The role of perspective taking on prosocial behavior

Frank van de Pieterman

S1108530

Supervised by dr. ir. Peter de Vries and dr. Pascal Wilhelm

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UNIVERSITY OF TWENTE.

Abstract

Prosocial behavior plays a large role in everyday society; in order to further elaborate on this interesting concept, the goal of this research was to explore the relationship between perspective taking and prosocial behavior. Following the two types of perspective taking described by Batson, Early and Salvarani (1997)(imagining how s/he feels in a given situation, and imagining how you would feel in that situation), participants (N = 101) in an experiment received a text and instructions with regards to perspective taking. There was a control group as well. After reading a sad text, empathy, personal distress and transportation were measured with scales, followed by two situations where prosocial behavior was required. The expectation was that imagining yourself as the main character in a stressful situation (in this research; meeting a former partner after a recent break up) would stimulate personal distress more than the other conditions, causing an individual to show more prosocial behavior in a non-urgent situation. However, this was not the case, although participants in both perspective-taking groups did score higher on empathy, personal distress and transportation, and showed more prosocial behavior in urgent situations. The major conclusion is that in urgent situations where prosocial behavior is required, it is possible to stimulate perspective taking in individuals in order to invoke prosocial behavior.

Keywords: prosocial behavior, helping behavior, perspective taking, empathy, personal distress, transportation, altruism

Abstract (Dutch)

Prosociaal gedrag speelt een belangrijke rol in het dagelijkse leven; om dieper in te gaan op dit interessante concept, was het doel van dit onderzoek om de relatie tussen perspectief nemen en prosociaal gedrag te ontdekken. Aan de hand van de twee verschillende typen perspectief nemen, beschreven door Batson, Early en Salvarani (1997) (indenken hoe iemand zich voelt in een bepaalde situatie, en indenken hoe jij je zou voelen in die situatie), proefpersonen (N = 101) in een experiment kregen een tekst en instructies met betrekking tot perspectief nemen. Er was ook een controlegroep. Na het lezen van een treurige tekst werden empathie, persoonlijk ongemak en transportatie gemeten met schalen, gevolgd door twee situaties waarin prosociaal gedrag benodigd was. De verwachting was dat jezelf inbeelden in de hoofdpersoon in een stressvolle situatie (in dit onderzoek: een ex-partner ontmoeten nadat het recentelijk uitgemaakt is), persoonlijk ongemak meer zou stimuleren dan in de andere condities, waardoor een individu meer prosociaal gedrag zou vertonen in een niet-urgente situatie. Dit was echter niet het geval, hoewel proefpersonen in beide perspectief-condities hoger scoorden op empathie, persoonlijk ongemak en transportatie, en in urgente situaties meer prosociaal gedrag lieten zien. De voornaamste conclusie is dat in urgente situaties waar prosociaal gedrag is benodigd, het mogelijk is om perspectief nemen te stimuleren in individuen, waardoor prosociaal gedrag wordt opgeroepen.

Trefwoorden: prosociaal gedrag, helpend gedrag, perspectief nemen, empathie, persoonlijk ongemak, transportatie, altruïsme

1. Introduction

When we look around us, we see people helping each other everywhere. In everyday life, prosocial behavior is an internalized concept. When asking people why they would perform simple prosocial or altruistic deeds, like donating money to charity or helping an elderly person across the street, the common answer is "that is just something you do," although nobody would really mind if one did not. Children are encouraged from a young onwards to share with others; people who perform extreme deeds for the well-being of others while expecting no specific reward, such as saving someone from a burning house or doing humanitarian volunteer work, are regarded as heroes by both people (Becker & Eagly, 2004; Kinsella, Ritchie & Igou, 2015) and organizations, such as governments (Terbush, 2014) and religious institutions (Chowdhury, 2012).

While the theory of natural selection focuses mostly on competition between individuals (Darwin, 1859), many different species of animals show behavior of working together or helping each other. A variety of research has been conducted on the mechanisms of this behavior, called prosocial or altruistic, in an array of species (Piliavin and Charng, 1990; Preston, 2013; Bourke, 2014). Stotland (1969) initiated the idea that empathy might be related to prosocial behavior, by being the first one to do extensive research on empathy and its implications. In his research, Stotland argued that when people see others' emotions, they react emotionally as well. Building on this idea, Batson, Early and Salvarani (1997) showed that imagining yourself in a given situations, and merely imagining how someone feels in that situation , are two different types of perspective taking, causing different types of prosocial and even altruistic behavior. Imagining how someone feels in a given situation triggers an empathic response, and imagining how one would feel oneself in a specific situation also stimulates personal distress. Remotely related are the findings of Green (Green & Brock, 2000; Green, 2010), who introduced the concept of transportation, i.e. losing oneself into a story, which is perspective taking as well. According to this theory, transportation causes heightened emotional response, resulting in empathy for the characters.

Based on previous research, one would expect that the different types of perspective taking initiate different types of prosocial behavior. In order to verify this, an experiment was conducted, with the end goal of discovering the impact of the various types of perspective taking described by Batson, Early and Salvarani (1997) on two types of prosocial behavior: urgent and

non-urgent, through empathy and personal distress. A fully understood relationship between perspective taking and prosocial behavior is important, as it can be used to explain, predict or even stimulate prosocial behavior in a wide variety of settings, such as education, social work, marketing and philantropy. The research question, therefore, is the following:

How does perspective taking influence prosocial behavior?

1.1 Theoretical framework

Helping others is often beneficial for both an individual and a species (Dawkins, 1986; Dawkins, 1989). This can be found in many species, where almost without exception this helps in the survival of genes through delayed fitness benefits such as kin selection (Ben-Ami Bartal, Decety & Mason, 2011; Díaz-Muñoz et al., 2014; Rubenstein, 2012). Examples of animals which show social behavior are ants and bees (Boomsma, 2009), lions (Packer, Gilbert, Pusey, & Obrien, 1991) and birds (Rubenstein, 2012).

In their review on helping behavior, Devety and Cowell (2014) show that animals react more intensely to family members in distress than to other individuals of the same species in distress. This is in accordance with Hamilton's rule (Hamilon, 1964), which poses that a genetic relationship with the recipient makes helping behavior more likely. Humans have these evolutionary tendencies as well; generally, people are favoring in-group members, making distinctions on traits like genetically relatedness, nationality or ethnicity (Batson, Klein, Highberger & Shaw, 1995; Cikara, Botvinick & Fiske, 2011; Vine, 1983).

However, in other situations, helping behavior in people often disregards genetic relatedness. Moral reasoning, a typical human trait, even reduces in-group favoritism (Decety & Cowell, 2014; Stewart-Williams, 2010; van Lange, 2008), a deviation with the evolutionary tendencies described above; why would a species develop a trait which does not promote its own genes?

One of the explanations for this phenomenon is that it is possible for humans to feel empathy for one another. Stotland (1969, p. 275), being one of the first to do extensive research on empathy, defines empathy as "perceiving the other's emotions. (…) he will respond to the other's experiences as he perceives them. (…) it is possible to empathize with 'nonexistent' emotions." Basically, empathy is responding to the emotions that another individual is experiencing. When watching someone experience pain, an urge to dissolve it can appear.

However, Eisenberg and Miller (1987) find only moderate correlations between empathy and prosocial behavior. They argue that prosocial behavior is merely a way to reduce one's own distress. This thought goes hand in hand with Stotland's reasoning: reaction to another person's distress does not necessarily have to be in the form of helping (or the urge to); it is also possible to deny or avoid the distress. Stotland (1969, p. 273) notes that "… sharing another's feelings should be distinguished from acting sympathetically and helpfully toward him. The relationship between action and the sharing of feelings is obviously not a simple or direct one." According to Shotland and Stebbins (1983), urgency is an important variable here; the more urgent a situation where help is required appears to an individual, the more likely this individual is to help.

Batson, Early and Salvarani (1997) argue that whether someone displays prosocial behavior is not only dependent upon feelings of empathy, but also on the type of perspective taking that was applied. They argue that there are two types of perspective taking: one is imagining how the other would feel, while the other is "putting yourself into the other's shoes," meaning that you imagine how you would feel in such a situation. Batson, Early and Salvarani. note that the difference is often not acknowledged in scientific research and literature, while it could explain the difference in behavior. Imagining yourself into another's position evokes not only the empathy described by earlier research, but also personal distress. Empathy is correlated with ratings of being softhearted, warm, sympathetic, compassionate, tender and moved, while personal distress is related to being alarmed, grieved, troubled, upset, disturbed and worried – a more urgent call to action (Shotland & Stebbins, 1983).

Research on the different types of perspective taking is consistent with this hypothesis. Research subjects who saw videos of people in painful situations, reported higher pain when they were asked to imagine how they would feel, compared to imagining how the other would feel (Jackson et al., 2006 with fMRI; Decety, 2011 with fMRI; Ruby & Decety, 2004 with PET; Lamm, Batson & Decety, 2007). Even looking at facial expressions of distress of other people, activates the same regions in the brain as when one was in distress himself (Decety & Michalska, 2010; Lamm, Decety & Singer, 2011). Additionally, Stotland (1964) already measured higher vasoconstriction in people who were asked to take the other's perspective (although without the specific types of perspective taking pointed out by Batson, Early and Salvarani) compared to people who were not asked to do so. Higher vasoconstriction indicates higher blood pressure, which is a symptom of stress.

Remotely related to perspective taking is the theory of transportation, which is absorption an individual experiences when reading a story, a phrase coined by Green and Brock (2000). According to research on this concept, transportation causes feelings for the characters and in the end attitude or belief change. This attitude or belief change is, according to them, story-consistent, even though no attitudes or believes were explicitly mentioned in the story in their research (Green & Brock, 2000; Green, 2010). Transportation was correlated to creating attachment to, and feeling empathy for, characters and the theme of the story (Green & Brock, 2000; Shen, Ahern & Baker, 2014). The concept of transportation seems related to perspective taking, and will therefore be used to check for manipulation.

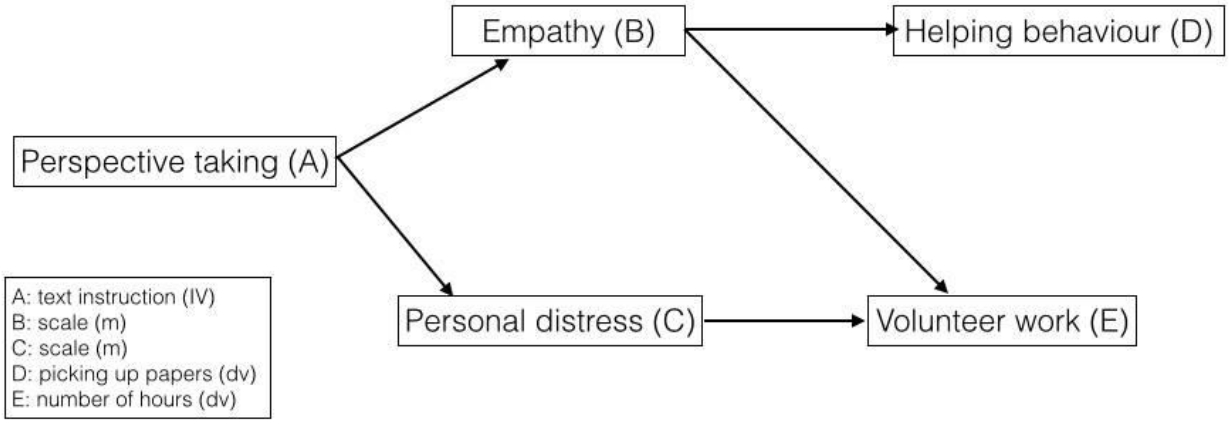
In this research, prosocial behavior was measured. It is important to note the difference between prosocial and altruistic behavior. According to Wilson (1976), altruism is unilaterally directed at others, relatively unresponsive to reward and punishment, and likely to have evolved through kin selection. Bar-Tal (1986) states that in order for behavior to be altruistic, it must benefit another person, it must be voluntarily, it must be performed intentionally, the benefit for the other must be the goal, and there is no reward expected. However, the most important difference between altruism and prosocial behavior is stated by Rachlin (2002), who states that helping behavior is altruistic if there is alternative behavior possible that is less harmful to the actor. If this is not the case, the behavior shown is prosocial. In this research, the two dependent variables are helping behavior in an urgent situation, and helping behavior in a non-urgent situation. Based on the definitions above, the behavior in the first would be classified as prosocial, while the behavior in the latter meets the critera for altruism.

1.2 Current research

To summarize, it seems that there are two types of perspective taking; imagining how a character feels, and imagining how oneself would feel into the situation of a target character. The first would result in higher feelings of empathy, while the second would stimulate personal distress as well. In urgent situations, people with higher feelings of empathy are inclined to help more, while in non-urgent situations, empathy is not enough; people would also need a higher feeling of personal distress to prevent them from ignoring or avoiding the situation. This is pictured in the conceptual model below. In the experiment in this study, research participanst were randomly assigned to three perspective-taking conditions after which they received a text (with instructions

according to their condition: *Self* for imagining how they would feel in the situation in the text; *Other* for imagining how the main character feels; *None* for control condition). After the levels of personal distress and empathy were measured by validated scales, they were put into two situations, urgent and non-urgent, where help was required. As said, to check for the manipulation, transportation was measured with a validated scale as well.

Figure 1. Conceptual Model of Current Research



To answer the research question, the following hypotheses are stated:

1. Participants in the imagine-other and imagine-self conditions score higher on empathy than participants in the control condition.
2. Participants in the imagine-self condition score higher on personal distress than participants in the other two conditions.
3. Participants in the imagine-other and imagine-self conditions are willing to commit themselves to more hours volunteer work than participants in the control condition.
4. Participants in the imagine-self and imagine-other conditions are more likely to help another person pick up dropped papers than in the control condition.

2. Method

2.1 Participants and design

There were 101 participants in this study, of which 91 were Dutch and 10 German. Of the participants, 57 was male and 44 were female. The average age (ranged 18 to 28) was 21.58 (SD: 2.075. See Table one for study characteristics of the participants.

Table 1: Study characteristics of participants

Institution	Social Sciences	Technical Sciences	%
University of Twente	55	33	87.1%
Saxion University of Applied Sciences	6	7	12.9%
Totals (*N* = 101)	61	40	

Participants were recruited through convenience sampling at the University of Twente and Saxion (University of Applied Sciences). Snowball sampling was also used, by asking participants if they knew other people who would be willing to participate. These methods of sampling were used to gain a large amount of participants. Psychology and Communication Science students received partial course credit for participation. Other participants did not receive a reward. The full experimental procedure was conducted in Dutch, so participants had to have a clear understanding of the Dutch language. Participants were told that all personal data would be processed anonymously and that the experiment was about the influence of a text.

The research was a true experiment, with research participants being randomly assigned to one of three conditions. This type of research was picked as it is the best way to expose causal relationships between variables. As the conceptual model shows, the independent variable was the type of perspective taking; the conditions were imagining how you would feel (*Self*), imagining how the other feels (*Other*), and a control group (*Control).* The dependent variables were to what extent the participants would help pick up and sort a stack of papers (*Papers*, urgent*)*, and how much hours of volunteer work (*VolunteerWork*, non-urgent*)* they would be willing to do. The volunteer work consisted of giving voluntary coaching in any course to high school students (during the time span of the research, final exams for high school students were

approaching). *Empathy* and *Personal Distress* were measured with validated six item scales (Batson, Early and Salvarani, 1997) and literally translated to remain valid. *Transportation* was measured with an eleven item scale developed and validated by Green and Brock (2000), which was literally translated as well. Using scales outside scientific literature can threaten the validity; validated scales ensure high construct validity. The research had relatively low face validity due to the variety of conditions in which the research was conducted (e.g. time of the day, day of the week, location). For this research, a significance level (p) of 0.05 was used.

2.2 Procedure

Participants were seated in a quiet environment, where they received the research papers, starting off with an introduction to the research, informed consent and guarantee of anonymity (Appendix A). If participants asked questions about the text or instructions, participants was told that all participants received the same text and instructions, to reduce the chance of guessing the hypothesis. In all conditions, participants started off with answering questions about basic demographics such as age, study background and sex (Appendix B). Afterwards, participants in the *Self* condition received the instruction to read the text and clearly imagine how s/he would feel in the protagonist's perspective. Participants in the *Other* condition received the instruction to read the text and clearly imagine how the protagonist would feel. Participants in the *Control* condition received the instruction to count the words *I* and *you* in the text. Full text instructions in Dutch can be found in Appendix B. The following two pages included the text, which was a short story about a girl meeting her ex-boyfriend shortly after their break up (see Appendix C)

Afterwards, all conditions were asked to fill in a set of items (see Appendix D for the Dutch translations), while keeping their experience from the text in mind. The questions were divided in three sets: empathy (such as "this text made me feel compassionate," Cronbach's Alpha of .80), personal distress (such as "this text made me feel alarmed," Cronbach's Alpha of .82), and transportation (such as "I could picture myself in the scene of the events described in the narrative," Cronbach's Alpha of .67). In the research, empathy and personal distress items were mixed using 5-point Likert scales for each item, in order to camouflage the constructs of Empathy and Personal Distress.

Then, the participants were led to believe that the experiment had come to an end, with on the last page a word of thanks and the question whether the participant would help out the university by giving high school students from low socio-economic background tutoring in any course, without any financial reward. The participant was asked to fill in the number of hours s/he would like to help, or to not fill in anything if the request was denied. To give the participants the illusion that this was not part of the research, the request was typed in a different font, and the university logo was added (Appendix E).

Next, the experimenter would thank the participant for participation while holding a stack of 30 papers, consisting of two scientific articles. When receiving the text and questions, the researcher would drop the stack of papers, seemingly by accident, while saying "Oh no, they were sorted." The reaction of the research participants was recorded with a video camera. As soon as the reaction of the participant had become sufficiently clear according to the researcher, the participants were debriefed with a document about the real purpose of the experiment (Appendix F), which they had to sign afterwards to indicate that they endured no harm. There was often also an informal explanation about the goal of the research, to which most participants reacted amused, interested or both.

After all the data was collected, two other researchers rated the helping behavior of the participant, by viewing the video data independently of each other, on a five-point scale as "no helping response," "minor help," "helping to pick up moderately," "actively helping to pick up," "actively helping to pick up and sort." The final score consisted of the average of the two ratings. To prevent bias and protect the anonymity of the participants, the interpreters were instructed to halt a video as soon as they recognized a participant, resulting in a missing value for that rating. Although Cohen's Kappa was rather low (.59), the average of the ratings was almost identical (2.35 and 2.36) and the correlation between the ratings was very high (.93). Therefore, to keep the number of ratings as high as possible, it was assumed as safe to have a missing value from one interpreter resulting in a score based purely on the alternative interpretation. Only if both interpreters reported a missing value, the score was discarded from the research. Eventually, the number of missing values of interpreter 1, interpreter 2 and final variable (i.e. the average of interpreter 1 and 2) on this item were respectively 12, 10 and 7.

3. Results

3.1 Empathy, Personal Distress, Transportation

Table 2: correlations of Empathy, Personal Distress and Transportation

	Empathy	Personal Distress	Transportation
Empathy	-	.71	.67
Personal Distress	.71	-	.64
Transportation	.67	.64	-

A MANOVA test was conducted to compare the effects of the independent variable (i.e. Perspective Taking conditions) on Empathy, Personal Distress, and Transportation, since these three variables were correlated which each other. The results were significant for all variables; Empathy, with $F(2, 98) = 22.998$, $p = .000$; Personal Distress, with $F(2, 98) = 18.627$, $p = .000$; Transportation, with $F(2, 98) = 19.450$, $p = .000$. Wilks' Lambda = 0.030, indicating that there was a significant effect of the independent variable on the dependent variables, with $F(6, 192) = 8.717$, $p = .000$. An overview of means and standard deviations of the dependent variables can be found in Table 3.

Table 3: Means and standard deviations of Empathy, Personal Distress and Transportation

	Self		Other		Control	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Empathy	2.87	.55	2.70	.62	1.86	.79
Personal Distress	2.69	.67	2.40	.80	1.69	.65
Transportation	3.02	.48	2.81	.50	2.31	.57

A Bonferroni test was conducted to see which conditions would differ from each other on the different variables. For Empathy, the means of Self and Other did not differ significantly ($p =$

.972). Control was significantly lower, however, for both Self (p = .000) and Other (p = .000). For Personal Distress, Self and Other did not differ significantly either (p = .324), while both were significantly higher than Control (p = .000 for Self; p = .000 for Other). For Transportation, Self and Other did not differ significantly either (p = .228). Other was significantly lower here as well (p = .000 for Self; p = .000 for Other).

In summary, when comparing the means with each other, participants in the conditions Self and Other scored higher on the Empathy, Personal Distress and Transportation scales than the participants in Control group did. However, they did not differ significantly from each other on each variable.

3.2 VolunteerWork

What was striking was the fact that only 8 out of 101 participants responded to the variable VolunteerWork, but the ones who did so had a large variety in number of hours (see Table 3). To still use this data, it was shaped into a new variable, indicating whether people said yes or no. This was a dichotomous (nominal) variable, compared to the original one which was quantitative. However, after analyzing with a Chi-square test, the dichotomous variable showed no significant result; X^2 (2, N = 101) = 2.06, p = .178, so the condition did not have a significant effect on the amount of hours of volunteer work a participant was willing to do.

The effect of empathy and personal distress on whether participants were willing to do volunteer work was measured using a logistic regression analysis. The result was not significant, for Empathy, B = -1.279, Df = 1, p = .690 ; and for Personal distress, B = 0.247, Df = 1, p = .072.

Table 3: Results VolunteerWork

	Frequency	%
0 hours	93	92
1 hours	2	2
2 hours	2	2
5 hours	2	2
10 hours	2	2
Total	101	100

3.3 Papers

A one-way ANOVA test was conducted to determine if the condition had a significant effect on to what extent people would help to pick up the papers. There was a significant difference between the groups (F = 7.130, p = 0.001, Df = 2, 91). An overview of the means and standard deviations can be found in table 4.

Table 4: Means and standard deviations for papers

	Mean	Standard Deviations
Self	2.81	1.53
Other	2.77	1.24
Control	1.70	1.44

The means of Self and Control were almost identical, meaning that in these conditions, participants showed almost no difference in helping to pick up the papers (p = 1.000). However, the difference between Self and Control (p = 0.005), and Other and Control (p = 0.006) is very significant, meaning that participants in the Control group clearly helped less with picking up the papers.

The effects of empathy and personal distress on the extent to which the papers were picked up was also measure, to confirm the conceptual model. For Empathy, the score was significant, (F 2.968; p = .040, r^2 = 0.03) meaning that people who feel more empathy help up pick papers more as well. However, Personal Distress was not significantly correlated to picking up papers (F = 1.845, p = .089, r^2 = .020).

4. Conclusion and discussion

The main conclusion of the research was that there were significant differences between the effects of the perspective taking conditions on the one hand, and the control condition on the other, on the extent to which participants helped to pick up the papers. Therefore, the fourth hypothesis was accepted. However, there was no significant difference between the effect of the two different types of perspective taking on any variable, including empathy, personal distress and the help at picking up papers. This difference was expected at personal distress, but the lack

in statistical difference of the two conditions on this variable resulted in rejection of the second hypothesis.

The amount of hours of volunteer work which participants were willing to do, did not result in any significant conclusions, due to the data being not suitable for analysis – even after conversion into a another type of variable. This resulted into a lack of statistical evidence to accept the third hypothesis. Empathy and Personal Distress also did not predict whether a participant would be willing to do volunteer work.

Empathy was significantly correlated with the extent to which people helped with picking up the papers, therefore confirming the first hypothesis, but Personal Distress was not. This was in accordance with the conceptual model, which therefore did not need to be adjusted. As expected, the participants in the perspective taking conditions also scored a significantly higher score on Transportation.

4.1 Discussion

What can be deduced from the hypotheses, is that there are statistically significant differences in the results overall, but not between the Self and Other conditions. Since the dependent variable in which a difference between Self and Other was expected (i.e. VolunteerWork) has been discarded, one might argue that it would not matter much. Yet it is peculiar that while the text instructions where literally translated from Batson, Early and Salvarani (1997), there is no significant difference, in contrast to their research. This might partially be due to a limited amount of participants; a larger *N* might result in a more reliable conclusion. Translating the test items in Dutch might have affected the validity of the data, especially since some words are difficult to exactly translate, such as troubled. However, it seems unlikely that this would heavily influence the outcome of the research.

While conducting the research, it became apparent that the amount of volunteer work would be hindered by a floor effect; many participants indicated informally that they did not have time, were moving shortly, or simply did not feel capable or qualified to give volunteer work. Therefore, the differences between the participants did not become clear, not even after reclassifying the data into a dichotomous variable.

The fact that only students of the University of Twente and Saxion University of Applied Science participated in this research, might limit implications with regards to external validity, as

this is not a representative sample of the total population. However, since the variables in this research are very general ones, it is deemed unlikely that any demographic characteristics would have had serious impact on the results. Yet, stratified sampling (or random sampling for that matter) would be more preferable because the sample would then reflect the target population more accurately. More jeopardizing the outcomes of the research was the fact that the researcher had a variety of personal relations with approximately one third of the participants, for which the results are not adjusted. It is very likely that a personal relation affects the behavior of the participants. Simmons, Marine and Simmons (1987) found that choices are quicker made and more towards prosocial behavior when the person in need is an acquaintance, as if less reasoning is involved.

For this research, a short story with a specific sad, i.e. negative, theme was picked. Although Adaval and Wyer (1998) claim that texts with a positive theme have a higher impact on the reader, Green and Brock (1998, p. 719) argue that "… the bulk of the stories [in literature] entail human suffering. (…) the most powerful tales tend to be those that involve negative aspects, such as dilemmas to be overcome or obstacles to be surmounted." From that perspective, this story was very suitable, although it was not scientifically validated: the main character was a student; it was an urban setting; the research participants were likely to have ever experienced something more or less the same. Whether the participants perceived the story as real or fictional was irrelevant, as Rubin (1994) stated that people are generally willing to accept a reality in a world created by a narrative, in contrast to persuasive messages, regards of it being real or fictional.

4.2 Implications

When answering the research question, - How does perspective taking influence prosocial behavior? - the hypotheses confirmed most of the literature described in the theoretical framework. In accordance with the hypothesis by Stotland (1969), people who score higher on an empathy scale have a higher urge to display prosocial behavior. The findings of Eisenberg and Miller (1987) are confirmed as well; there is a low correlation between empathy and prosocial behavior, but it is significant.

The role of personal distress remains unclear, though. Since the data on the non-urgent variable was not suitable for analyzing, no conclusions can be drawn at this point. However, the

findings of Batson, Early and Salvarani (1997) were not confirmed in this study, as there was no significant difference on personal distress found between participants in the two different types of perspective taking. There was, as expected, no significant correlation between personal distress and prosocial behavior in urgent situations. Yet, it is confirmed that people, when stimulated to take perspective, actively experience the need of the other and show therefore more prosocial behavior.

The results of this research can be useful in situations where prosocial behavior is required from an individual, such as when donating time or money to charity, donating blood or organs to hospitals, but also when helping individuals who are in need of urgent help. In these situations, behavior can be not only explained, but also predicted or even stimulated (for example by nudging or actively asking people to take perspective), resulting in people being able to rely more onto each other.

From a scientific point of view, a next step could be the development of perspective taking, for example during childhood. Moreover, it is likely that, when perspective taking is not triggered in experimental context such as in this study, individual or group differences can be found in people's extent of perspective taking and, therefore, their incentives for prosocial behavior. Explaining these differences would help to further map the concept of prosocial behavior. My personal interest would go towards a more philosophical concept; further analyzing the relationship between morality and prosocial behavior, with all the ethical challenges it poses (Cote, Piff & Willer, 2013). Further research here would answer paradoxical questions and moral dilemmas like the one posed by Decety and Cowell (2014, p. 532): "Are individuals who make utilitarian judgments in personal situations more rational and calculating, or are they simply colder and less averse to harming other?"

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Appendix A – Opening page

Datum: …….

Welkom bij dit onderzoek,

In dit onderzoek zal gekeken worden naar hoe je reageert op een tekst. Mocht je op enig moment willen stoppen met het onderzoek om welke reden dan ook, dan is dit geen probleem. Meld dit aan mij en dan wordt het onderzoek direct afgebroken.

Er zijn geen juiste of onjuiste antwoorden op de vragen. Alle antwoorden zullen anoniem verwerkt worden.
Bij vragen of opmerkingen kun je me altijd bereiken op onderstaand e-mailadres en telefoonnummer.

Bedankt voor je medewerking!

Groeten,
Frank van de Pieterman
+316 5757 7899
f.g.vandepieterman@student.utwente.nl

Appendix B – Demographics and Text Instructions

Wat is je geslacht?
Antw: M / F
Wat is je nationaliteit?
Antw: Nederlands / Duits / Anders
Wat is je leeftijd?
Antw: variabel
Aan welke instelling studeer je?
Antw: Saxion Hogeschool / Universiteit Twente
Wat studeer je?
Antw: variabel
Wat is je SONA nummer [indien je SONA credits wilt ontvangen]:
Antw: variabel

Condition Self:
Op de volgende pagina vind je de tekst. Terwijl je leest, probeer je voor te stellen hoe jij je zou voelen als je de beschreven situatie zou meemaken, en hoe dit je leven zou beïnvloeden. Richt je niet te veel op alle informatie; concentreer je op hoe jij je zou voelen in de situatie.

Condition Other:
Op de volgende pagina vind je de tekst. Terwijl je leest, probeer je voor te stellen hoe de hoofdpersoon zich voelt, en hoe dit haar leven beïnvloedt. Richt je niet te veel op alle informatie; concentreer je op hoe de hoofdpersoon zich voelt in de situatie.

Condition Control:
Op de volgende pagina vind je de tekst. Terwijl je leest, probeer bij te houden hoevaak de woorden “I” en “you” worden gebruikt. Lees de tekst maar één keer, dus tel het niet achteraf. Richt je niet op hoe de persoon zich voelt, maar probeer objectief te blijven.

Appendix C – Short Story

I'm shivering in spite of the new black coat my mother bought me for my birthday. Sadness has already settled over my hands like a blanket, and they refuse to heat up even when I buy some coffee. It burns the roof of my mouth and leaves a metallic taste on my tongue. The fuzz will be painful in the morning.

He's late, even though he knows perfectly well where we're meeting. He even chose it, dramatic twat. Who wants to meet at a bus station when it is still so cold outside?

Mist is curling around every building, turning the city I know into a foreign landscape of odd shapes and shadowy alleyways. I've only been here late at night after a pub crawl, and that was a month ago at least. Now its streets seem grey; empty without the brightly dressed clubbers.

I fumble for a cigarette. It takes me three goes to light it, my fingers are so shaky. Maybe that bottle of wine last night was a mistake. Didn't feel like one at the time; but then when do they?

"Clara?"

My head snaps up like a marionette. Something twists in my stomach as I recognize the navy flat-cap he bought down the road from here. We look at each other for a fraction of a second; then I glance past him and he coughs awkwardly.

"Hey, Tom," I manage. My voice sounds weird, forcibly calm, purposely friendly.
"Hi."
"Do you want to go and sit down somewhere...?"
"I can't. I've got to go and work in a minute."

I want to shake him, grab him by the shoulders and scream: well why didn't you ask to meet at another time then? But I'm exhausted by arguments and we ran out of things to throw a long time ago. Plus, it made the cat jumpy. At least I got to keep poor little Mirabelle in the end. She misses him, I can tell. I found her curled up in his scarf yesterday.

Tom is looking uncomfortable. I clear my throat and try to form a sentence.

"Well. What did you want to say?"
"I'm just...do you think we're doing the right thing?"
"Couldn't you have thought about that before you moved out?"
"Don't be like that, Clara."

I stare at him.
"I'm not doing this again."

He looks paler than usual, today, and his mouth is tense like it always was before an argument.

"Just give it one more chance?"
"No."

“Please.”

He looks broken somehow, standing there in those battered old jeans that look like he’s stolen them from Kurt Cobain. I curse as the cigarette I’d forgotten about burns my fingertips. I drop it and blink rapidly as my eyes become stupidly blurry.

“Listen to me. I mean it this time. No more trying to convince me, no more apologies, no more arguments. I can’t do it anymore. I’ll go mad, and so will you. We’ll tear each other to pieces.”

My voice sounds flat, emotionless, but it’s either that or floods of tears and I’d choose this any day.

Tom nods, not meeting my eyes. It’s so wrong, somehow, that everything should finish here outside a crappy apartment block. Three years shouldn’t be over in a paragraph, it should take a book and a half, but I know I can’t say anything more.

He finally gives me a last glance, shuffling slightly on the spot. I feel stupid when it hits me that we’ll probably never talk again. How did I not realize that before now? Suddenly I feel an absurd urge to hug him, reassure him that I was only joking, that of course we can start over.

But my feet stay firmly planted on the ground where they should.

“Bye,” he says quietly, and walks with a shaky gait up the high street.

I realize my hand is slightly outstretched, like it’s trying to keep hold of something. But it’s long gone now and I have a exam to prepare for. The book won’t read itself, a voice says in my head and I smile bitterly, beginning the slow ascent home, away from things that I can’t think about any more.

Appendix D – Scales on Empathy, Distress and Transportation

Door deze tekst voel ik me gealarmeerd	1	2	3	4	5
Door deze tekst voel ik me van streek	1	2	3	4	5
Door deze tekst voel ik me verstoord	1	2	3	4	5
Door deze tekst voel ik medeleven	1	2	3	4	5
Door deze tekst voel ik me teder	1	2	3	4	5
Door deze tekst voel ik me bewogen	1	2	3	4	5
Door deze tekst voel ik me warmhartig	1	2	3	4	5
Door deze tekst voel ik me bedroefd	1	2	3	4	5
Door deze tekst voel ik me bezwaard	1	2	3	4	5
Door deze tekst voel ik me war	1	2	3	4	5
Door deze tekst voel ik me sympathiek	1	2	3	4	5
Door deze tekst voel ik me bezorgd	1	2	3	4	5

Terwijl ik de tekst las, kon ik me gemakkelijk de gebeurtenissen voorstellen die erin voorkwamen.
1 2 3 4 5

Terwijl ik de tekst las, was ik bezig met activiteit die in de kamer plaatsvond.
1 2 3 4 5

Ik zou mijzelf in kunnen beelden in de scene die beschreven werd in de tekst.
1 2 3 4 5

Ik was mentaal betrokken bij de tekst terwijl ik hem las.
1 2 3 4 5

Toen ik klaar was met het lezen van de tekst, kon ik hem makkelijk uit mijn hoofd zetten.
1 2 3 4 5

Ik wil weten hoe de tekst afloopt.
1 2 3 4 5

De tekst had emotionele invloed op me.
1 2 3 4 5

Ik merkte dat ik me afvroeg hoe de tekst anders had kunnen aflopen.
1 2 3 4 5

Ik merkte dat mijn gedachten afdwaalden bij het lezen van de tekst.
1 2 3 4 5

De gebeurtenissen in de tekst zijn relevant in mijn dagelijks leven.
1 2 3 4 5

De gebeurtenissen in de tekst hebben mijn leven veranderd.
1 2 3 4 5

Het onderzoek is nu afgelopen. Bedankt voor je deelname.

Appendix E – Dependent Variable Volunteer Work

De Universiteit Twente neemt deel aan een programma waarbij middelbare scholieren die moeite hebben met leren, gratis bijles krijgen. Dit helpt hen bij het slagen op hun eindexamen. We willen je vragen of je wilt bijdragen door onbetaald bijles te geven in een vak waar jij goed in bent. Indien je mee wilt doen, vul dan hieronder het aantal uren in dat je zou willen helpen, en je emailadres waarmee we contact met je kunnen opnemen. Als je niet wilt helpen, kun je 0 invullen en je emailadres weglaten.

Ik wil ..... uren onbetaald bijles geven.

Mijn emailadres is .....

Appendix F - Debriefing

Hartelijk bedankt voor je deelname aan dit onderzoek. Ik zou je nu graag op de hoogte willen brengen van het werkelijke doel van het onderzoek.

Het doel van dit onderzoek is om te kijken of het inleven in een tekst gevoelens opwekt die altruïstisch gedrag stimuleren. Altruïsme werd hier gemeten door te kijken hoeveel uren vrijwilligerswerk je aangaf te willen doen, en in welke mate je hielp met het oppakken van de gevallen papieren. Beide situaties zijn gesimuleerd. **Het vrijwilligerswerk is dus ook niet echt.**

Het oppakken van de papieren is gefilmd. Hier heb ik je van tevoren niet over ingelicht, omdat het je gedrag zou kunnen beïnvloeden. Het zal alleen worden gebruikt voor dit onderzoek en na het afstuderen zal het worden vernietigd. Mocht je hier niet mee akkoord gaan, geef dit dan nu aan; dan wordt de data direct vernietigd.

Mocht je nog vragen hebben, dan kun je me nu benaderen, of via onderstaande gegevens.
Ik zou je willen vragen om hieronder je handtekening neer te zetten, om aan te geven dat je akkoord gaat met het verwerken van jouw data in dit onderzoek en dat je geen stress hebt ondervonden aan dit onderzoek. Mocht dit niet het geval zijn, meld dit dan alsjeblieft bij mij.

Nogmaals bedankt,
Groeten,
Frank van de Pieterman
+316 5757 7899
f.g.vandepieterman@student.utwente.nl

☐ Ik ga akkoord met de dataverwerking en heb op geen enkele manier schade ondervonden aan dit onderzoek.

☐ Ik heb interesse in dit onderzoek en wil van de uitkomst op de hoogte worden gehouden van de uitkomst. Mijn email adres is .....

Handtekening: _____