In 2012 it was stated that there were over 1 billion smartphones used throughout the world, and that about 89% of the individuals owning one uses it throughout the day (Alexander, 2012). Thus it seems that smartphones can be considered a viable tool to try and stimulate certain behaviour.

Since more people use smartphones nowadays, this study will thus look at one way to influence the behaviour of people regarding donating to non-profit organisations. In the past, but also in the present there have been quite some organisations trying to promote non-profit organisations or get people to contribute to charity through the use of smartphone applications (Jensen, 2011). Research has been done in the past regarding the stimulants of donating to non-profits, or even philanthropy in itself (Bekkers & Wiepking, 2011), and there have also been cases where smartphone applications were utilised to add an option to donate to good causes (Jensen, 2011). However, in this study, those stimulants will be incorporated into the smartphone application itself.

In this way, this study aims to explore whether stimulating behaviour through the use of a smartphone application can influence the donation behaviour of individuals, and potentially benefit nonprofit organisations.

2. LITERATURE REVIEW

2.1 Defining philanthropy

Non-profit organisations and philanthropy are highly related. Non-profit organisations do not aim at getting profits, and philanthropy, or charitable giving, is one major form of income to non-profit organisations (Salamon & Anheier, 1992). In order to clearly think about philanthropy, Miller (2006) states that it is required to define it, and thus "specify the boundaries between motives, means, and objectives that are truly philanthropic and those that are not".

Sulek (2010) suggests that the most widely accepted definition is given by Salamon, who defined philanthropy as "the private giving of time or valuables (money, security, property) for public purposes" (Salamon & Anheier, 1992). He also looks at definitions from different perspectives, with some of the more notable definitions being; from a literal perspective "the love of mankind" (Johnson, Latham, & Todd, 1866; Webster & McKechnie, 1983; Webster & Porter, 1913), from a volitional (voluntary committing to a certain action) perspective "voluntary giving with the aim or intent of meeting a charitable need" (Van Til, 1990), and from an ideal perspective "voluntary action for the public good" (Payton, 1988).

2.2 Drivers of philanthropy

Now that philanthropy is defined, we can take a look at the drivers of philanthropy that put people in motion. In the literature review of empirical studies done by Bekkers and Wiepking (2011), they identify eight different mechanisms that drive philanthropy; (a) awareness of need; (b) solicitation; (c) costs and benefits; (d) altruism; (e) reputation; (f) psychological benefits; (g) values; (h) efficacy. Furthermore, they aim to capture these mechanisms within four different dimensions. The first dimension distinguishes whether it is a tangible or intangible mechanism. The second dimension distinguishes whether such a mechanism is within, outside, or between individuals. The third and fourth dimension distinguish the actors, as well as the targets, of a mechanism. The actors can comprise of beneficiaries, (charitable, non-profit) organizations, donors, and alters (people in the social environments of donors); the targets may be beneficiaries or donors.

Awareness of need is described as a prerequisite for philanthropy, as individuals need to become aware of a need to support (Bekkers & Wiepking, 2011). Solicitation is described as the act of being solicited to donate. It is also stated that a large majority of donations occur in response to such a solicitation (Bekkers & Wiepking, 2011). Costs and benefits are the material costs and benefits that are associated with donating. It is stated that there is a danger in offering material benefits for charitable contributions, in that they might reduce the effect of prosocial self-attributions on future helpfulness (Zuckerman, Iazzaro, & Waldgeir, 1979). Altruism consists of actions that contribute to a good cause but purely motivated by an individual's devotion to helping others (Bekkers & Wiepking, 2011). Psychological benefits focuses purely on the psychological, intangible costs and benefits associated with donating (Bekkers & Wiepking, 2011). A majority of the studies have shown that giving may influence one's self-image. There has also been evidence that helping behaviour might result in joy, also stated as the 'joy of giving'. Values are intangible and located within individuals. They thus originate from donors themselves and are also targeted towards either themselves or beneficiaries. Furthermore, individual values are often very difficult or even impossible to manipulate, so no research of that is available. The effects of certain attitudes and values to donations were researched (Bekkers & Wiepking, 2011). Efficacy is referring to the perception of donors if their contribution can make a difference in the specific cause that they are supporting. It is stated that if people perceive that their contribution will not make a difference that they are less likely to give at all. No experimental studies have been conducted regarding manipulated efficacy. Furthermore, people generally seem to overestimate their own contribution's effectiveness.

Reputation refers to the social consequences of donations for the donor. It is stated that giving is usually viewed as a positive thing to do and that people are willing to incur costs to be recognised for generous contributions (Clark, 2002). However, not giving or contributing damages one's reputation. Furthermore, people seem to prefer donations to be known by others. The effect of being watched may thus also play a role in one's decision to donate. This is especially a mechanism that is applicable to young people since they are more often using social media, thus have more opportunities of social exposure (Perrin, 2015).

Lee (2014) underlines behaviour from individuals on social media might not always end up in actual activism. She notes that individuals seem to construct their own identity based on aspects like what they eat, have, or even post. This behaviour could be seen as not at the same level as actual activism since it is not actually doing but merely presenting yourself in a certain manner. Goffman (1978) defined this as selfpresentation, and notes that he believes that "every person is like an actor on stage that is acting the part they want the audience to believe is the real them".

2.3 Stimulating behaviour

This brings us to the question of how individuals can be stimulated, or even persuaded from being only interested in charities and showing signs of slacktivism, to actually performing charitable behaviour. Cialdini (1987) defines six distinct ways of persuading and stimulating human behaviour; reciprocity, scarcity, authority, consistency, liking, and social proof. A few of those can be interpreted as influences relating to reputation.

Liking another person causes it to be more likely for an individual to be agreeable to propositions that are made (Cialdini, 1987). Liking someone may be the result of; sharing similarities, receiving compliments from another individual, or working towards mutual goals (Cialdini, 1987). Social proof is all about setting a norm or standard. Individuals often look towards the behaviour of others in order to determine their own behaviour (Cialdini, 1987). In the case of philanthropy you could thus try to stimulate an individual by informing them of what others are doing, and even more so when these people share similarities. Additionally, Reingen (1982) found out through multiple experiments that social proof did have an effect on individual's willingness regarding a request for donating money. For the sake of this research, the variable of reputation will be studied. Reputation will be influenced by a quantified endorsement (altered by social proof mechanism) and the relative quality of this same endorsement (altered by similarity mechanism),

2.4 Hypotheses

From the literature follows that both social proof and similarity mechanisms can have a positive influence on behaviour, and more specifically on charitable behaviour. The following hypotheses were thus defined according to the literature mentioned before:

H1: The inclusion of a social proof mechanism will lead to increased charitable behaviour in comparison to cases where these mechanisms are non-existent.

H2: The inclusion of a similarity mechanism will lead to increased charitable behaviour in comparison to cases where these mechanisms are non-existent.

Additionally, the following main research question was defined from the literature study: The following research question was used during this study: *How will the use of a smartphone application with a social proof and similarity mechanism influence the willingness to donate of an individual*?

2.5 Theoretical framework

From the literature discussed this simple theoretical framework was first derived:



Figure 1: Simple theoretical framework

Figure 1 represents the original relationship between reputation and willingness to donate. In here the relationship between the variables of reputation and willingness to donate is still neutral. This is due to the fact that slacktivism still occurs, and that an individual might care just about their reputation, and this does not yet lead to an increase in charitable giving. Below you see the control variables which are also included. Awareness of need and self-efficacy are included as they very often serve as a prerequisite for individuals to make a donation.

In figure 2 (below) you see the theoretical framework with the intervention of a smartphone application. Now, there is a positive relationship between the smartphone application, consisting of the social proof and similarity mechanisms, and the willingness to donate. The social proof and similarity mechanisms function as the independent variables which are manipulated. These independent variables additionally serve as smaller, more distinct parts of the bigger variable 'reputation' which was also discussed in the literature.

3. METHODS

3.1 Research design

For this study, an experimental study was conducted. This took the form of making questionnaires on the online platform of Google Forms, and distributing it online to attract respondents. It was a 2×2 experiment, with an additional (fifth) control group. The independent variables were social proof (low or high), and similarity (low or high), furthermore a fifth group had no social proof and similarity mechanisms included. Since the study was about finding whether there was an influence in donating behaviour for a big population, a quantitative study was more reliable and objective. A quantitative research allowed for the use of statistics to make conclusions and thus ruled out subjectivity. Another reason why a quantitative study was chosen was that the theoretical framework included several different variables. By making questionnaires and distributing them through the use of the internet, universal

answers were collected, and thus the impact of all different variables could be measured through statistics.

3.2 Participants

In total, a sample of N = 145 respondents participated in this study. Unfortunately, a few cases had to be deleted (n = 14). This was done either because the participants were speeding through the survey (not paying attention to the reverse coded questions), or because of them being flatliners (answering all questions in the same manner, mainly only choosing the middle answer). These participants were identified by calculating the variance that was given within all answers, and the variance between the four different constructs. After this removal, the sample size used for the analysis of this research consisted of n = 131 respondents. This sample size is sufficient seen as there were five different conditions for all respondents. Of this sample size, a total of n = 17respondents participated in the English experiment, while n = 114 respondents participated in the Dutch experiment. A small majority of the respondents were female (53.4% female, 46.6% male). The age ranged from 17 to 86 years, with an average of M =35.15 and a standard deviation of SD = 17.476. The level of education of the respondents consisted of preparatory secondary vocational education or Dutch VMBO/MAVO (1.5%), preparatory secondary higher general education or Dutch HAVO (3.1%), preparatory secondary university education or Dutch VWO (2.3%), intermediate vocational education or Dutch MBO (7.6%), higher vocational education (college) or Dutch HBO (36.6%), University (47.3%), and postdoctoral/PhD (1.5%). A majority of the respondents (62.4%) indicated that they have donated to a charity in the past year.

Two different tests were performed to check whether there was a (statistically significant) difference in the distribution of gender and/or age between the five different conditions. First, Pearson's chi-square test (with $\alpha = .05$) was performed to determine whether there was a significant difference in the gender distribution between the five conditions. The chisquare test turned out to be statistically non-



Figure 2: Extended theoretical framework

significant with X^2 (4) = 3.385, and p = 0.496, p > 0.05. Thus, this means that there was no significant difference in the gender distribution between the five different conditions (see appendix 9.1.1). Furthermore, a one-way analysis of variances (ANOVA) test was performed to check whether there was a significant difference in the age distribution between the five conditions. The one-way ANOVA turned out to be statistically non-significant with F (4) = 0.815, and p = 0.518, p > 0.05, thus meaning that there was no significant difference in age distribution between the five conditions (see appendix 9.1.2).

3.3 Materials

3.3.1 Manipulations

In order to test whether the two independent variables, social proof and similarity, were able to affect an individual's willingness to donate several screenshots of a smartphone application were fabricated. This was done in order to replicate the feeling of actually using a smartphone application. It thus became an experimental research. Five different respondent groups were formed. The first group was a control group, in which neither of the two independent variables was apparent in the screenshot. In the second group, the inclusion of both social proof and similarity was low. In the third group; social proof was high, similarity was low. In the fourth group; social proof was low, similarity was high. And in the fifth and last group, both social proof and similarity was high.

3.3.2 Measurements

In this section, the way the dependent variable, independent variables, and the control variables were measured is discussed. To sufficiently measure the independent and control variables, several scales were used. These scales were established after doing research on pre-existing scales and combining those with the research design. Furthermore, to make sure whether all these variables were all internally consistent, the Cronbach's alpha was tested. George and Mallery (2003) stated that any Cronbach's alpha below 0.5 was unacceptable. From that onwards, between 0.5 and 0.6 was poor, between 0.6 and 0.7 was questionable, between 0.7 and 0.8 was acceptable, between 0.8 and 0.9 was good, and anything above 0.9 was excellent. However, because of these constructs only having 3 items, the Cronbach's alpha was not expected to be very high.

3.3.2.1 Dependent variable

The dependent variable was the willingness to donate. This variable was measured according to the response to the following statement (item) judged on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree): "I would donate something to the Koala Habitat Organisation.".

3.3.2.2 Independent variables

The two independent variables were the social proof and similarity mechanisms. To measure whether these mechanisms were conveyed in a successful manner to the participant, two manipulation check scales were constructed. All of the statements ultimately used were inspired by the manipulation checks apparent in the master thesis by Keizer (2017).

For the construct of the social proof manipulation check the following statements (items) were judged on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree); "The Koala Habitat Organisation is an unknown goal among the entire society.", "Donating to the Koala Habitat Organisation occurs very often.", and "A lot of people support the Koala Habitat Organisation.".

Cronbach's alpha for this construct was $\alpha = 0.622$. However, if the first (reversed) item was deleted, this alpha increased to $\alpha = 0.668$. Therefore it was decided to delete this item. This meant that the internal consistency was still a bit questionable, but for the sake of this research, it would still be taken into account (see appendix 9.1.3).

For the construct of the similarity manipulation check the following statements (items) were judged on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree); "A lot of people who are like me support the Koala Habitat Organisation.", "The Koala Habitat Organisation does not have a big group of adherents who are like me.", and "The Koala Habitat Organisation is a popular goal among people who have a lot in common with me.".

Cronbach's alpha for this construct was $\alpha = 0.605$. However, if the second (reversed) item was deleted, this alpha increased to $\alpha = 0.682$. Therefore it was decided to delete this item. The internal consistency remained a bit questionable, but for the sake of this research, this variable was still taken into account (see appendix 9.1.4).

3.3.2.3 Control variables

The two control variables that were measured according to a scale were the environmental awareness of need, and the self-efficacy.

For the construct of environmental awareness of need the following statements (items) were judged on a five-point Likert scale (1 = strongly disagree, 5 =strongly agree); "History teaches us that the koala population is in a bad state.", "Only a very small part of the former koala population is left.", and "I do not have to worry about the future of the koala population.". These statements were inspired by literature published by Schuyt, Smit, and Bekkers (2013).

Cronbach's alpha for this construct was $\alpha = 0.692$. However, if the third (reversed) item was deleted, this alpha increased to $\alpha = 0.728$. Therefore it was decided to delete this item. This meant that the internal consistency was now acceptable within this construct (see appendix 9.1.5).

For the construct of self-efficacy the following statements (items) were judged on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree); "My donation can not make a difference for the koalas.", "Mankind can play a big role in the koala problem.", "I have enough means (time, money) to resolve the koala problem.". These statements were inspired by literature published by Chen, Gully, and Eden (2001).

Cronbach's alpha for this construct was $\alpha = 0.252$. This was way too low to make any reliable conclusions regarding the effect of this variable. Normally this would have meant that this variable would be disregarded entirely, however for the sake of this paper it was still discussed (see appendix 9.1.6).

3.4 Procedure

In Google Forms a total of 10 different questionnaires were produced. For each of the five different manipulation groups, there was both an English and a Dutch questionnaire created, in order to try to attract as many participants as possible. Since a good division of participants between the five different groups was desirable, it was decided that a third-party website would be used to sequentially redirect every participant to one of the groups that would click on the link. This link rotating, as it is called, was done by the aid of the website clickmeter.com. After all different questionnaires were put into both the English and the Dutch link rotator, the link was shared on a variety of platforms. The data was collected between the 14th of September and the 1st of October. The links were published on the author's personal Facebook page, LinkedIn page, the University of Twente Marketplace on Facebook, a few student groups on Facebook, and shared on the LinkedIn pages of relatives. In order to further motivate potential respondents, a Dutch VVV coupon with a value of \notin 50,- was offered as a prize to one lucky respondent.

The experiment itself started with a vignette case. This case was included in order to set the mood that an individual would answer questions with the previous information in mind, and looked at it from that perspective. This first part was about the koala, an animal which only lives in Australia. Because of the fact that quite some people were unaware of the current state of this animal. After this more general part, the fictional smartphone application was introduced in the case. For the control group, this meant that it was merely stated that it existed and was downloaded. For the other four groups, it also included that fields of interest were entered, thus personalising the experience. Lastly, the screenshot containing a fictional koala habitat organisation is introduced as a charity goal. All of the groups had a subtle difference in their screenshots. The four groups containing either low or high inclusion of social proof or similarity mechanisms had a small text about the number of people that supported this goal, as well as how many of these supporters shared the same interests as the participant. The control group did not have this text. Afterwards, the questionnaire itself followed. First, a willingness to donate was asked on a five-point Likert scale, ranging from strongly disagree, to strongly agree, along with a question on the amount they were willing to donate, if any. Then, statements regarding environmental awareness of need, and self-efficacy were introduced, which were also to be judged on a five-point Likert scale, ranging from strongly disagree, to strongly agree. Both constructs had three items, of which one was reversed.

Another six statements followed, which were manipulation checks. All of these were judged on a five-point Likert scale, ranging from strongly disagree, to strongly agree. Three statements were used to check whether the social proof manipulation was perceived by respondents or not. Three different statements were used to check whether the similarity manipulation was perceived by respondents or not. There was also a text stating "The Koala Habitat Organisation is a fictional organisation, while answering these questions please keep the scenario in mind as well.", in order to remind everyone that these questions should be answered according to the scenario and not by personal beliefs. This was necessary to try to prevent people from answering these questions with a mindset that the koala habitat organisation was a real organisation.

The last few questions were about the remaining control variables which were mentioned earlier in the theoretical framework. This consisted of questions regarding; age, gender, educational level, monthly gross income, whether the respondent made a charity donation in the past year, and their daily active smartphone usage. In Appendices 9.2 and 9.3 an overview of the experiments both in English and Dutch can be found.

The data was analysed with the use of the statistical program SPSS and collected and organised with Microsoft Excel. First, the individual responses of participants were merged into one big Excel file and were then coded to prepare it for SPSS. Afterwards, it was imported into SPSS, and labels and values were given for the coded data. This made it very easy in SPSS to efficiently analyse the data.

4. RESULTS

4.1 Manipulation checks

To check whether the social proof and similarity manipulations were executed and conveyed successfully, the manipulation checks were included. Both the inclusion of the social proof, and the similarity mechanism were thus tested by a one-way ANOVA since both contained three independent groups (None, Low, and High). The first thing that was looked at was whether the assumption of homogeneity of variance was met or not. Levene's test of Equality of Error Variances for social proof gave F(2) = 0.976 with p = 0.380. Thus p > 0.05, which meant that this assumption was not rejected (see appendix 9.1.7). For similarity this test gave F(2) = 0.423 with p = 0.656. Thus p > 0.05 which meant that for similarity this assumption was also not rejected (see appendix 9.1.8).

After this, the one-way ANOVA was performed. For social proof F(2) = 0.555 with a significance level of 0.575 was found (see appendix 9.1.9). Since the value was that high, this implicated that there were no statistically significant differences found between subjects within the three groups of social proof (none, low, and high).

For similarity F(2) = 4.060 with a significance level of 0.020 was found for the one-way ANOVA (see appendix 9.1.10). This value was very low (p < 0.05), which implicated that there actually were statistically

Table 1: Tests of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	48,552 ^a	6	8,092	6,485	,000
Intercept	3,128	1	3,128	2,506	,116
EnvironmentalAwareness AverageMinusDeleted	8,360	1	8,360	6,699	,011
SelfEfficacyAverage	29,009	1	29,009	23,248	,000
SocialProof2	1,150	1	1,150	,921	,339
Liking2	1,926	1	1,926	1,544	,216
SocialProof2 * Liking2	1,472	1	1,472	1,180	,280
Error	154,731	124	1,248		
Total	1294,000	131			
Corrected Total	203,282	130			

Dependent Variable: I would donate something to the Koala Habitat Organisation.

a. R Squared = ,239 (Adjusted R Squared = ,202)

significant differences found between subjects within the three groups of similarity (none, low, and high). Based on these results it was concluded that the social proof manipulation was unfortunately not successful, but the similarity manipulation was successful.

4.2 Testing the hypotheses

To test the two hypotheses, a univariate analysis of covariances (ANCOVA) was performed. The willingness to donate was the dependent variable. The social proof and similarity mechanisms were the independent variables. Furthermore, environmental awareness of need and self-efficacy were added as the covariates. These covariates were added in order to remove the effects of these variables, and thus purify the data. Afterwards, another ANOVA was performed, in order to check the results of Tukey's Post Hoc test. The same independent and dependent variables were used for Tukey's test, but the covariates were excluded to enable the Post Hoc option.

4.2.1 Social proof and similarity mechanisms

With a value of F(1) = 0.921 and p = 0.339 there was no significant main effect of social proof on the willingness to donate (see Table 1). There was a slight difference in the means of the three conditions; none (M = 2.674 and SE = 0.227), low (M = 2.830)and SE = 0.156), and high (M = 3.048 and SE =0.159), however this did not proof to be statistically significant (see appendix 9.1.11). With a value of F(1) = 1.544 and p = 0.216 there was also no significant main effect of similarity on the willingness to donate (see Table 1). Similarly there was a slight difference in the means of the three conditions; none (M = 2.674 and SE = 0.227), low (M= 3.077 and SE = 0.161), and high (M = 2.801 and SE= 0.151), however this once again did not proof to be statistically significant (see appendix 9.1.12). There was no significant two-way interaction effect between social proof and similarity on the willingness to donate either with F(1) = 1.180 and p = 0.280 (see Table 1).

Furthermore, Tukey's Post Hoc test was also performed with the willingness to donate as the dependent variable, and the inclusion of the social proof and similarity mechanisms as the independent variables. This test ultimately showed the same result as well with all mean differences between the three groups; none, low, and high, being not statistically significant (see appendix 9.1.13).

4.2.2 Environmental awareness of need and self-efficacy

With a value of F(1) = 6.699 and p = 0.011 there was a significant main effect of environmental awareness of need on the willingness to donate (see Table 1). To check for moderating effects, the group was divided in two, and another ANOVA was performed with social proof (none, low, and high), similarity (none, low, and high), and environmental awareness of need (low, high) as the independent variables, and the willingness to donate as the dependent variable. This showed that environmental awareness of need had a marginally significant main effect on the willingness to donate with F(1) = 3.826 and p = 0.053. This showed that participants who scored high on environmental awareness of need had a significantly higher score on the willingness to donate (M = 3.168,SE = 0.165) as compared to participants who scored low on environmental awareness of need (M = 2.673, SE = 0.157) (see appendix 9.1.14).

With a value of F(1) = 23.248 and p < 0.000 there was also a significant effect of self-efficacy on the willingness to donate (see Table 1). Thus, to check for moderating effects this group was also divided in two, and another ANOVA was performed with social proof (none, low, and high), similarity (none, low, and high), and self-efficacy (low, high) as the independent variables, and the willingness to donate as the dependent variable. This showed that selfefficacy had a significant main effect on the

Table 2: Overvie	w of the	tested	hypotheses
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	Hypotheses	Result
Ш1	The inclusion of a social proof mechanism will lead to increased charitable	Not accorted
ш	behaviour in comparison to cases where these mechanisms are non-existent.	Not accepted
ш2	The inclusion of a liking mechanism will lead to increased charitable behaviour	Not accorted
ΠZ	in comparison to cases where these mechanisms are non-existent.	Not accepted

willingness to donate with F(1) = 10.657 and p = 0.001. This showed that participants who scored high on self-efficacy had a significantly higher score on the willingness to donate (M = 3.278, SE = 0.156) as compared to participants who scored low on self-efficacy (M = 2.530, SE = 0.154) (see appendix 9.1.15).

4.3 Overview of tested hypotheses

The results of this study showed that both the social proof and similarity mechanisms had no significant main effect on the willingness to donate. Therefore, both H1 and H2 were rejected. Table 2 presents an overview of the tested hypotheses of this study.

5. DISCUSSION

The primary objective of this research was to investigate whether social proof and similarity mechanisms had an influence on the willingness to donate of an individual. The following research question was used during this study: *How will the use of a smartphone application with a social proof and similarity mechanism influence the willingness to donate of an individual?* In order to give an answer to this question, an online experiment was diffused containing 5 different scenarios and survey questions afterwards. In this chapter, the main findings will be discussed. Furthermore, limitations, practical implications, and suggestions for future research in this field are discussed.

5.1 Main findings

Based on the literature review, as well as on the hypotheses earlier stated, it was expected that the inclusion of social proof and similarity mechanisms would lead to an increase in charitable behaviour. Furthermore, it was expected that individuals with a higher environmental awareness of need and higher self-efficacy would also lead to higher rates of charitable behaviour. However, the inclusion of social proof and similarity mechanisms did not lead to a statistically significant increase in the willingness to donate, which was the dependent variable used to measure charitable behaviour.

For social proof, it was found that there were some minor differences between the three groups. The results showed that the group without any social proof mechanism had the lowest average willingness to donate, the group with a low amount of inclusion of the social proof followed, and the group with the highest amount of inclusion also had the highest willingness to donate on average, as was expected. However, these differences were relatively small. This was entirely different from the similarity mechanism. Once again there were minor differences. However, in here it was the group with the low inclusion of a similarity mechanism that actually had the highest average willingness to donate of the three groups. Once again the group with no inclusion of a similarity mechanism had the lowest average willingness to donate. Furthermore, Tukey's test underlined that the small mean differences between all the groups were not statistically significant.

The answers to the manipulation check statements showed mixed results. For social proof, it became apparent that there were no significant differences between the respondents of the three groups noticed. This could very well implicate that the respondents were unaware of the state they were put in by the experiment. This also made the data regarding the effect of the inclusion of the social proof mechanism on the willingness to donate less useful since the differences between the three groups could not be attributed to the inclusion of the social proof mechanism. For the similarity mechanism, this was different. In here it showed that the differences between the groups were statistically significant. This could implicate that the respondents were aware of the similarity mechanism being apparent in their version of the experiment.

Regarding the variables of environmental awareness of need and self-efficacy, more positive results were achieved. For environmental awareness of need, a positive relationship was found with the dependent variable willingness to donate. On top of that, this relationship was also found to be statistically significant. Self-efficacy also had a positive relationship with the willingness to donate, and this relationship also was statistically significant. However, the only difference between these two variables was that the internal consistency (as tested by Cronbach's alpha) of the environmental awareness of need was at a good level, while the one of self-efficacy was unacceptable. Thus, although the results of self-efficacy in comparison to environmental awareness of need were possibly even better, ultimately it proved not to be since the internal consistency was unacceptable.

Regarding theoretical implications, it became clear that some of the results confirm earlier discussed literature. Bekkers and Wiepking (2011) stated that both awareness of need and efficacy were drivers of philanthropy. In this study, the results showed that both environmental awareness of need as well as selfefficacy were good predictors for the willingness to donate. The higher the scores on either environmental awareness of need or self-efficacy, the higher the willingness to donate, this was thus in line with the theory. Unfortunately, the same thing cannot be said about the theories discussed from Cialdini (1987). This study did not find results that can confirm whether social proof and/or similarity mechanisms were a good method of influencing the willingness to donate of an individual, which is what was expected following from the theory.

5.2 Practical implications

Previous results might suggest that although there is not a significant statistical difference when involving social proof and/or similarity mechanisms, it may still affect an individual's charitable behaviour, albeit slightly.

This research might serve as a pilot study for marketers or charity organisations who are looking to new ways for stimulating charitable behaviour. Furthermore, it revealed that environmental awareness of need still is an important factor for an individual's charitable behaviour. It thus is still a good idea to convince people that there is a serious need for charitable behaviour for them to act on.

More specifically, environmental non-profits or even koala foundations could conclude from this research that the awareness of need is indeed an important factor in gather donations. Thus, it is very important for these organisations to try to make people aware of their cause.

5.3 Limitations

There are several limitations that need to be taken into account concerning this study. First and foremost, this study tried to replicate a smartphone application by the usage of screenshots. This was done since building a smartphone application in such a short timespan was not possible, and furthermore, the author did not possess the knowledge to build something like that himself, at this point in time. By the usage of smartphone screenshots, it was aimed to replicate this experience. However, it is questionable whether people would behave and answer similarly when they were to be exposed to an actual smartphone application.

Furthermore, this experiment used a scenario. It could be possible that people who are less drawn to the scenario its topic will let this influence their decision, as well as people who are more drawn to the topic. In this way, their personal opinions and beliefs would have been more decisive rather than the screenshots and other material they were exposed to in the experiment.

It would definitely be interesting to have an actual smartphone application with several different charity goals, implicating social proof and similarity mechanisms on the pages where the donation can be made. Simple a/b testing, similar to the way it was presented with a clickthrough website used in this experiment, could lead users randomly to one of the different versions of the donation pages. Afterwards, an improved survey could be diffused to the users. Such a more realistic approach could definitely benefit this study and furthermore, lead to more interesting results.

Another limitation of this research is that it seems that the social proof manipulation was not conveyed correctly according to the results of the manipulation check. Therefore, it immediately becomes uncertain that even if there was a difference between the results of the three different groups of the inclusion of the social proof mechanism, whether this difference could be accounted to this variable. This mechanism thus was not included in a satisfactory manner, making the results of it unreliable as well. Furthermore, both the social proof and similarity mechanism showed no statistically significant results between the three different groups; none, low, and high. For social proof, this could have been due to different reasons. First, it could be due to the fact discussed before, that respondents were not aware of the mechanism actually being there. Another reason, which is also possible for the similarity mechanism is the way it was included in the experiment. It might be that people might not be responsive to this type of inclusion of these mechanisms. Perhaps to gain statistically significant differences it needed to be included in an alternative way. For instance, larger messages, or (in case of an actual smartphone application) usage of pop-ups.

The internal consistency for most of the constructs as measured by the Cronbach's alpha was a bit disappointing. A major reason for it being disappointing was arguably the low amount of items in each of the constructs. This caused it to have a lower internal consistency, and thus being less reliable used as a measuring scale.

A major limitation as well would be the generally highly educated sample. A total of 85.5% indicated that they either were enrolled to or have graduated from a Higher Vocational Education (college) or Dutch HBO, University, or Postdoctoral (PhD) level. It could be the case that people with lower educational levels are more susceptible to the manipulations that were introduced. 50.5% also indicated that they had a monthly gross income of €1000,- or less. This is also a major group, and potentially a more balanced group of income levels would have produced different results.

The sample itself was also relatively small. Additionally, the experiment was mainly diffused through social channels. This could have affected the results, for instance, relatives or friends answering in a more socially desirable way (although all results were processed anonymously). The way it was diffused also caused the experiment to mainly be conducted to a similar group of respondents with similar areas and cultures, as was also demonstrated by the educational level and monthly gross income statistics stated before.

Lastly, the experiment had a relatively long scenario that needed to be read by the respondents in a careful manner. As demonstrated before, quite a number of respondents sped through the survey questions (unaware of the reversed statements), it is very probable that similar situations occurred with respondents speeding through the scenario part of the experiment.

5.4 Suggestions for future research

Following from the previous sections, a lot can be suggested for future research directions. First of all, this study could best be seen as a pilot study for future research. As shown in the limitations section, the internal consistency of most of the constructs could be better. Furthermore, the manipulation checks showed that not all manipulations were conveyed in a correct manner, this could be improved in future research. Besides the survey part getting reworked, an actual real-life situation could be better replicated by the use of an actual smartphone application. Before this is done, of course, it is important to first find an accurate way to convey the manipulations in it, and furthermore, find adequate ways to measure whether these manipulations were conveyed correctly. Then, at last, it would be interesting to look at whether there will be major differences between groups.

Additionally, a more varying sample would also be interesting to look at. Although the age and gender were considered quite average, the educational level was rather high, and monthly gross income quite low. Furthermore, a majority of the sample was taken from Dutch respondents.

6. CONCLUSION

This study tried to explore the concept of influencing an individual's behaviour through the use of a smartphone application. This study showed that there were no statistically significant differences found for the willingness to donate of an individual after the inclusion of the two variables; social proof and similarity in a fictional smartphone application. There were minor (random) differences apparent, but additional research has to prove whether these variables can actually influence an individual. The environmental awareness of need did have a positive relationship with the willingness to donate of an individual. Thus, this factor should definitely be kept in mind.

To conclude with an answer to the research question; The following research question was used during this study: *How will the use of a smartphone application with a social proof and similarity mechanism influence the willingness to donate of an individual?* Currently, it remains uncertain whether a smartphone application can influence the willingness to donate, and whether these factors are able to influence this relationship, or other factors might be a better fit. Additional research is necessary to find out whether a smartphone application can have a crucial role in stimulating charitable behaviour.

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9. APPENDICES

9.1 SPSS output and calculations

9.1.1 Gender distribution between five different conditions

Gender * Manipulation group Crosstabulation

		Manipulation group						
			Control	Low Social Proof/Low Liking	High Social Proof/Low Liking	Low Social Proof/High Liking	High Social Proof/High Liking	Total
Gender	Male	Count	12	14	10	15	10	61
		% within Manipulation group	48,0%	53,8%	41,7%	55,6%	34,5%	46,6%
	Female	Count	13	12	14	12	19	70
		% within Manipulation group	52,0%	46,2%	58,3%	44,4%	65,5%	53,4%
Total		Count	25	26	24	27	29	131
		% within Manipulation group	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3,385 ^a	4	,496
Likelihood Ratio	3,419	4	,490
Linear-by-Linear Association	,768	1	,381
N of Valid Cases	131		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 11,18.

9.1.2 Age distribution between five different conditions

Descriptives

					95% Confiden Me	ce Interval for an		
	Ν	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Control	24	34,13	18,781	3,834	26,19	42,06	19	79
Low Social Proof/Low Liking	26	33,15	12,908	2,531	27,94	38,37	19	63
High Social Proof/Low Liking	24	40,92	19,622	4,005	32,63	49,20	18	86
Low Social Proof/High Liking	26	34,27	18,555	3,639	26,77	41,76	19	85
High Social Proof/High Liking	28	33,75	17,262	3,262	27,06	40,44	17	81
Total	128	35,15	17,476	1,545	32,09	38,21	17	86

ANOVA

Age

Age

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1001,971	4	250,493	,815	,518
Within Groups	37786,208	123	307,205		
Total	38788,180	127			

9.1.3 Cronbach's alpha manipulation check social proof

Reliability Statistics

Cronbach's Alpha	N of items
,622	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
The Koala Habitat Organisation is a recognised goal among the entire society.	4,63	1,774	,332	,668
Donating to the Koala Habitat Organisation occurs very often.	4,41	1,629	,570	,336
A lot of people support the Koala Habitat Organisation.	4,31	1,706	,412	,549

9.1.4 Cronbach's alpha manipulation check similarity

Reliability Statistics

Cronbach's Alpha	N of Items
,605	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
A lot of people who are like me support the Koala Habitat Organisation.	5,28	2,404	,463	,430
The Koala Habitat Organisation has a big group of adherents who are like me.	5,08	2,856	,285	,682
The Koala Habitat Organisation is a popular goal among people who have a lot in common with me.	5,20	2,314	,506	,364

9.1.5 Cronbach's alpha environmental awareness of need

Reliability Statistics

Cronbach's Alpha	N of Items
,692	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
History teaches us that the koala population is in a bad state.	7,68	2,466	,496	,613
Only a very small part of the former koala population is left.	7,39	2,301	,634	,439
l do have to worry about the future of the koala population.	7,66	2,625	,406	,728

9.1.6 Cronbach's alpha self-efficacy

Reliability Statistics

Cronbach's Alpha	N of Items
,252	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
My donation can make a difference for the koalas.	6,21	1,980	,121	,220
Mankind can play a big role in the koala problem.	5,69	2,155	,132	,194
l have enough means (time, money) to resolve the koala problem.	7,56	1,926	,157	,134

9.1.7 Levene's test of Equality of Error Variances for social proof

Test of Homogeneity of Variances

ManipulationCheckSocialProofAverageMinusDeleted

Levene Statistic	df1	df2	Sig.	
,976	2	128	,380	

9.1.8 Levene's test of Equality of Error Variances for similarity

Test of Homogeneity of Variances

ManipulationCheckLikingAverageMinusDeleted

Levene Statistic	df1	df2	Sig.
,423	2	128	,656

9.1.9 One-way ANOVA Manipulation check social proof

ANOVA

ManipulationCheckSocialProofAverageMinusDeleted

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,496	2	,248	,555	,575
Within Groups	57,172	128	,447		
Total	57,668	130			

9.1.10 One-way ANOVA Manipulation check similarity

ANOVA

ManipulationCheckLikingAverageMinusDeleted

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5,536	2	2,768	4,060	,020
Within Groups	87,273	128	,682		
Total	92,809	130			

9.1.11 Means and standard deviations social proof conditions

Estimates

Dependent Variable: I would donate something to the Koala Habitat Organisation.

			95% Confidence Interval		
Designed Social Proof	Mean	Std. Error	Lower Bound	Upper Bound	
None	2,674 ^{a,b}	,227	2,226	3,123	
Low	2,830 ^{a,b}	,156	2,521	3,139	
High	3,048 ^{a,b}	,159	2,733	3,362	

 a. Covariates appearing in the model are evaluated at the following values: EnvironmentalAwarenessAverageMinusDeleted = 3,8321, SelfEfficacyAverage = 3,2417.

b. Based on modified population marginal mean.

9.1.12 Means and standard deviations similarity conditions

Estimates

Dependent Variable: I would donate something to the Koala Habitat Organisa

			95% Confidence Interval		
Designed Liking	Mean	Std. Error	Lower Bound	Upper Bound	
None	2,674 ^{a,b}	,227	2,226	3,123	
Low	3,077 ^{a,b}	,161	2,759	3,394	
High	2,801 ^{a,b}	,151	2,502	3,099	

a. Covariates appearing in the model are evaluated at the following values: EnvironmentalAwarenessAverageMinusDeleted = 3,8321, SelfEfficacyAverage = 3,2417.

b. Based on modified population marginal mean.

9.1.13 Tukey's Post Hoc tests

Multiple Comparisons

Dependent Variable: I would donate something to the Koala Habitat Organisation. Tukey HSD

		Mean Difference (I-			95% Confide	ence Interval
(I) Designed Social Proof	(J) Designed Social Proof	J)	Std. Error	Sig.	Lower Bound	Upper Bound
None	Low	-,38	,305	,427	-1,11	,34
	High	-,32	,305	,539	-1,05	,40
Low	None	,38	,305	,427	-,34	1,11
	High	,06	,244	,971	-,52	,64
High	None	,32	,305	,539	-,40	1,05
	Low	-,06	,244	,971	-,64	,52

Based on observed means.

The error term is Mean Square(Error) = 1,582.

Multiple Comparisons

Dependent Variable: I would donate something to the Koala Habitat Organisation. Tukey HSD

		Mean Difference (l-			95% Confide	ence Interval
(I) Designed Liking	(J) Designed Liking	J)	Std. Error	Sig.	Lower Bound	Upper Bound
None	Low	-,38	,308	,436	-1,11	,35
	High	-,33	,303	,525	-1,05	,39
Low	None	,38	,308	,436	-,35	1,11
	High	,05	,245	,976	-,53	,63
High	None	,33	,303	,525	-,39	1,05
	Low	-,05	,245	,976	-,63	,53

Based on observed means.

The error term is Mean Square(Error) = 1,582.

9.1.14 ANOVA Environmental awareness of need

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	16,207 ^a	9	1,801	1,165	,324
Intercept	942,338	1	942,338	609,502	,000
SocialProof2	,243	া	,243	,157	,693
Liking2	,759	1	,759	,491	,485
EnvironmentalAwareness HIGHLOW	5,916	1	5,916	3,826	,053
SocialProof2 * Liking2	,107	1	,107	,069	,793
SocialProof2 * EnvironmentalAwareness HIGHLOW	,011	1	,011	,007	,932
Liking2 * EnvironmentalAwareness HIGHLOW	5,338	1	5,338	3,452	,066
SocialProof2 * Liking2 * EnvironmentalAwareness HIGHLOW	,166	1	,166	,107	,744
Error	187,076	121	1,546		
Total	1294,000	131			
Corrected Total	203,282	130			

Tests of Between-Subjects Effects

Dependent Variable: I would donate something to the Koala Habitat Organisation.

a. R Squared = ,080 (Adjusted R Squared = ,011)

1. EnvironmentalAwarenessHIGHLOW

Dependent Variable: I would donate something to the Koala Habitat Organisation.

EnvironmentalAwareness		Std. Error	95% Confidence Interval		
HIGHLOW	Mean		Lower Bound	Upper Bound	
Low	2,673 ^a	,157	2,363	2,983	
High	3,168 ^a	,165	2,842	3,495	

a. Based on modified population marginal mean.

9.1.15 ANOVA Environmental self-efficacy

Tests of Between-Subjects Effects

Dependent Variable: I would donate something to the Koala Habitat Organisation.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	24,232 ^a	9	2,692	1,819	,071
Intercept	956,982	ា	956,982	646,715	,000
SocialProof2	,016	া	,016	,011	,917
Liking2	,366	1	,366	,248	,620
SelfEfficacyHIGHLOW	15,770	1	15,770	10,657	,001
SocialProof2 * Liking2	1,064	୍ୟୁ	1,064	,719	,398
SocialProof2 * SelfEfficacyHIGHLOW	,837	া	,837	,566	,453
Liking2 * SelfEfficacyHIGHLOW	,074	1	,074	,050	,823
SocialProof2 * Liking2 * SelfEfficacyHIGHLOW	1,060	۹ ۴	1,060	,717	,399
Error	179,051	121	1,480		
Total	1294,000	131	11.		
Corrected Total	203,282	130			

a. R Squared = ,119 (Adjusted R Squared = ,054)

1. SelfEfficacyHIGHLOW

Dependent Variable: I would donate something to the Koala Habitat Organisation.

SelfEfficacyHIGHLOW			95% Confidence Interval		
	Mean	Std. Error	Lower Bound	Upper Bound	
Low	2,530 ^a	,154	2,225	2,835	
High	3,278 ^a	,156	2,969	3,587	

a. Based on modified population marginal mean.

9.2 Experiments in English

9.2.1 Initial information for all groups

Dear participant,

I want to thank you in advance for being so kind to fill in this questionnaire, and therefore helping me with my research! I am doing this research for my bachelor thesis at the University of Twente.

In this research, you will be exposed to a scenario, which also involves looking at a screenshot. Please study the scenario as well as the screenshot very carefully, and read through all of the information thoroughly. Afterwards, a few questions will be asked, most of these are related to the scenario earlier given. The biggest part of the questions involves giving your personal opinion, with the information you have acquired of the scenario still in mind. It is not necessary to return to previous parts of this questionnaire; your first instinct is always the right one.

All submitted information will be processed completely anonymously. In most cases, the research will take between 5 and 10 minutes. Among all participants, a coupon (VVV-coupon, https://www.vvvcadeaubonnen.nl/) with a value of \notin 50,- will be given away to one lucky participant! If you want to win this, you will need to fill in your e-mail address at the end of this questionnaire. If you are the winner, you will be contacted at November 1st the latest.

Thank you for your cooperation!

Thom Melching

t.q.melching@student.utwente.nl

9.2.2 Scenario part 1 for all groups

Read the text below very carefully and please imagine the following scenario:

While you are watching videos on Youtube you run into animal videos about the koala. The koala is a cute animal, but you know very little about it. You decide to look for more information about the animal.

It seems to be the case that in the last few years there are fewer koalas left over. Bushfire, fatal domestic dog attacks, and increased urbanisation are all reasons that more koalas are disappearing. Compared to the population of 100 years ago, there is only 1% left of it nowadays.

On Facebook, you find a number of pages about the koalas. Some post cute videos about the animal, while others try to emphasise the critical situation of the koalas. You decide to follow a few of these pages very thoroughly, and you are also participating in online conversations. Furthermore, you occasionally share a cute video of the animal through social media.

One evening one of your friends approaches you and asks "What is your deal with koalas, if I may ask?". You tell everything you know about the animals in a very passionate manner, and the dangers they are subjected to nowadays. Quite a number of people are fascinated and stick around to hear your plea about the subject. In the end, everyone seems to be convinced about the seriousness of the affair, and the general opinion seems to be that everyone is impressed by your efforts for the koala population.

Although others are impressed by your efforts for this noble cause, in reality, you have not contributed anything yet to resolve the problem itself. You think that the animals are adorable and cute, but you are in doubt whether you should contribute yourself.

9.2.3 Scenario part 2 of null (group 0) condition

Read the text below very carefully, take notice of the screenshot and please imagine the following scenario:

Later that week you are using your smartphone to browse a bit while suddenly you encounter an advertisement of a mobile application which interests you. It is a mobile application through which you can support multiple charity goals. You are interested in it, and decide to download the application. The application has around 100.000 downloads at this point in time. First, you need to register with an e-mail address and fill in your name, age, and gender. After you have done this, you are looking at some of the different charities. The following goal, as portrayed below, attracts your attention:

9.2.4 Screenshot of null (group 0) condition



Koala Habitat Organisation

Organisation for Animal Welfare and Wildlife Conservation

Help us in our quest to protect the natural habitat of the koala!



9.2.5 Scenario part 2 of group 1, 2, 3 and 4 conditions

Read the text below very carefully, take notice of the screenshot and please imagine the following scenario:

Later that week you are using your smartphone to browse a bit while suddenly you encounter an advertisement of a mobile application which interests you. It is a mobile application through which you can support multiple charity goals. You are interested in it, and decide to download the application. The application has around 100.000 downloads at this point in time. First, you need to register with an e-mail address and fill in your name, age, and gender. After that you are taken to a page where you can enter your interests related to charitable causes. You decide to enter the following fields of interest as portrayed by the screenshot below:

9.2.6 Screenshot 1 of group 1, 2, 3 and 4 conditions

	39% 12:44
← Enter your field(s) of interest	Done
You're almost done! By entering your interests hook you up with charities that fit you.	we can
Animal Welfare	1
Wildlife Conservation	1
Monuments	+
Child Mortality	1
Sports and Exercise	+
Elderly Care	+
Clean Drinking Water	1
Literacy	+
Refugees of War	1
Religious Freedom	+

9.2.7 Scenario part 2 of group 1, 2, 3 and 4 conditions

Read the text below very carefully, take notice of the screenshot and please imagine the following scenario:

After you have done this, you are looking at some of the different charities. There is a great amount of different charitable causes, and they all seem to be related to your earlier entered information. The following goal, as portrayed below, attracts your attention:



9.2.8 Screenshot 2 of group 1 (left) and 2 (right) conditions



9.2.9 Screenshot 2 of group 3 (left) and 4 (right) conditions

9.2.10 Questionnaire part for all five conditions

These questions should in no circumstance be viewed as promises or obligations, but are merely used in the context of the research.

I would donate something to the Koala Habitat Organisation.

(five-point Likert scale with 1 = strongly disagree and 5 = strongly agree)

How much money would you be willing to give?

- o €1 to €5
- o €6 to €10
- o €11 to €15
- o €16 to €20
- o More than €20

o I would not be willing to do this.

To what extent do you agree with the following points?

(five-point Likert scale with 1 = strongly disagree and 5 = strongly agree)

- History teaches us that the koala population is in a bad state.
- My donation can not make a difference for the koalas.
- Only a very small part of the former koala population is left.
- Mankind can play a big role in the koala problem.
- I do not have to worry about the future of the koala population.
- I have enough means (time, money) to resolve the koala problem.

The Koala Habitat Organisation is a fictional organisation, while answering these questions please keep the scenario in mind as well.

To what extent do you agree with the following points?

- The Koala Habitat Organisation is an unknown goal among the entire society.

- A lot of people who are like me support the Koala Habitat Organisation.
- Donating to the Koala Habitat Organisation occurs very often.
- The Koala Habitat Organisation does not have a big group of adherents who are like me.
- A lot of people support the Koala Habitat Organisation.
- The Koala Habitat Organisation is a popular goal among people who have a lot in common with me.

What is your gender?

o Male

o Female

What is your age?

•••

What is the highest educational level you have completed or are currently enrolled in?

- o Elementary school
- o Preparatory Secondary Vocational Education
- o Preparatory Secondary Higher General Education
- o Preparatory Secondary University Education
- o Intermediate Vocational Education
- o Higher Vocational Education (college)
- o University
- o Postdoctoral (PhD)

How many minutes do you actively use your smartphone per day?

- o 0 to 60 minutes
- o 60 to 120 minutes
- o 120 to 180 minutes
- o 180 to 240 minutes
- o 240 to 300 minutes
- o More than 300 minutes

Have you donated to a charity in the past year?

o Yes

o No

In which category does your monthly gross income place?

- o €0 to €500
- o €501 to €1000
- o €1001 to €1500
- o €1501 to €2000
- o €2001 to €2500
- o €2501 to €3000
- o €3001 to €3500
- o €3501 to €4000
- ----
- o €4001 to €4500 o €4501 to €5000
- 0 0 10 01 10 00 000
- o More than €5000
- o I would prefer not to disclose this information.

o I don't know.

Among all participants, a coupon (VVV-coupon, https://www.vvvcadeaubonnen.nl/) with a value of €50,- will be given away to one lucky participant! If you want to win this, please fill in your e-mail address:

•••

9.3 Experiments in Dutch

9.3.1 Initial information for all groups

Beste deelnemer,

Hartelijk dank dat u deze enquête wilt invullen, en dus ook wilt meehelpen met mijn onderzoek! Dit onderzoek voer ik uit voor mijn afstudeeropdracht aan de Universiteit Twente.

In dit onderzoek wordt er een scenario geschetst, waarbij ook een screenshot (schermafbeelding) wordt getoond. Bestudeer het scenario aandachtig, en lees alle informatie nauwkeurig door. Daarna zullen er een aantal vragen gesteld worden, de meeste hiervan zijn gerelateerd aan het scenario. Bij het grootste deel van alle vragen wordt uw persoonlijke mening gevraagd, met de informatie die u in het scenario heeft opgedaan in uw achterhoofd. Het is niet nodig om op een later moment nog terug te keren naar eerdere delen uit de enquête, uw eerste ingeving is altijd de juiste.

Alle geregistreerde gegevens zullen geheel anoniem verwerkt worden. Het onderzoek zal in de meeste gevallen tussen de 5 en 10 minuten in beslag nemen. Onder alle deelnemers wordt er een VVV cadeaubon t.w.v. \in 50,- verloot. Om kans te maken hierop dient u uw e-mailadres op het einde in te vullen. Indien u heeft gewonnen wordt er uiterlijk 1 November contact met u opgenomen.

Hartelijk dank voor uw medewerking!

Thom Melching

t.q.melching@student.utwente.nl

9.3.2 Scenario part 1 for all groups

Lees de tekst hieronder nauwkeurig door en stelt u zichzelf het volgende voor:

Terwijl u op YouTube filmpjes bekijkt komt u dierenfilmpjes over de koala tegen. De koala is een schattig dier, maar u weet er eigenlijk niet al te veel over. U besluit meer informatie op te zoeken over het dier.

Het schijnt dat er de laatste paar jaren steeds minder koala's over zijn gebleven. Bosbranden, toenemende verstedelijking, en aanvallen van wilde honden zijn een aantal redenen dat steeds meer koala's verdwijnen. Ten opzichte van 100 jaar terug is er nog maar 1% over gebleven van de toenmalige koalapopulatie.

Op Facebook vindt u ook een aantal pagina's over koala's. Sommigen plaatsen schattige video's van het beestje, anderen brengen de kritieke situatie extra onder de aandacht. U besluit een aantal van deze pagina's nauwlettend te volgen, en neemt ook deel aan de online conversaties. Ook deelt u zo nu en dan een schattige video van de beestjes via sociale media.

Op een avond spreekt één van uw vrienden/vriendinnen u aan en vraagt: "Wat heb jij eigenlijk met koala's?". U vertelt gepassioneerd over alles wat u van de beestjes weet, en de gevaren waaraan ze zijn blootgesteld tegenwoordig. Meerdere personen beginnen tijdens uw betoog geboeid te luisteren. Op het eind lijkt iedereen overtuigd van de ernst van de situatie voor koala's, en is de algehele opinie dat het knap is van u dat u zich voor zo'n nobel doel inzet.

Ondanks dat anderen het knap van u vonden dat u zich inzette voor zo'n nobel doel, heeft u in werkelijkheid nog niet iets gedaan aan het verhelpen van het koalaprobleem. U vindt de dieren erg lief en schattig, maar twijfelt nog of u zelf iets moet bijdragen.

9.3.3 Scenario part 2 of null (group 0) condition

Lees de tekst hieronder nauwkeurig door, bestudeer het screenshot, en stelt u zichzelf het volgende voor:

Later in die week zit u op uw smartphone wat te browsen en komt u plots een advertentie tegen van een mobiele applicatie die uw aandacht trekt. Het is een mobiele applicatie waarbij u verschillende goede doelen kan steunen. Uw interesse is gewekt en u besluit de applicatie te downloaden. De applicatie heeft op dit moment zo'n 100.000 downloads. Als eerste moet u zich even registreren met een e-mailadres en uw naam, leeftijd en geslacht invullen. Nadat u dit heeft ingevuld gaat u rondkijken tussen de verschillende goede doelen. Uw oog valt op het volgende doel:

9.3.4 Screenshot of null (group 0) condition



Koala Habitat Organisatie

Organisatie voor Dierenwelzijn en Natuurconservatie

Help mee de leefomgeving van de koala te beschermen!



9.3.5 Scenario part 2 of group 1, 2, 3 and 4 conditions

Lees de tekst hieronder nauwkeurig door, bestudeer het screenshot, en stelt u zichzelf het volgende voor:

Later in die week zit u op uw smartphone wat te browsen en komt u plots een advertentie tegen van een mobiele applicatie die uw aandacht trekt. Het is een mobiele applicatie waarbij u verschillende goede doelen kan steunen. Uw interesse is gewekt en u besluit de applicatie te downloaden. De applicatie heeft op dit moment zo'n 100.000 downloads. Als eerste moet u zich even registreren met een e-mailadres en uw naam, leeftijd en geslacht invullen. Hierna komt u bij een pagina terecht waar u uw interesses met betrekking tot goede doelen kan invullen. U besluit de volgende interessegebieden te kiezen zoals op het screenshot hieronder:

9.3.6 Screenshot 1 of group 1, 2, 3 and 4 conditions

	▼		
÷	Vul uw interessegebied(en) in	Klaar	
J	Je bent bijna klaar! Door het invullen van inte kunnen we jou koppelen aan passende goede	eresses e doelen.	
	Dierenwelzijn	1	
	Natuurconservatie	1	
	Monumenten	+	
	Kindersterfte	1	
	Sport en Beweging	+	
	Ouderenzorg	+	
	Schoon drinkwater	1	
	Geletterdheid	+	
	Oorlogsvluchtelingen	1	
	Religieuze vrijheid	+	

9.3.7 Scenario part 2 of group 1, 2, 3 and 4 conditions

Lees de tekst hieronder nauwkeurig door, bestudeer het screenshot, en stelt u zichzelf het volgende voor:

Nadat u dit heeft ingevuld gaat u rondkijken tussen de verschillende goede doelen. Er is een groot aantal verschillende goede doelen, en ze lijken allemaal gerelateerd te zijn aan uw eerder ingevulde informatie. Ook staat er wat informatie over het aantal andere personen die het goede doel al eerder hebben gesteund. Uw oog valt op het volgende doel:





9.3.9 Screenshot 2 of group 3 (left) and 4 (right) conditions

9.3.10 Questionnaire part for all five conditions

Deze vragen moeten absoluut niet worden beschouwd als beloftes of verplichtingen, maar worden puur in het kader van het onderzoek gebruikt.

Ik zou iets doneren aan de Koala Habitat Organisatie.

(five-point Likert scale with 1 = strongly disagree and 5 = strongly agree)

Hoeveel geld zou u bereid zijn te doneren aan dit goede doel?

- o €1 tot €5
- o €6 tot €10
- o €11 tot €15
- o €16 tot €20
- o Meer dan €20
- o Ik zou hiertoe niet bereid zijn.

In hoeverre bent u het eens met de volgende punten?

(five-point Likert scale with 1 = strongly disagree and 5 = strongly agree)

- De geschiedenis leert ons dat het slecht gesteld is met de koalapopulatie.
- Mijn donatie kan geen verschil uitmaken voor de koala's.
- Er is nog maar een heel klein deel over van de voormalige koalapopulatie.
- De mens kan een belangrijke rol spelen in het koalaprobleem.
- Ik hoef mij geen zorgen te maken over de toekomst van de koalapopulatie.
- Ik heb genoeg middelen (tijd, geld) om het koalaprobleem te verhelpen.

De Koala Habitat Organisatie is een fictieve organisatie, denk bij het beantwoorden ook terug aan het scenario.

In hoeverre bent u het eens met de volgende punten?

- De Koala Habitat Organisatie is een onbekend doel onder de gehele samenleving.

- Veel mensen die op mij lijken steunen de Koala Habitat Organisatie.
- Het doneren aan de Koala Habitat Organisatie gebeurt heel vaak.
- De Koala Habitat Organisatie heeft geen grote achterban van mensen zoals ik.
- Veel mensen steunen de Koala Habitat Organisatie.
- De Koala Habitat Organisatie is een populair doel onder mensen die veel met mij overeenkomen.

Wat is uw geslacht?

o Man

o Vrouw

Wat is uw leeftijd?

•••

Wat is uw hoogst genoten of huidige opleiding?

- o Basisonderwijs, lagere school
- o VMBO, MAVO
- o HAVO
- o VWO
- o Middelbaar beroepsonderwijs
- o Hoger beroepsonderwijs
- o Wetenschappelijk onderwijs
- o Postdoctoraal

Hoeveel minuten gebruikt u actief uw smartphone gemiddeld per dag?

- o 0 tot 60 minuten
- o 60 tot 120 minuten
- o 120 tot 180 minuten
- o 180 tot 240 minuten
- o 240 tot 300 minuten
- o Meer dan 300 minuten

Heeft u in het afgelopen jaar gedoneerd aan een goed doel?

o Ja

o Nee

In welke categorie bevindt uw maandelijks bruto inkomen zich?

- o €0 tot €500
- o €501 tot €1000
- o €1001 tot €1500
- o €1501 tot €2000
- o €2001 tot €2500
- o €2501 tot €3000
- o €3001 tot €3500
- o €3501 tot €4000
- -----
- o €4001 tot €4500
- o €4501 tot €5000
- o More than €5000
- o Dit zeg ik liever niet.
- o Dit weet ik niet.

Onder alle deelnemers verloten wij een VVV cadeaubon t.w.v. €50,-. Indien u hier kans op wilt maken, vul dan hieronder uw e-mailadres in:

...