

Underlying psychological mechanisms of helping effects:

Examining the *when* \times *why* of charitable giving

Arvid Erlandsson



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<p>Abstract</p> <p>The overarching purpose of this thesis was to investigate if different helping effects can be specifically linked to different psychological mechanisms.</p> <p>Helping effects (i.e. the <i>when</i> of helping) refer to situational differences that can increase or decrease the probability of helping. The three helping effects in focus in this thesis, were (1) the identifiable victim effect (the tendency to be more likely to help when learning about a single identified victim than when learning about statistical victims); (2) the proportion dominance effect (the tendency to be more likely to help when hearing e.g. about a project that can save 94 of 100 victims than when hearing about a project that can save 94 of 8000 victims); (3) the in-group effect (the tendency to be more motivated to help victims that are from the helper's in-group than victims that are from the out-group).</p> <p>Psychological mechanisms (i.e. the <i>why</i> of helping) refer to the emotions, thoughts and beliefs of a potential helper that can increase helping motivation. This thesis included three distinguishable psychological mechanisms that each was assumed to be able to increase motivation to help independently of the others: (1) emotional reactions (feeling more personal distress and sympathy toward the victims can increase helping); (2) perceived utility (believing that one can make a great deal of good for a relatively small personal cost can increase helping); (3) perceived responsibility (believing that one has a moral obligation, duty or personal responsibility can increase helping).</p> <p>The three articles included in the thesis investigated the interaction between helping effects and psychological mechanisms in different ways. Article 1 focused exclusively on the proportion dominance effect and in two studies it was shown that perceived utility (but not sympathy, distress, perceived rights of the victims or perceived personal responsibilities) mediated the effect. Article 2 tested all three psychological mechanisms as possible mediators on all three helping effects. Both when using a within-subject design with joint evaluation and when using a between-groups design it was found that emotional reactions primarily mediated the identifiable victim effect; that perceived utility primarily mediated the proportion dominance effect; and that perceived responsibility was the comparably stronger mediator of the in-group effect. Article 3 tested the relation between helping effects and psychological mechanisms in a different way. Participants read about two help projects and had to allocate their money unevenly between the projects. They were then asked to justify why they allocated as they did. Participants who gave more money to a project with an identified victim than to a project with only statistical information justified their choice more with emotional reasons than those giving more to the statistical project. Participants who gave more money to a high rescue proportion project than to a low rescue proportion project justified their choice more with efficacy reasons (i.e. perceived utility) than those giving more to the low rescue proportion project. Participants who gave more money to a project focusing on in-group victims than to a project focusing on out-group victims justified their choice more with responsibility reasons than those giving more to the project with out-group victims.</p> <p>Taken together, these findings suggest that emotional reactions primarily underlies the identifiable victim effect; that perceived utility primarily underlies the proportion dominance effect and that perceived responsibility primarily underlies the in-group effect. This illustrates the meaning of separating helping effects, the merit of distinguishing psychological mechanisms from each other, and that it is worthwhile to systematically test if different helping effects are driven by different psychological mechanisms.</p>		
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Front cover: The painting *A Triumph of the Human Spirit* by artist Jan Johnson Sheets portrays the Jessica McClure rescue. The painting hangs inside the Midland Center in Midland, Texas. The plaque next to it reads: *“This painting is a tribute to an event that lifted the entire world to a higher plane of human consciousness and helped us to better understand the human spirit with its boundless capacity for compassion and love. Thanks to the men and women who came together in Midland, Texas, the world shared in a God-graced victory that came from faith and self-sacrifice.”*

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Dedicated to my late aunt Maj, who knew I would be an academic before I knew it myself

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funny guy, sharp researcher and great friend. *Per* moved into my office in the summer of 2012 and since then he is probably the person I have spent the most time with. There are few people who I share so many opinions, values, and sense of humor with as *Per*, but as we both enjoy arguing, we tend to focus our discussions on the few areas where we disagree (e.g. the moral value of safeguarding “the cosmic balance”). Thanks to *Per*, going to the office in the morning is like going to the pub to hang out with your best friend (usually not including the beer). Our office (M143) might not be the most stylish room at the department, but it is surely the place where real friendship happens.

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In 2002, *Filip* was a lazy, insecure young novelist living together with me in Eslöv and failing exams on the introductory chemistry course. In 2014 he is a strong, handsome, married postdoc who works at one of the best medical labs in the world. Our friendship has, however, remained stable. *Danilo* and I wrote our master-theses together many years ago, and I was accepted in Lund to some extent because he managed to publish an article based on my master-thesis and kindly included me as a co-author. I also want to thank *Mitsuru* for the many exciting Japanese summer-courses in Växjö, and for helping me in various ways over the years. A big gratitude also to the *Japanese ministry of education, culture, sports, science and technology* for accepting me for the Monbukagakusho scholarship in 2008 as well as all students, teachers and staff who I met at *ICU* during my years in Tokyo.

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Another person who I consider part of my family is my girlfriend *Mariella* who not only accept, but also seem to like most of my peculiarities. Sharing evenings, weekends, travels and memories with you have surely made my life so much better and more complete. Thank you for being consistently wonderfully sweet and for your patience those times I am a little slow in understanding things.

//Arvid

Abstract

The overarching purpose of this thesis was to investigate if different helping effects can be specifically linked to different psychological mechanisms.

Helping effects (i.e. the *when* of helping) refer to situational differences that can increase or decrease the probability of helping. The three helping effects in focus in this thesis were (1) the identifiable victim effect (the tendency to be more likely to help when learning about a single identified victim than when learning about statistical victims); (2) the proportion dominance effect (the tendency to be more likely to help when hearing e.g. about a project that can save 94 of 100 victims than when hearing about a project that can save 94 of 8000 victims); (3) the in-group effect (the tendency to be more motivated to help victims that are from the helper's in-group than victims that are from the out-group).

Psychological mechanisms (i.e. the *why* of helping) refer to the emotions, thoughts and beliefs of a potential helper that can increase helping motivation. This thesis included three distinguishable psychological mechanisms that each was assumed to be able to increase motivation to help independently of the others: (1) emotional reactions (feeling more personal distress and sympathy toward the victims can increase helping); (2) perceived utility (believing that one can make a great deal of good for a relatively small personal cost can increase helping); (3) perceived responsibility (believing that one has a moral obligation, duty or personal responsibility can increase helping).

The three articles included in the thesis investigated the interaction between helping effects and psychological mechanisms in different ways. Article 1 focused exclusively on the proportion dominance effect and in two studies it was shown that perceived utility (but not sympathy, distress, perceived rights of the victims or perceived personal responsibilities) mediated the effect. Article 2 tested all three psychological mechanisms as possible mediators on all three helping effects. Both when using a within-subject design with joint evaluation and when using a between-groups design it was found that emotional reactions primarily mediated the identifiable victim effect; that perceived utility primarily mediated the proportion dominance effect; and that perceived responsibility was the comparably stronger mediator of the in-group effect. Article 3 tested the relation between helping effects and psychological mechanisms in a different way. Participants read about two help projects and had to allocate their money unevenly between the projects. They were then asked to justify why they allocated as they did. Participants who gave more money to a project with an identified victim than to a project with only

statistical information justified their choice more with emotional reasons than those giving more to the statistical project. Participants who gave more money to a high rescue proportion project than to a low rescue proportion project justified their choice more with efficacy reasons (i.e. perceived utility) than those giving more to the low rescue proportion project. Participants who gave more money to a project focusing on in-group victims than to a project focusing on out-group victims justified their choice more with responsibility reasons than those giving more to the project with out-group victims.

Taken together, these findings suggest that emotional reactions primarily underlies the identifiable victim effect; that perceived utility primarily underlies the proportion dominance effect and that perceived responsibility primarily underlies the in-group effect. This illustrates the meaning of separating helping effects, the merit of distinguishing psychological mechanisms from each other, and that it is worthwhile to systematically test if different helping effects are driven by different psychological mechanisms.

Svensk sammanfattning / Summary in Swedish

Denna avhandling handlar om hjälpande och framförallt om givande till välgörenhet. De två centrala frågorna som ställs handlar om *när* vi hjälper (i vilka situationer hjälper vi mer eller mindre?) och om *varför* vi hjälper i dessa situationer (vilka sorters känslor och tankar gör oss mer motiverade att hjälpa?).

Hjälpeffekter: När hjälper vi?

Frågan om *när* vi hjälper handlar om när objektiva skillnader i hjälpsituationer eller skillnader i presentationen av hjälpsituationer ökar eller minskar hjälpande. I denna avhandling används begreppet *hjelpeffekter* för att beskriva dessa skillnader. Fokus är på tre hjälpeffekter som undersökts i flera tidigare studier.

Identifierbarhetseffekten

Ett offer som är identifierat (t.ex. med namn och bild) får mer hjälp än offer som är statistiska.

Proportionsdominanseffekten

Offer som presenteras som en del av en liten grupp (t.ex. det är möjligt att rädda 94 av de 100 offer som lider) får mer hjälp än offer som presenteras som en del av en stor grupp (t.ex. det är möjligt att rädda 94 av de 8000 offer som lider).

Ingruppseffekten

Offer som kommer från vår ingrupp (t.ex. andra svenskar) får mer hjälp än offer som kommer från vår utgrupp.

Psykologiska mekanismer: Varför hjälper vi?

Frågan om *varför* vi hjälper handlar om vilka känslor och tankar inom oss som ökar eller minskar vår hjälpmotivation. I denna avhandling används begreppet *psykologiska*

mekanismer för att illustrera dessa mentala processer. Fokus är på tre typer av psykologiska mekanismer.

Hjälpa med hjärtat – emotionella reaktioner

När känslomässiga reaktioner som orsakats av hjälpsituationen gör att vi hjälper mer. Denna avhandling fokuserar på två typer av emotionella reaktioner som tidigare visat sig göra oss mer hjälpbenägna; (1) personligt obehag (jag mår dåligt av att se lidande, så jag hjälper för att slippa må dåligt) och (2) sympati (jag känner medkänsla med de som lider så jag hjälper för att de inte ska må dåligt).

Hjälpa med hjärnan – förväntad nytta

När en tro på att ens uppoffring verkligen kommer att leda till goda konsekvenser gör att man hjälper mer. Den förväntade nyttan innehåller en kalkylerande komponent och definieras här som de upplevda positiva konsekvenserna av att hjälpa (t.ex. offren mår bättre) minus de förväntade negativa konsekvenserna av att hjälpa (t.ex. det kostar pengar för hjälparen).

Hjälpa med boken – upplevt ansvar

När en tro på att man har ett personligt ansvar att hjälpa eller en uppfattning om att man har en särskild skyldighet att hjälpa gör att man hjälper mer. Denna psykologiska mekanism bör förstås som att den potentielle hjälparen motiveras av moraliska principer och regler.

Drivs olika hjälpeffekter av olika psykologiska mekanismer?

Huvudfrågan i denna avhandling var att undersöka om olika hjälpeffekter beror på olika psykologiska mekanismer. De tre empiriska studierna i avhandlingen undersökte denna frågeställning från olika perspektiv och med olika metoder.

De empiriska artiklarna

Artikel 1

Artikel 1 fokuserade endast på proportionsdominanseffekten. I den första delstudien fick deltagarna läsa olika hypotetiska hjälpscenarior och efter varje scenario så skattade de sina emotionella reaktioner, den upplevda nyttan med att hjälpa, offrens rättighet att få hjälp, samt sin motivation att hjälpa. Antalet offer man kunde hjälpa hölls konstant i varje hjälpscenario, men för varje hjälpscenario fick hälften av deltagarna läsa att de offer man kunde hjälpa var del av en liten grupp (t.ex. 56 av 60), medan den andra hälften fick läsa att de var del av en stor grupp (t.ex. 56 av 560). I den andra delstudien så fick deltagarna läsa fyra versioner av en och samma situation, och det enda som ändrades var storleken på

den totala offergruppen. Deltagare skattade sitt upplevda obehag, sin sympati för offren, den upplevda nyttan med att hjälpa och det upplevda ansvaret att hjälpa. I slutet av formuläret mättes även motivation att hjälpa för alla versionerna.

I båda delstudierna visade resultaten att motivation att hjälpa och upplevd nytta, men inte emotionella reaktioner eller upplevda rättigheter, var högre när man kunde hjälpa en stor proportion av offren än när man kunde hjälpa en liten proportion av offren, och att endast den upplevda nyttan förklarade (medierade) proportionsdominanseffekten.

Artikel 2

Artikel 2 testade de psykologiska mekanismerna på alla tre hjälpeffekter (identifierbarhetseffekten, proportionsdominanseffekten och ingruppsseffekten). I de första tre delstudierna undersöktes alla hjälpeffekter separat. Deltagare läste en och samma hjälpsituation i fyra versioner och i varje version så ändrades endast en aspekt (graden av identifierbarhet hos offret i delstudie 1, storleken på offergruppen i delstudie 2 och graden av ingrupp i delstudie 3). Efter varje version skattades obehag, sympati för offren, upplevd nytta av att hjälpa och upplevt ansvar att hjälpa. I slutet av formuläret mättes även motivation att hjälpa för alla versionerna.

I delstudie 4 så testades samma sak fast med en annan typ av design (varje deltagare läste endast en version av varje hjälpsituation, t.ex. antingen versionen med ett identifierat offer *eller* versionen med statistiska offer). Dessutom testades hjälpande inte bara med självskattad hjälpmotivation utan även med hypotetiska donationsbelopp (hur mycket skulle du donera till detta projekt) och med faktiska pengafördelningar (deltagare fördelade pengar mellan olika projekt).

De sammantagna resultaten visade: (1) Att ökad identifierbarhet hos offret ökade obehag och sympati mer än vad det ökade upplevd nytta och upplevt ansvar, och dessutom att sympati bäst förklarade (medierade) identifierbarhetseffekten. (2) Att en mindre offergrupp (alltså större räddningsproportion) ökade upplevd nytta mer än det ökade obehag, sympati eller upplevt ansvar, och dessutom att upplevd nytta bäst förklarade (medierade) proportionsdominanseffekten. (3) Att en högre upplevelse av att offren tillhörde ens egen ingrupp ökade upplevt ansvar mer än det ökade obehag, sympati eller upplevd nytta, och att upplevt ansvar bäst förklarade (medierade) ingruppsseffekten.

Artikel 3

Artikel 3 var skriven mer ifrån ett marknadsföringsperspektiv och undersökte dels hur människor väljer att fördela sina pengar när kan jämföra två hjälpprojekt mot varandra, och dels vilka skäl de använder för att förklara sitt val. Deltagarna fick läsa tre hjälpdilemman som illustrerade de tre hjälpeffekterna (identifierbarhetseffekten, proportionsdominanseffekten och ingruppsseffekten). Varje dilemma innehöll beskrivningar av två hjälpprojekt och för varje dilemma så var deltagarens uppgift att fördela 5 kronor (riktiga pengar) mellan de två hjälpprojekten. Pengarna kunde inte delas lika vilket tvingade deltagarna att föredra (ge mer pengar till) ett projekt framför det

andra. Efter fördelningen så fick deltagarna motivera sitt val genom att rangordna den relativa viktighetsgraden av olika skäl. Skälen var uppdelade i känslöskäl, effektivitetsskäl, ansvarsskäl och utfyllnadsskäl.

Resultaten visade: (1) Att projektet som innehöll ett identifierat offer överlag inte föredrogs framför projektet som endast innehöll statistisk information men att de som föredrog projektet med identifierade offer i högre grad motiverade detta med emotionsskäl än de som föredrog projektet med statistiska offer. (2) Att projektet som kunde rädda en stor proportion av offren (liten offergrupp) föredrogs framför projektet som kunde rädda en liten proportion av offren (stor offergrupp), och att de som föredrog projektet med en hög räddningsprocent i högre grad motiverade detta med effektivitetsskäl än de som valde projektet med låg räddningsprocent. (3) Att projektet som kunde rädda ingruppsoffer föredrogs framför projektet som kunde rädda utgruppsoffer, och att de som föredrog projektet med ingruppsoffer i högre grad motiverade detta med ansvarsskäl än de som föredrog projektet med utgruppsoffer.

Sammanfattning av resultaten

Denna avhandling bidrog till fältet genom att tydligt separera olika hjälpeffekter, genom att föreslå flera olika psykologiska mekanismer som kan påverka graden av hjälpande och framförallt genom att testa flera olika psykologiska mekanismer som den primära orsaken till olika hjälpeffekter.

Identifierbarhetseffekten kunde bäst förklaras med starkare emotionella reaktioner. Detta innebär att den primära orsaken till att vi hjälper identifierade offer mer än statistiska tycks vara att vi upplever starkare sympati när vi läser om identifierade offer än när vi läser om statistiska offer.

Proportionsdominanseffekten kunde bäst förklaras av en större upplevd nytta. Detta innebär att den primära orsaken till att vi hjälper 94 individer när de är del av en liten grupp (94 av 100) än när de är del av en stor grupp (94 av 8000) tycks vara att vi upplever att vi gör mer nytta när vi kan hjälpa en hög proportion av de drabbade.

Ingruppseffekten kunde bäst förklaras av ett större upplevt ansvar. Detta innebär att den primära orsaken till att vi hjälper mer när vi hör om ingruppsoffer än när vi hör om utgruppsoffer tycks vara att vi upplever ett större ansvar att hjälpa ingruppsoffer än att hjälpa utgruppsoffer.

List of articles

- I. Erlandsson, A., Björklund, F., & Bäckström, M. (2014). Perceived utility (not sympathy) mediates the proportion dominance effect in helping decisions. *Journal of Behavioral Decision Making*, 27(1), 37-47. doi: 10.1002/bdm.1789
(Published article reprinted with permission from John Wiley & Sons, Ltd)
- II. Erlandsson, A., Björklund, F. & Bäckström, M. (in press). Emotional reactions, perceived impact and perceived responsibility mediate the identifiable victim effect, proportion dominance effect and in-group effect respectively – *Organizational Behavior & Human Decision Processes*
(Uncorrected Proof of the article reprinted with permission from Elsevier)
- III. Erlandsson, A., Björklund, F. & Bäckström, M. (submitted) Allocation decisions when comparing charity appeals – Manuscript submitted to *Psychology & Marketing*

1. Introduction

Jessica McClure was only 18 months old when she fell into a narrow well close to her home in Midland, Texas on October 14th 1987. Jessica was not seriously injured in the fall but got stuck 6.7 meters below the ground. The news about the small girl trapped in the well spread quickly from the local newspaper The Midland Reporter Telegram via the larger Odessa American and Amarillo Daily News to national TV such as CNN and NBC. As a result from the vast media coverage, the amount of help and support was enormous. Volunteer workers from not only Midland but from far away, offered their assistance in the rescue project, and even more noteworthy, over \$800,000 was donated to Baby Jessica by common Americans. For more than 58 hours, volunteer rescue workers worked non-stop to save “Baby Jessica” from the well and finally they succeeded. Baby Jessica was saved, uninjured apart from a severed toe and a scar in her forehead.

The Baby Jessica rescue effort is often used as an example of the capability of caring and as a proof of the inner goodness in humans. Men and women from different backgrounds and social classes were united in a joint effort to save the life of an unknown girl. However, the huge motivation to help Baby Jessica lies in stark contrast to the virtually non-existent motivation to save other victims in similar or even greater need. During the 58 hours Baby Jessica rescue project, thousands of children in developing nations in eastern Africa, died from hunger-related causes, or easily preventable diseases such as Malaria, Measles and Diarrhea. Although not covered in the media to the same extent as the Baby Jessica rescue project, American people were not unaware of the huge needs in Africa and other places of the world – they just did not react to it. When comparing the impressive levels of helping towards Baby Jessica against the low or non-existent levels of helping towards most poor children, one sees a huge discrepancy. How come we help so much in some situations and so little in other situations?

This thesis will approach this topic by making a distinction between the *when*-question and the *why*-question of helping. This distinction is central for this thesis, but not always clearly separated in the literature. The *when*-question is about how an objective situation looks like, or how a charity appeal is framed, and how those differences increase or decrease helping motivation. The *why*-question is about what goes on in our heads, and what types of feelings, thoughts and beliefs that can increase or decrease our motivation to help. The meaning of the *when*-question and the *why*-question are further explained below.

The *when*-question

The *when*-question concerns what kind of situational differences that increase or decrease our helping behavior or helping motivation. In other words, does a story about Baby Jessica make us more motivated to help than a story about 20,000 children dying from hunger related causes? In this, and in many other situations, the answer seems to be yes. However, in this example, as in almost all real-life situations, the two helping stories differ on several aspects. To mention a few aspects that are particularly relevant in this thesis: (a) Whereas the Baby Jessica-story includes a single identified victim, the Hunger-story includes many and anonymous victims. (b) Whereas saving Baby Jessica means solving the problem at hand, saving one starving child would not make any big difference for global poverty. (c) Whereas Baby Jessica was an American girl (belonged to the in-group), most people starving were from other nations (belonged to the out-group).

Each of these three aspects (as well as other aspects) might have contributed to the differences in helping. Comparing two helping scenarios that differ on several aspects makes it impossible to pinpoint which of the many aspects that contributes to differences in helping. Therefore, when trying to answer the *when*-question scientifically, the aim is often to present scenarios that differ on only one aspect. If two scenarios that differ on only one aspect elicit different degrees of helping behavior or helping motivation, then we have good reason to believe that this very aspect plays a role in increasing (or decreasing) helping. In this thesis, situations where one aspect increases or decreases helping, will be referred to as *helping effects*.

The *why*-question

The *why*-question focuses not on the factual situational aspects, but on the motivational and psychological aspects of helping. To illustrate (again with the purpose of the thesis in mind), people who read the newspaper article about Baby Jessica and decided to volunteer or to donate money might have done that: (a) Because they felt strong empathic feelings toward Jessica and her family. (b) Because they believed that they could make an important contribution for a relatively low personal cost, or (c) Because they felt a personal obligation to help. All these psychological aspects can increase our motivation to help. These three aspects will be referred to as *psychological mechanisms*.

The aim of the thesis: The *when* × *why* interaction

The main aim of the thesis is to investigate whether or not the *when* of helping interacts with the *why* of helping? Or in other words, does the answer to the *why*-question depends on which *when*-question we currently look at? Even simpler, can we explain the underlying processes of different helping effects by means of different psychological mechanisms?

The outline of this thesis

Before presenting the specified research question and the hypotheses, we must learn more about the research field of charitable giving, as well as about the helping effects and the psychological mechanisms. In Chapter 2, definitions and delimitations will be explicated to make it clear what this thesis is about and what it is not about. In Chapter 3, the *when*-question of helping will be discussed, and the three helping effects most central for this thesis (the identified victim effect, the proportion dominance effect and the in-group effect) will be explained in detail. In Chapter 4, the *why*-question of helping will be discussed by presenting a taxonomy that includes three psychological mechanisms (emotional reactions, perceived utility, perceived responsibility) assumed to be able to motivate helping independently of each other. In Chapter 5, the interaction between the *when*-question (situational differences) and the *why*-question (psychological mechanisms) will be discussed. More concretely, literature that connects any of the included psychological mechanisms to each of the three helping effects will be reviewed. The hypotheses that will be arrived to, suggest that different helping effects are primarily mediated by different psychological mechanisms. Chapter 6 provides an extended summary of the included empirical articles including the unique contribution of each article. Chapter 7 is an extended discussion section that will contain several diverse topics that are more or less related to the general research question.

2. Setting the stage

Empirical research on helping and charitable giving is a very active and “hot” topic these days (e.g. Oppenheimer & Olivola, 2011), but one could certainly argue that it is not the most systematic field of research. Different scholars sometimes use different names for similar concepts and sometimes the same name for different concepts (Batson, 2011). This makes it difficult to separate factual disagreements from disagreements about how the words and labels should be used. The aim here is not to find the “true” concepts or to force others to adopt the terminology that I suggest, but to make it obvious what this theses will cover and what it will not cover. Therefore, this first chapter discusses the definition (explaining what is included in the concept of helping in this thesis), and delimitations (clarifying what is outside the scope of the thesis).

Definition

In this thesis, primarily focus will be on the type of helping that is commonly known as charitable giving. I will provisionally define charitable giving as follows:

A conscious donation of money or other concrete resources, to a charitable organization that indirectly will benefit others who the helper has no close personal relation with, and that is done without any tangible reward for the helper.

I am aware that this definition excludes some acts that might commonly be perceived as helping. First, the general usage of helping does not limit itself to monetary helping. One can certainly help in other ways than with money (e.g. with time, with labor) and the type of help is sometimes related to the *when* and *why*-questions. This question is fascinating but outside the scope of this thesis (but see Liu & Aaker, 2008). Second, in charitable giving, the victim is usually absent from the context where the helping decision is made. This implies that helping in this definition is limited to non-dyadic helping where helping is not made directly helper to victim, but rather helper → charitable organization → victim. These two aspects are likely the main ones that distinguish charitable giving from helping in general. Third, and on a different note, helping differs from cooperation in that the helper is not rewarded in any tangible ways. Lending money to someone in need and charging a high interest rate is not helping even if it benefits the

victim. Lending money without any interest (or any other concrete personal reward) could however be considered helping.

Although this is the definition used in the empirical articles in this thesis, it should be noted that not all cited references have used the same inclusion-criteria when referring to helping. The aim is to be as explicit as possible about the operationalizations when discussing the results from other studies.

Delimitations

This thesis does only cover a limited part of the field about helping and charitable giving. To make it even more clear what the scope of this thesis is, it might be useful to discuss a couple of questions that lie outside the scope.

Individual differences

When explaining behavior, one can adopt either a situational-based perspective (*when* do people help more?) or an individual-based perspective (*who* helps more?). The field of charitable giving is no exception. Researchers on charitable giving holding a purely individual-based perspective are therefore more likely to investigate what kind of persons that donate more or less to charity. Researchers from a situational perspective are more likely to investigate in which types of situations people are more or less motivated to help. This thesis focuses on situational factors that influence helping motivation. This means that individual differences (e.g. sex, age, personality, values,) related to helping will be discussed sparingly and only when they are related to the situational factors.

This does not mean that individual differences are unimportant for helping. On the contrary, there are several perspectives of helping that deals primarily with the question about the characteristics of helpers and non-helpers (for reviews, see Bekkers & Wiepking, 2011a; Wiepking & Bekkers, 2012), or with the question about how specific types of people react to certain helping situations (i.e. the *who* × *when* interaction; Winterich, Zhang & Mittal, 2012; Graziano, Habashi, Sheese & Tobin, 2007)

The egoism-altruism question

It is important to separate the concept of helping from the concept of altruism. Helping refers to the act, whereas altruism refers to what the ultimate motivation is. According to Batson (2011), people can help with an ultimately egoistic goal (avoiding internal and external punishment, gaining internal and external reward or relieving ones aversive arousal). Batson further suggest that people also can help with an ultimately altruistic goal

(caring about the welfare of the victim/victims). A single goal cannot be both egoistic and altruistic but one can have several goals at once. The very existence of altruistic ultimate goals is well-debated (see Batson, 2011; Cialdini et al., 1987 and Dovidio, Piliavin, Schroeder & Penner, 2006) but this thesis does not attempt to answer that question. My take on the altruism/egoism question is that it seems nearly impossible to determine if good personal consequences of helping (e.g. a feeling of satisfaction) is a side-effect from helping someone you felt empathic concern toward (Batson would call that altruistic helping), or if the personal satisfaction is the ultimate goal and that you helped in order to reach it (Batson would call this egoistic helping). Also, the question of altruistic and egoistic motivation seems relatively extraneous from a societal and consequence-oriented point of view. For the many victims in need around the world, the amount of help given is a clearly more important question than whether or not the helper was motivated by selfish reasons or not. Therefore the egoistic/altruistic distinction will be avoided in this thesis.

How does helping behavior affect the helper

This thesis focuses on the antecedents of helping – not on the consequences of helping. There have been many other studies concerning how helping affects the helper (e.g. Anik, Aknin & Norton & Dunn, 2011; Dunn, Aknin & Norton, 2008; Meier & Stutzer, 2008; Grant & Sonnentag, 2010). For example, Dunn, Aknin and Norton (2014) suggested that helping others increase personal well-being and that this relation is stronger if the donor feels connected to the victim (relatedness), when the donor thinks she can make a difference (competence) and when the donor perceives no external forces to help (autonomy). Similarly, the degree of autonomy influences the well-being of both the helper and the victims (Weinstein & Ryan, 2010). This means that both the helper and the recipient will be happier post-helping in cases where helping was internally motivated, but not when there was external pressure on the decision to help. A famous but not very well defined concept related to the personal consequences of helping is *warm glow* (Andreoni, 1990). I will refer to warm glow as an internal self-directed positive emotion that often is felt after helping as a direct result of the decision to help. Warm glow is similar to satisfaction and pride, but does not include any social rewards (but Mayr, Harbaugh & Tankersley, 2009 use a broader definition). *Anticipated warm glow* will be discussed as one possible motivational aspect later in the thesis, but actual consequences of helping is outside the scope of this thesis.

Blame and praise: The social aspects of helping

Yet another aspect outside the scope of this thesis concerns the social factors that motivate helping. The social aspects of helping primarily include; (1) helping in order to avoid criticism and blame from others for failing to help and (2) helping in order to obtain

praise or in order to improve one's reputation among observers. Helping is usually seen as a social norm and as social norms get more important in the presence of others, people help more when they believe they are being observed (Solomon et al., 1981). It has been shown that people offer to volunteer more in need situations if they believe their decision will be made in public rather than in private, and that offering to volunteer improves one's social reputation within the group (Bereczkei, Birkas, & Kerekes, 2007; Fisher & Ackerman, 1998). Also, people who think that another person will know about their donation decision generally give more than people who think they make the decision in private (Rayniers & Bhalla, 2013). Different people influence our helping differently. Men help more when they believe they are being observed by an attractive female than if they believe they are being observed by a male or not observed by anyone (van Vugt & Iredale, 2013, see also Landry, Lange, List, Price & Rupp, 2006). When helping publicly, people are careful not to appear motivated by ulterior motives (Lin-Healy & Small, 2012). In one study where participants could help a well-liked charity-organization by pressing fast on a button, actual performance was lower if participants also had (publicly known) egoistic incitements for pressing (Ariely, Bracha & Meier, 2009, see also White & Peloza, 2009). Blame and praise are not part of the current thesis, but will be briefly mentioned in the general discussion section.

The normative questions of helping

There is not enough space to discuss all the normative aspects of helping in detail. I will merely state that my view originates from two assumptions. The first assumption is that all people's lives and well-being are worth roughly equally much from an objective perspective (the impartiality principle). My second general assumption is that doing more good is preferable to doing less good (the aggregation principle). Consequently it is, from an objective perspective, four times as good to save the life of four persons as it is to save the life of one person (see Dickert, Västfjäll, Kleber, Slovic, 2012, and Slovic, 2007, for normative discussions about these issues). I am aware that both assumptions can be questioned, but neither of them can be easily refuted (Singer, 2011). Hence, if people accepted these assumptions and were totally rational, helping motivation would be perfectly predicted by the number of people possible to save per dollar (or more specifically, by the increase in total well-being per dollar). As we will see in the following chapter, this is rarely the case.

3. The *when* of helping – Helping effects

This chapter will discuss helping effects. A helping effect refers to when one specific situational factor increases or decreases helping. Situational factors can refer to how one asks for donations (e.g. the foot in the door technique, see Weyant, 1996), but this thesis rather focuses on how a need situation is presented for the potential donor. A helping effect cannot be tested by observing helping toward an isolated situation at a single time. Instead, a helping effect is tested by comparing the amount of helping towards two (or more) situations (e.g. charity appeals, donation-requests or newspaper-articles) that differs on only one aspect. In the current operationalization, if two situations differs on only one aspect, and if the two situations elicit different amounts of helping, then you have a helping effect.

There are many established helping effects. The main aim of this chapter is to provide a general overview of the literature on helping effects. However, most of the chapter will be concentrated on three helping effects that are particularly important for the research question of this thesis. These “main” helping effects are: (1) The Identifiable victim effect; (2) the Proportion dominance effect; and (3) the In-group effect. These three helping effects often co-occur in real life, and it is hardly surprising that they sometimes have been bunched together into a more generic helping effect (Jenni & Loewenstein, 1997).

The aim in this chapter is to emphasize some central distinctions of helping effects in general and between the three main helping effects in particular. Admittedly, the provided helping effect classification is probably not the ultimate one. I am very aware that it is possible to further divide the included helping effects into even more specific effects. Nevertheless, for the current purpose, the most important is to recognize that the three included helping effects are clearly separated.

The chapter begins with one section discussing the more general scope-insensitivity effect that refers to the very weak relation between actual need (e.g. number of victims one can save) and helping motivation. After that, one section summarizes some of the helping effects that are not part of the three main ones. Then, one section will be devoted for each of the main helping effects. In the last section, different techniques for measuring helping effects will be discussed.

Scope-insensitivity

Scope-insensitivity (also known as psychophysical numbing; Dickert, Västfjäll, Kleber & Slovic, in press; Rubaltelli, Hysenbelli, Dickert & Slovic, submitted manuscript; Fetherstonhaugh, Slovic, Johnson & Friedrich, 1997) is not so much a helping effect as the absence of a helping effect. It refers to the very weak correlation between actual need (e.g. the number of victims one can help) and helping motivation. Instead, it appears that the actual need or the scope of the problem sometimes almost decreases helping (cf. the singularity effect below). As noted by Bekkers & Wiepking (2010) many of the largest charities in the USA focus on extremely rare diseases (e.g. illnesses affecting only 0,006 of the population). In one study, both number of casualties and numbers of survivors that needed help was manipulated (Evangelidis & van den Bergh, 2011). Nicely showing how easy it is to forget the actual need when making help decisions, the number of dead people predicted helping motivation but the number of affected people (who actually could benefit from help) did not. Also, one study asked for peoples emotional reactions after reading about either 5 or 10000 dead, and found no differences (Dunn & Ashton-James, 2008).

If people were totally scope-sensitive, all lives (and everyone's well-being) would be equally valued. This would imply that the number of people possible to help would be perfectly correlated with the amount of help. This is not the case. People are obviously scope-insensitive implying that some individuals are valued more than others, which in turn means that some victims will receive disproportionately much help whereas other victims will receive disproportionately little help.

The finding that the objective need and number of victims possible to help does not predict helping is very important but only takes us half way. Rather than focusing on aspects that do not influence helping, we can be more specific and aim to learn more about all the situational aspects that actually increase or decrease helping (i.e. helping effects).

Helping effects outside the scope of the thesis

The *immediacy effect* refers to the human tendency to help the victims that you were exposed to the most recently. In a study by Huber, van Boven, McGraw and Johnson-Graham (2011), participants read four charity-requests and could allocate money between them. Half of the participants first read all requests and then allocated money. The other half allocated money after reading each request. As expected, those who allocated money after reading all requests gave most to the request presented last, whereas the participants who gave after each request gave the most money to the first request (as they had the most money to spare then). The *reference dependence effect* means that we are more motivated to

help a victim who experienced a loss than a victim who was born with a chronic handicap, but this effect only exist when the victim is identified (Small, 2010).

The *innocentness effect* refers to the human tendency to help more when the victims are innocent and dependent on external help then when the victims somehow can receive blame for their own situation or have the capacities to help themselves (Fong, 2007; Lee, Winterich & Ross, in press; Weiner, 1993; 1995;). In one study it was shown that everything else equal, victims who suffered as a result of a natural disaster received more help than victims suffering as a result of a civil war and victims who already tried to improve their own situation received more help than passive victims (Zagefka, Noor, Brown, de Moura & Hopthrow, 2011). Even if the victims themselves were not blamed for the problems, the mere fact that another human had caused the situation made people less motivated to help.

The famous *bystander effect* refers to the human tendency to be more motivated to help a victim when one is the only possible helper compared to when there are other potential helpers present (Darley & Latane, 1968; Fischer et al., 2011). In a study by Cryder and Loewenstein (2012), participants were recruited in a shopping mall and given 5 dollars that they could donate to a project focusing on buying textbooks for poor girls in South America. Increasing vividness (by adding pictures of girls on the waiting list) or determinedness (by determining the girl that is next in line to receive books) did not increase helping motivation in this study, but the absence of other helpers did (i.e. if you don't help, this girl will not get any textbooks).

The *goal-gradient effect* refers to people being more motivated to help when they believe that they are close to the goal. In one study, progress of a charity fund was manipulated so that the project was either 10%, 60% or 85% complete. Donations were clearly higher when the project was close to being complete (Cryder, Loewenstein & Seltman, 2013). In another study, a charity project was either presented in a "to date" frame (we have collected 49% of the necessary amount) or in a "to go" frame (we have 51% yet to collect; Koo & Fishbach, 2008). Previous donors from the cold list (those not regularly donating) gave more money when the project was framed "to date", whereas those on the hot list (those how gave something every month) increased their donation more when framed "to go". It has also been found that the total amount of donations increases if people are offered more choices (8 or 16) of how to allocate their money than if they have only three choices (Soyer & Hogarth, 2011). Also, changing the appeal-scale (e.g. how much money one asks for) can influence both the likelihood and magnitude of helping (De Bruyn & Pokopec, 2013).

This should not been seen as an exclusive list of helping effects, but as an illustration of the many types of situational differences that can increase helping. We now turn to the three "main" helping effects (i.e. those that will be studied in the present thesis).

The Identifiable Victim Effect

The identifiable victim effect refers to the human tendency to be more motivated to help when learning about an identified victim than when learning about statistical victims. Using the example from the introduction, whereas Baby Jessica was an identified victim (her name and picture was in the newspaper every day), the children dying from hunger and easily curable diseases in eastern Africa were statistical.

Studies of the identifiable victim effect and its components

The identifiable victim effect was first explicitly discussed by Schelling (1968) and then empirically investigated by Jenni and Loewenstein (1997). However, their definition of the effect was very broad and included both what I will refer to as the identifiable victim effect and what I will refer to as the proportion dominance effect. Later studies have been better at narrowing down the identifiable victim effect. In the literature, the effect is often assumed to include one or more of three factors – determinedness, vividness and singularity.

Determinedness

Determinedness is the weakest form of identifiability. A determined victim means that there already exists a victim (e.g. your blood will be given to a person that currently is in great need). An undetermined victim means that the identity of the victim will be determined at a later stage (e.g. your blood will be given to the next person that is in great need). In a study by Small and Loewenstein (2003), students won \$10 and were told that they could share it with another student (the victim) if they wished to. No one learned the actual identity of the other student, but half of the participants drew a number connected to the victim before deciding whether or not to donate, whereas the other half drew the number after deciding whether or not to donate. Donations to the other student were twice as large for those who already had drawn the number (see also Ritov & Kogut, 2011, Study 2). Another study in the same article found the same effect in a charitable setting. Participants (non-students) were more likely to support an unknown poor family if they learned that the family had already been chosen than if they learned that a family is about to be chosen. These studies suggest that simply by making helpers aware that there exist a determined victim that needs help, one can increase helping. The determinedness effect is, however, not always strong enough to increase helping motivation (e.g. Cryder & Loewenstein, 2012; Jenni & Loewenstein, 1997).

Vividness

Vividness refers to more or less arousal-eliciting information about victims. Determinedness can exist without vividness (as in Small & Loewenstein, 2003 described above) and vividness can exist without determinedness (such as when describing child abuse in very graphic terms but without mentioning a certain victim; Bagozzi & Moore, 1994). Adding vivid information of a victim is without doubt a stronger manipulation of identifiability. Vividness can refer to many things but for example Kogut and Ritov (2005a), showed that adding the age and name of a child increases helping motivation and that an additional picture increases it further. Other ways to increase vividness is to include personal information of the victim or to have the victim tell her story in her own words. When presenting statistical non-vivid descriptions of victims (victims are represented by dots) people donate more to four victims than to one victim, but when presenting victims with a picture, one victim elicit at least equally much helping motivation as four victims (Hsee & Rottenstreich, 2004). One can also create a more vivid appeal by anthropomorphizing social causes. Participants who saw a tree with a sad face painted on plus the text “save me” donated more money than participants who saw a tree without the face and with the text “save trees” (Ahn, Kim & Aggarwal, 2013). In another study, participants gave an advice either to an unidentified or an identified person participating in a game (identifiability was manipulated only by giving the person a gender-neutral name). Giving a good advice was related to lower benefit for oneself but higher benefit for the other person. The result showed that people gave better advice if the other person was identified with a name (Sah & Loewenstein, 2012). In a study by Dickert, Kleber, Peters & Slovic (2011), participants were more willing to donate when the number of victims possible to save was illustrated with pictures than if they were illustrated with numbers. Providing personal information of a determined counterpart increased offers in a dictator-game (Bohnet & Frey, 1999). In an ultimatum-game experiment it was showed that people cooperated more if they knew that they would learn the reactions from a determined victim (even when the victim could not identify the allocator; Ellingsen & Johannesson, 2008).

There are, however, some boundary conditions of this effect. The identified victim version elicits more helping if the helper first takes the perspective of the victim but not when she gets the request to donate money before learning about the victim (thus taking the perspective of a helper; Hung & Wyer, 2009). Identifiability has also been suggested to interact with abstractness (Ein-Gar & Levontin, 2013). Over several studies the authors found that the identifiable victim effect exists in concrete situations (here and now) but not abstract situations (where temporal or social distance is big). Also, donation boxes accompanied with a poster picturing victims rendered more donations than donation boxes without posters if the boxes were placed in stores, but not when showed in door to door solicitations (Thornton, Kirchner & Jacobs, 1991).

Singularity

One very important boundary condition of the identifiable victim effect is that it works primarily when there is a single identified victim. An individual but not a group is seen as a psychologically coherent unit (Hamilton & Sherman, 1996) and when presenting either eight identified children with name and picture or eight statistical children, there is either no difference, or even a higher helping motivation towards the eight statistical children (Kogut & Ritov, 2005a; 2005b). The number of victims may even create a helping effect in itself. As long as the victims are identified, one victim in need elicits more motivation to help than does eight victims (*the singularity effect*; Kogut & Ritov 2005a, 2005b, 2007, Västfjäll, Slovic, Mayorga & Peters, 2014 but see also Dickert, Sagara & Slovic, 2011). According to this effect, people are more motivated to help when they can help one victim than when they can help two or more victims. In the study by Dickert, Kleber et al., (2011), identifiability and singularity marginally interacted so that one pictured child received more help than five pictured children (always described as part of a larger group), but five statistical children received more help than one statistical child. The effect has also been shown in public decisions (Kogut, 2009), where teachers were more likely to help identified students than statistical victims by making an exception to the general rule. The effect also exists in medical decision making. Physicians are more likely to approve additional tests if the situation is framed as an example including a single patient than if it is framed in general terms (Redelmeier & Tversky, 1990). In one study, participants saw a picture of a child they could help (Oceja, Stocks & Lishner, 2010). Half of the participants saw only the single child; the other half saw the child as one in a group of children. Also, half of the participants were asked how much they wanted to give to the identified child whereas the other half was asked how much they wanted to give to needy children in general. The results showed a clear interaction effect – if seeing only one child, people gave more if asked to give to only that child. If they saw the child among many, they gave more if asked to give to children in general.

People donate more to a singular victim than to six victims if the six victims are perceived as unrelated to each other, but equally much to six victims if they are clearly defined as a coherent group (Smith, Faro & Burson, 2013). One simple but effective way to use the single identified victim effect to increase donation to a group of victims has been proposed by Hsee, Zhang, Lu & Xu, (2013). Their unit-asking technique means first asking donors how much they are willing to donate to one victim and after that asking them how much they are willing to donate to 20 victims. This way of asking rendered clearly higher donations than just asking about donations toward 20 victims.

In this thesis, the identifiable victim effect consists of all these three factors. The identified victim version of the scenario always includes a single determined vividly described victim whereas the statistical version of the scenario always does not. Admittedly, one could certainly argue that determinedness, vividness and singularity are separate factors that should be seen as three separate helping effects. The main reasons for aggregating the three aspects into a single effect are first; that they indeed are similar and often aggregated

in the literature; second, that all three factors have primarily been linked to similar underlying mechanisms; and third, that I had difficulties replicating the main helping effects if separating the three aspects but succeeded better when aggregating them.

Variants of the identifiable victim effect

Traditionally, the identifiable victim effect has been tested by describing a situation where one identified child is at risk and where you can help this very child (your money is earmarked to the child you see; Kogut & Ritov, 2005a, 2005b; Västfjäll, Slovic & Mayorga, submitted manuscript). This way of presenting a situation is rarely feasible for charitable organizations as it is usually not possible to truthfully claim that money from one donor will be directed toward a specific victim. Also, a charity organization claiming that money is earmarked for a single victim, might be interpreted as suspicious and dishonest by some donors.

Instead, organizations make use of the identifiable victim effect in other ways. For example, they often include information and a picture of one of the many victims possible to save in order to increase donations to the greater cause (for examples in the research literature, see Dickert, Kleber et al., 2011, Study 2 and Oceja & Jimenez, 2007). Sometimes organizations even create an artificial connection between you and a certain identified victim (e.g. you can sponsor Samuel from Venezuela) but donations are not earmarked for that very child but distributed among many causes and the identified child that you read about is only one among many victims that will benefit from your donation. In a study by Oceja and colleagues (2014), it was shown that making participants care for only one identified victim made them allocate more resources to that victim, on the expense of the statistical group. However, making participants care for one victim when this victim one among others, increased help for the whole group. However, this way of using the identifiable victim effect does have its risks. Some studies have shown that helping motivation can be reduced just by adding information about other victims. For example, in the famous Rokia-example, participants read either a text about the poor child Rokia, a statistical text about the famine in an African country, or both the text about Rokia plus the statistical text (Small, Loewenstein & Slovic, 2007). Interestingly, not only did the appeal with picture and story about Rokia elicit more helping motivation than the statistical appeal. Adding the statistical information to the identified victim information actually decreased helping motivation. Teaching participants about the identifiable victim effect (by using the story about Baby Jessica) had the same effect (Small et al., 2007). Despite this, presenting an identified victim as one among many is probably the most common usage of the identifiable victim effect by charitable organizations.

Yet another way to make use of the identifiable victim effect is to include an iconic victim that cannot personally be helped, but that illustrates the need for help towards a certain cause (Loewenstein, Small & Strnad, 2006). For example, an iconic victim can be a

patient that needed and received an important organ transplant and now is back to full health. An iconic victim could also be one of the many victims that did not make it. For example, a charity appeal could describe and display pictures of a child that died one week after the picture was taken as a result of the problem the organization wants to solve. In both these scenarios, the identified victim cannot be helped (either because he already is cured or because he is no longer alive) but using his story and picture make use of the identifiable victim effect in order to increase donations. In one study, listening emphatically to an regretful drug addict telling his story made participants more likely to take money from other worthwhile projects and give it to a project supporting drug addicts just released from prison (Batson, Chang, Orr & Rowland, 2002). Importantly, the drug addict that participants heard about lived in another state and could personally not benefit from the project. This shows that even a single iconic victim can increase helping motivation. The distinction between different variants of the identifiable victim effect (donations earmarked to identified victim; identified victim one among many; iconic identified victim) has to my knowledge not been discussed much previously, but the current thesis tests the identifiable victim effect with several of these variants.

Individual differences and the identifiable victim effect

Not all individuals are equally sensitive to the identifiable victim effect. People who score low on rationality are more prone to the identified victim effect than participants who score high (Friedrich & McGuire, 2010). Interestingly, neither the vividness effect (one identified polar-bear vs. general polar-bears) nor the singularity effect (1 panda or 8 pandas) was found for people who classified themselves as environmentalists, but both effects were found for those who did not (Markowitz, Slovic, Västfjäll & Hodges, 2013). This indicates that knowledge of a cause decreases the impact of identifying a victim. Other boundary conditions are that the identified victim effect exists primarily among people with anxious attachment styles (Kogut & Kogut 2013), and that only people who score low on numeracy (those less good in reasoning with numbers) give more to single identified victims than to many statistical ones (Dickert, Kleber et al., 2011).

The identifiable victim effect in punishment situations

The identifiable victim effect also works in punishment-situations. Determined but otherwise unknown non-contributors are more severely punished than non-contributors yet to be determined (Small & Loewenstein, 2005). Also, having a determined counterpart make us work harder in competitive situations (Haran & Ritov, 2014). We are also more likely to punish a person who harmed an identified victim than a person who harmed statistical victims (Gino, Shu, Bazerman, 2010; Nordgren & McDonnell, 2011). Likewise, identifying information of the perpetrator can either increase (if we take the students perspective) or decrease (if we take the teachers perspective) punishment

towards a misbehaving student (Kogut 2011a). Identifiability also seems to interact with innocence. An innocent identified victim receives more help than innocent statistical victims, but an identified victim that caused her own plight will receive less help than non-innocent statistical victims (Kogut, 2011b). A single victim and six related victims received more help than six unrelated victims if the victims were described as nice and totally innocent, but the opposite pattern was found if the victims were negatively described (Smith et al., 2013).

Summary

This section summarized research about the identifiable victim effect. Undeniably, the suggested operationalization of the effect is rather broad including determinedness, vividness and singularity. I have also not limited inclusion to scenarios where donations are earmarked for the victim, but included situations where the identified victim is either one among many or iconic. Later in the thesis, possible underlying reasons for the identifiable victim effect will be discussed.

The Proportion Dominance Effect

The proportion dominance effect refers to the human tendency to be more motivated to help when learning that one can help a relatively high proportion of the victims at risk (e.g. you can save 94 out of 100 victims) than when learning that one can help a relatively low proportion of victims at risk (e.g. you can save 94 out of 100000 victims; Bartels, 2006). Saving Baby Jessica from the well would mean saving one out of one victim at risk (i.e. a rescue proportion of 100%). Saving one (or even ten) of the hundreds of thousands starving children in eastern Africa would mean saving a very low proportion of victims at risk.

The proportion dominance effect and the identifiable victim have occasionally been confused. For example, in the early article by Jenni and Loewenstein (1997), proportionality was included as one factor of the identifiable victim effect. In addition, proportionality was the only factor that robustly predicted helping motivation in that study. The proportion dominance effect and the identifiable victim effect do have some overlaps. A single identified victim is often its own reference group so by helping a single victim, one also helps 100% of the victim-group. However, it is possible to distinguish the two effects by either keeping the degree of identifiability or the size of the reference group constant.

Studies on the proportion dominance effect

The first systematic studies on the proportion dominance effect in a charitable context came in the late nineties. Fetherstonhaugh et al., (1997) made participants read about eight refugee camps that varied on several variables. For each camp, participants rated if they would send rescue planes to that camp. The results showed that people were more likely to help when the camp was relatively small (11,000 refugees) than large (250,000 refugees) despite the number of lives possible to save being the same. People thus valued each single life less if there were many refugees in the camp. The authors attributed this to the principles of Weber's law about just detectible differences. In order for us to react differently to stimuli, we must be able to perceive the differences between them. Friedrich, et al., (1999) likewise showed that most people think that more lives must be saved to justify a \$850M expenditure if 41000 lives are at risk compared to when 9000 lives are at risk. Both these studies also found that the participants who are not prone to the proportion dominance effect, in general put a much higher price on each life. In the study by Friedrich et al., (1999), for the participants prone to the proportion dominance effect, the mean number of required lives to save for \$850M was 973 if the reference group was small (9,000 people are at risk) but 4,688 if the reference group was large (41,000). For participants not prone to the effect, the required number of lives saved for \$850M was 63 (no matter size of the reference group). In another early study, Baron (1997) found that both the number of people possible to save (90 vs. 900) and the rescue proportion (9% vs. 90%) influenced willingness to allocate resources when participants read about different disasters. Baron attributed this to a general tendency to confuse different types of numbers.

In Jenni and Loewenstein's study (1997), participants were more motivated to support a helping project framed as being able to save 25 out of 25 people killed every year at a highway intersection, than to support a project framed as being able to save 25 out of 50000 people killed at the entire highway. This example illustrates that the proportion dominance effect is most of all a framing effect. Just by narrowing down the scope of the problem, one can make the rescue proportion appear higher. Bartels & Burnett, (2011) tested the proportion dominance effect by letting people compare two helping projects and choose which one they wanted to support. One of the projects could help a higher percentage but the other project could help a higher absolute number of victims. When the potential victims in the projects moved like a single group, proportion dominance tendencies (people preferring the project with a higher rescue proportion) were stronger than when the victims moved individually. These results suggest that proportion dominance tendencies are greater when the victims are perceived as one flock than when they are perceived as separate individuals. In line with this, Bartels (2006) found that people think it normatively right to save a high absolute number of victims rather than a high proportion of victim if the victims are human, but less so when the victims are animals.

Pseudo-inefficacy

The pseudo-inefficacy effect is a helping effect that includes elements from both the identifiable victim effect (identified victims) and from the proportion dominance effect (victims not possible to save). According to pseudo-inefficacy, our helping motivation is not only a function of the number of people possible to help, but also a function of the number of people not possible to help. Therefore, knowing about victims that we cannot save reduces motivation to help identified victims that we can help (Västfjäll, Slovic & Mayorga, submitted manuscript). In a Dickert and Slovic study (2009), participants saw either one child or one child among many and were asked to rate their helping motivation/sympathy towards that specific child. The existence of other children as distractors decreased helping motivation and this was more obvious when making the rating out of memory than when doing online judgments. In another study, it was found that both pictures of children not possible to save and irrelevant threatening pictures reduced the positive emotion people got from helping identified victims (Västfjäll, Slovic & Mayorga, submitted manuscript, Study 5). The pseudo-inefficacy effect implies that we are more likely to prefer rescue projects that solve the problem at hand (i.e. save all victims at risk) rather than rescue projects that do equally much good but does not solve the problem completely. As most of the causes that needs the most support in the world, are far from being completely eradicated, this creates a vicious circle where small-scale problems gets too much support and large-scale problems gets too little.

It has been suggested that the proportion dominance effect is a specific form of slow and reasoned pseudo-inefficacy that can be contrasted against a fast and intuitive form of pseudo-inefficacy (Västfjäll, Slovic & Mayorga, submitted manuscript). The difference is that whereas the studies testing fast pseudo-inefficacy include comparably small numbers of identified victims possible to save and victims not possible to save (e.g. you can save Rokia but not Moussa and Okeke), the studies testing slow pseudo-inefficacy (i.e. the proportion dominance effect) include situations with large number of victims possible to save and not possible to save (e.g. you can save 400 out of 1200 victims). My interpretation of the fast form of pseudo-inefficacy is that it represents an interaction between the identified victim effect and proportion dominance effect. This thesis focuses on the slow and reasoned form of pseudo-inefficacy (i.e. the proportion dominance effect).

Individual differences and the proportion dominance effect

There are some studies on individual differences and proportion dominance effect. It has been shown that more numerate people (those better at deriving meaning out of numbers) are more influenced by the proportion of victims possible to save whereas less numerate people are more influenced by the absolute number of victims or the number of people at risk (Kleber, Dickert, Peters & Florack, 2013). A high relative preference on

rational over intuitive thinking reduces the proportion dominance effect in some situations (Bartels, 2006 and Friedrich & McGuire, 2010 for similar results). Participants who called themselves environmentalists did not display a proportion dominance effect whereas non-environmentalists did (Markowitz et al. 2013). Likewise, Friedrich et al., (1999) and Fetherstonehaugh et al. (1997) both found tendencies that the participants who were not affected at all by proportional savings, seemed to hold sacred values (Baron & Spranca, 1997), meaning that not only did they refrain from making calculations about proportional savings – they refrained from making any calculations at all.

Summary

This section has introduced a second helping effect – the proportion dominance effect. The proportion dominance effect in this thesis refer to a general tendency to be more motivated to help when reading about a project that can save a high proportion of the victims (e.g. 93 of 100), than when reading about a project that saves an equal absolute number, but a lower proportion of victims (e.g. 93 of 9000). Although the identifiable victim effect and proportion dominance effect often overlap in the real world, they are clearly separated in this thesis. The proportion dominance effect scenarios in this thesis always include large numbers of statistical victims. No victims are determined or single, and vividness is held constant to minimize overlap with the identified victim effect. Later in the thesis, we will discuss possible underlying mechanisms of the proportion dominance effect.

The In-group Effect

The in-group effect refers to the human tendency to be more motivated to help when one read about victims from the in-group than when one read about victims from the out-group. For example, Baby Jessica was an American girl and thus clearly part of the American in-group, whereas most of the starving children came from African countries that for most Americans probably were considered the out-group.

The in-group effect (also known as the in-group bias or parochialism, Baron, 2009) is widely researched in social psychology (see Stürmer & Snyder 2010 for a review about helping toward in-groups and out-groups). It can be driven by either an aversion towards the out-group, a liking towards the in-group, or a combination (Brewer, 1999). It can be argued that the in-group effect and the identifiable victim effect overlap each other in that by showing an identifiable victim, people are more likely to take the perspective of the victim which in turn decrease the social distance. The identified victim could then be seen more as a member of the in-group compared to when one learn about statistical victims

(cf. Davis & Maitner, 2010). In this thesis, degree of identifiability is held constant on the statistical level while manipulating group-belonging of the victims.

Types of in-groups

In-groupness could be seen as a continuous variable where perceived social distance is a subjective measure that can change over time (Strombach et al., 2013). Cialdini, Brown, Lewis, Luce & Neuberg (1997), refers to this as “perceived oneness” whereas Dovidio et al., (1997), use the term “we-ness”. In this thesis, rather than measuring perceived group-belonging the aim is to manipulate the victims to be either from the helpers’ in-group or from the helpers’ out-group. Admittedly, how people define ones in-group depend on the person as well as on the situation and different group-belongings can be manipulated to become more or less salient. Nevertheless, there are some natural types of in-groups that have received relatively more attention than others and that rather universally influence people’s attitudes and behavior.

Kin

Probably the most universal and strong type of in-groups is the family. Helping close relatives (e.g. children, siblings) can even be seen as helping oneself and therefore helping one’s children are not even included in the operationalization of helping in this thesis (cf. Wiepking & Bekkers, 2012). Nevertheless, the degree of kinship influences helping even outside the close family. From an evolutionary perspective, it is not surprising that humans are generally much more motivated to help people they are related to compared to people they are not related to. Burnstein, Crandall and Kitayama 1994) explain the preference to help kin exclusively in inclusion fitness terms. In their article, they show that people help those they share more genes with, those who have greater productive capacities and those who are in good health. They also show that kin partiality is clearly stronger in life and death situations than in everyday situations where other factors (e.g. reciprocity) play a larger role. Likewise, the tendency to help kin more than non-kin is stronger when help involves a big sacrifice and a big benefit (e.g. adopting a child) but when helping include just a small effort (e.g. making a phone call) we are equally motivated to help kin as acquaintances (Cialdini et al., 1997). However, as we are not perfect in detecting who is kin, aspects such as similarity and proximity can work as suggestive cues to kinship (van Vugt & van Lange, 2006)

Nationality & Ethnicity,

Another often researched natural type of in-group is nationality (Baron, 2009; Baron & Miller, 2000). Levine & Thompson (2004) manipulated in-group and out-group as European vs. South American disaster victims and found that if making European group membership salient (for British students), they were more motivated to help in-group victims. In a study done on American participants, it was shown that mortality salience

(being reminded about death) increased helping to American charities, but not to international charities (Jonas, Schimel, Greenberg & Pyszczynski, 2002). Ethnicity is a related but not identical way to classify in-group. A meta-analysis by Saucier, Miller and Doucet (2005) did not show any universal discrimination by white people against black people, but found that when it is easy to justify the choices not to help in non-racist terms (e.g. when help is very risky or very demanding), then white people help black victims less. In a study by Cuddy, Rock & Norton, (2007) in the aftermath of hurricane Katrina, different ethnicities (black and non-blacks) attributed more complex emotions to victims from their respective in-group (manipulated by giving the some personalized victims stereotypical white or black names), and this influenced their helping motivation (see Vaes, Paladino, Castelli, Leyens & Giovanazzi, 2003 for similar results).

Similar opinions & Personal experience

In-group can also be constituted by the degree of similarities of people's opinions. Studies have showed that people are more likely to forward a lost check, if they know that the donor has opinions that are in 100% agreement with the social norm and of high importance (Sole, Marton & Hornstein, 1975). In one study, male Manchester United fans that had their team-belonging made salient helped an injured person wearing a Manchester United shirt in 92% of the observations. If the injured person instead wore a neutral shirt or a Liverpool-shirt, observed helping was instead 50% and 30% respectively. When instead making soccer-fan group belonging salient, the proportion of people helping the victim was 80% for a Manchester United-shirt, 70% for a Liverpool-shirt and 29% for a neutral shirt. This shows the importance of in-group salience. Shared experiences can also create in-groups. Simply believing that one knows more about a nation, increases help to victims from that nation (Zagefka, Noor & Brown, 2013; see also Smith & Schwartz, 2012). Helping is also higher when the victim is suffering from an illness with which we have personal experience (Small & Simonsohn, 2008). In a survey about Swedish charitable giving behavior (Swedbank Robur, 2011), it was found that older Swedes donated comparably more money to research on illnesses whereas donations to child cancer was highest in the age-bracket 30-44 years (when people usually have children). Also, in a sociological article by Wiepking (2010), high socioeconomic status donors helped charities in general less than low socioeconomic status participants, but they helped organizations that promoted fine art and culture more.

Minimal groups & Proximity

A minimal group refers to a group that is randomly construed. For example, one can create two teams by lottery, and members of each team will likely soon see their teammates as in-group and members of the opposing team as out-group. Minimal groups are often used in research to avoid any of the natural differences that belong to natural groups such as kin, nationality or shared opinions. In one study using a minimal group paradigm (strength of group-belonging was manipulated by shirt-color and designated seating), students showed more self-disclosure and volunteered to help more when the

recipient was a fellow in-group member than when the recipient was an out-group member (Dovidio et al., 1997). It has also been shown that mere proximity of the person making the helping request can increase helping (Baron & Bell, 1976). One study only primed the concept of relatedness and found that this increased helping intentions compared to autonomy, competence or neutral primes (Pavey, Greitemeyer & Sparks, 2011).

In the studies included in this thesis, I have primarily focused on the nationality group-category (but, the third study in Article 2 manipulated in-group with kinship). To avoid nationality of the victim to confound with perceived need (e.g. Swedish victims vs. Sudanese victims) Canadian victims were chosen as a suitable out-group.

The identifiability × in-group interaction

The identifiable victim effect and the in-group effect have been suggested to interact in complicated ways. More specifically, the identifiable victim effect works primarily for in-group victims as long as there is no intergroup conflict between the groups (Kogut & Ritov, 2007; see also Davis & Maitner, 2010). However, if there is an intergroup conflict between in-group and out-group (e.g. Israelis vs. Palestinians), identifying a single victim increases help to the out-group (better to be an individual than part of “them”) but decreases help to the in-group (better to be part of “us” than an individual, Ritov & Kogut 2011). It should be noted however, that the identifiability and singularity effect have been found also when testing the effects on out-group victims (e.g. identified African children; Västfjäll et al., 2014). In this thesis, identifiability is held constant on the statistical level when testing the in-group effect whereas the group-belonging is sometimes out-group (African) and sometimes in-group (Swedish) when testing the identifiable victim effect. A further elaboration about interactions between helping effect can be found in the general discussion.

Individual differences and the in-group effect

Some individual differences influencing the strength of the in-group effect have been suggested. In an article by van Lange, Bekkers, Schuyt and van Vugt (2007), people with a prosocial social value orientation helped more than people with a competitive or egoistic orientation when the victims were from the out-group but there were no differences when the victims were from the in-group. Also, Winterich, Mittal & Ross (2009) found an interesting interaction with gender identity, moral identity and in-group effect. Participants with a masculine identity and a high moral identity showed a strong preference for helping in-group, whereas participants with a female identity and a high moral identity had no or even a reversed effect. This suggests that those with a female

identity, who value morals highly, help their out-group more whereas those with a male identity who value morals highly just focus on their in-group.

Summary

This section has introduced the in-group effect. The in-group effect has been widely researched within social psychology, but not as much as the identifiable victim effect and proportion dominance effect within the field of charitable decision making. These three helping effects are the main focus of this thesis. Later in the thesis, we will discuss possible underlying mechanisms of the in-group effect.

Investigating the *when*-question?

This section could be seen a methodological detour. The aim is to provide a brief summary about two questions that researchers often face when designing studies about helping effects. The first question concerns how to measure helping (i.e. which dependent variable should be used). The second question concerns different ways to measure the helping effects (i.e. between-group or within-subject designs).

How to measure helping?

In this thesis, the word *helping motivation* is used broadly to refer to a general tendency to help. When doing research about helping and charitable giving, the main dependent variable is usually a variable that is assumed to be closely related to actual helping. Helping motivation could thus include measures such as (a) self-rated willingness to help, (b) self-rated likelihood to help, (c) self-rated hypothetical donations, (d) actual help decisions (helping or not helping) and (e) magnitude of actual help behavior. Although these measures are not the same thing, they are all related to each other. The vast majority of the articles cited in this thesis have used one or several of these measures as the dependent variable. Although there are subtle differences between almost all studies, one could classify at least most types of measures into: (a) actual money, (b) hypothetical willingness to pay or (c) self-rated helping intentions.

Actual money

The preferable way to measure helping motivation is obviously to measure actual helping behavior. One popular way to do this is to provide the participants with money in an unrelated task to assure that they have the opportunity to help. Then participants are asked to read a charity appeal and told that they can donate any amount of money to that

very charity. The actual donation task is often done anonymously by putting money in a sealed envelope (e.g. Cryder, Loewenstein & Scheines, 2013; Cryder & Loewenstein, 2012; Aguiar, Brañas-Garza & Miller, 2008; Kogut & Ritov 2005a; 2005b; 2007; Small et al., 2007; Västfjäll et al., 2014; Västfjäll, Slovic & Mayorga, submitted manuscript). A logistically simpler and cheaper variant of the same idea is to inform that participants will take part in a lottery. Participants are then asked to imagine that they win a certain sum on the lottery, and asked how big proportion of the lottery-winnings they would like to donate in that case (Liu & Aaker, 2008; Soyer & Hogarth, 2011). Yet another way to use real money when testing allocation decisions is to let participants know that as a sign of gratitude, the experimenters will donate a sum of money to charity, but that it is the job of the participant to allocate the money between different charity projects.

Self-rated likelihood to help and hypothetical donations

A logistically simpler and cheaper way to test helping motivation is to ask for participants' self-rated likelihood to help (yes or no) and the amount they hypothetically would be willing to donate. This type of measure have been used several times (Västfjäll et al., 2014; Västfjäll, Slovic & Mayorga, submitted manuscript; Kleber et al., 2013; Dickert, Kleber et al., 2011; Ajzen, Rosenthal & Brown, 2000; Kogut & Ritov, 2005a, 2007; Cryder, Loewenstein & Scheines, 2013; Rubaltelli et al., submitted manuscript). When measuring hypothetical willingness to help, one often lets participants read one charity appeal and ask them how much money they would be willing to donate to this very appeal. One can use either a free answering scale (the participants writes an amount) or an appeal-scale that can differ both in the value of the leftmost anchor (the lowest possible amount to donate) and in the steepness (with how much does the amount change in each step). Most studies that have used both behavioral measures and hypothetical measures find at least similar results. In one study, the hypothetical response rate to a mail-survey was similar to the actual response rate in a field study (Dommeyer, 2008). Although hypothetical donations tend to be higher than real donations because people overestimate how much they actually donate, both types of measures are similarly influenced by different situational factors (e.g. Kogut & Ritov, 2005a; 2005b; 2007; Kogut 2011b). Thus, relatively high hypothetical donations usually imply relatively high actual donations, although the actual amounts might differ a lot.

One common distinction when measuring actual or hypothetical donations is to separate the likelihood of helping and the magnitude of helping. Total donations can increase either by increasing the likelihood of helping (higher compliance to donate anything at all) or by increasing the magnitude of donations (larger mean size of the donations). However, trying to increase magnitude can have detrimental effect on likelihood and vice versa (e.g. Smith & Berger, 1996) and it has also been suggested that the likelihood and magnitude of helping are predicted by different types of feelings (Dickert, Sagara & Slovic, 2011). In this thesis, focus is on general helping, meaning that likelihood and magnitude of helping are collapsed into a single variable.

Self-rated helping motivation

A third, even simpler, way to measure helping motivation is simply to ask about how willing people are to help a certain charity project, how motivated they are to help it, and how important they think it is to help (e.g. Bartels, 2006; Cryder, Loewenstein & Seltman, 2013; Fetherstonhaugh et al., 1997; Hung & Wyer, 2009; Burnstein et al., 1994; Zagefka et al., 2011). The main benefit of this type of measure is that it can be tested on a Likert-scale (e.g. a seven point scale where 1 = not at all motivated to help in this situation and 7 = extremely motivated to help in this situation). It has been shown that ratings of general support for a helping project and perceived importance measure basically the same attitude as hypothetical willingness to pay (Kahneman, Ritov, Jacowitz & Grant, 1993 and Kahneman & Ritov, 1994). As responses on a Likert-scale also have better psychometric properties than willingness to pay estimates, self-rated helping motivation seems like a reasonable way to measure helping.

In the empirical studies included in this thesis, all three types of measures of helping are included, but to different degrees. Paper 1 only use self-rated helping motivation, Paper 2 use self-rated helping motivation in the first studies, and an aggregate helping motivation variable, including all three measures for Study 4. Paper 3 used actual money as the dependent variable.

How to test helping effects

As mentioned earlier, a helping effect cannot be tested in isolation. Instead, one must compare two scenarios that ideally differ on only one situational aspect. If helping motivation differs between these two scenarios, there is a helping effect. Helping effects can be tested using different techniques. The simplest way to categorize the different techniques is with the between-group/within-subjects classification.

To test a helping effect within-subject means that each participant responds to both scenarios. To test a helping effect between-groups means that half of the participants read one of the scenarios while the other half read the other scenario. Both techniques come with both benefits and inherent problems. Also, the different helping effects can differ in magnitude depending on the type of technique used to measure it. In this section I will first try to explain different ways to test helping effects, and then shortly discuss how they have been shown to influence the different helping effects.

Between-groups design with separate evaluation

The most common way to test a helping effect is to let half of the participants read one of the helping scenarios (e.g. a charity appeal written in the identifiable victim version) and let the other half read the other helping scenario (e.g. an identical charity appeal written in the statistical version). If the group who read the identifiable victim version on average is more motivated to help than the group who read the statistical version, then one has

found the identifiable victim effect (provided that the measured variables have satisfactory validity and reliability). Testing a helping effect with a between-group design implies that the two versions of the charity appeal are evaluated separately (each participant can only see one of the versions). The benefits of separate evaluation between-group designs are many. It is generally robust to demand characteristic and only reading one of the two projects makes it very difficult to detect what is actually being tested. The cost of between-group designs is that it is difficult to find the effects as individual differences in response styles tend to overshadow the situational differences (i.e. some participants will never rate high helping motivation no matter the situation, whereas other will rate maximum helping motivation in all situations). This way of testing helping effects is used in Article 2, Study 4 in the current thesis.

Within-subject design with joint evaluation

When testing e.g. the identifiable victim effect with a within-subject design with joint evaluation, all participants read two versions of a single charity appeal. The first version is written in an identifiable victim version. The second version is written in a statistical version. Preferably, half of the participants should read the identified version first and the other half should read the statistical version first to balance out possible order effects. All participants then rate their helping motivation toward both versions of the charity appeal. If helping motivation is rated higher toward the identified victim version, then one has found the identifiable victim effect. This way of testing a helping effect is simple but come with several problems. Most obviously, to present two versions of an identical charity appeal that differ only on one aspect, make it easy for participants to detect that very aspect. This is an obvious validity problem as participants might then answer either in ways that they think the experimenter would wish for, or in a way opposite to what the experimenter wish for in order to appear smart (Sigall, Aronson & van Hoose, 1970). The main benefit of this type of design is that it control for individual differences by letting all participants rate their helping motivation to both versions. In this thesis, this way of testing helping effects is used in Article 1, Study 2 and in Article 2, Studies 1-3.

Within-subject design with balanced scenarios

One way to at least reduce the problems associated with the within-subject design is to create two (or more) scenarios that differ in several ways (e.g. Scenario A concerns an earthquake, Scenario B concerns a flooding). Importantly, both of these scenarios must be possible to write both in an identified victim version and in a statistical version. One can then present these two scenarios next to each other so that half of the participants read the earthquake-scenario in the identifiable victim version next to the flooding-scenario in the statistical version whereas the other half of the participants read the earthquake-scenario in the statistical version and the flooding-scenario in the identifiable victim version. This way, participants compare two requests that differ in several ways and are therefore less likely to guess which manipulation the experimenter is interested in. Participants rate their helping motivation toward both scenarios and as long as both versions are used on

both scenarios equally many times, differences in help motivation created by the scenarios are balanced out. However, one must make sure that there are no interaction between scenario-type and version. This method has been used previously (e.g. Bartels, 2006, Study 1). A similar but not identical method was used by Fetherstonhaugh et al. (1997, Study 1) where two versions of a helping project to a Rwandian refugee camp were compared, not directly with each other, but by comparing both of them to an unrelated project and then testing the effect by comparing their respective preference relative to the unrelated project. In this thesis, a within-subject design with balanced scenarios is used to test helping effects in Article 1, Study 1.

Allocation-dilemmas

The within-subject design with balanced scenarios can also be used to create allocation-dilemmas. An allocation-dilemma means putting two charity appeals (e.g. the earthquake-scenario in the identified victim version and the flooding-scenario in the statistical version) next to each other and asking participants to choose which appeal they would like to support. This can be done either by making them allocate a fixed amount of resources between the two appeals (e.g. giving \$3 to the scenario written in the identified victim version and \$2 to the scenario written in the statistical version) or to force them to donate only to one of the charity appeals (Soyer & Hogarth, 2011). If participants on average allocate more money to the scenario written in the identified victim version, then one has found the identified victim effect. When asking people to allocate money between two causes, they often tend to adopt an egalitarian principle and donate the same amount to both. By asking participants to choose only one of the projects to help, or to force them to donate money unevenly, people cannot answer egalitarian which increases the chance of finding effects. This way of testing helping effects also make theoretical sense, as many times resources are finite and helping one project more means helping the other project less (Bartels, 2006; Tinghög, 2011). Winterich et al. (2009) likewise suggest that donation allocations appear to be a promising area and that research should explore the effect of resource on allocation among groups rather than on total helping (see also van Lange et al. 2007 and Bennett, 2003 for similar opinions). In this thesis, allocation-decision as a way of testing helping effects is used in Article 3.

The three helping effects in separate and joint evaluation

There is plenty of literature on how evaluation mode can change people's preferences (e.g. Hsee & Zhang, 2004, 2010; Bartels, 2008; Bazerman, Moore, Tenbrunsel, Wade-Benzoni & Blount, 1999). Separate evaluation is more sensitive to qualitative differences; joint evaluation is more sensitive to quantitative ones. In a famous example, participants were asked to estimate their willingness to pay for two dictionaries. Dictionary A had 10000 entries and was in mint condition. Dictionary B had 20000 entries but had a torn cover. In separate evaluation (one group estimated only the price of Dictionary A, the

other group only Dictionary B), people were willing to pay a higher price for Dictionary A, but in joint evaluation (where the two dictionaries could be compared) people were clearly willing to pay more for Dictionary B. The offered explanation is that the torn cover is something easily evaluable whereas the number of entries is difficult to evaluate if shown in isolation (Hsee, 1996). Preference reversals can naturally occur even when testing helping effects and this section take up some examples from the literature.

The identifiable victim effect in separate/joint evaluation

The identifiable victim effect is sensitive to the mode of asking and has been shown to exist primarily in separate evaluation. In one study, participants were more motivated to help single identified victims than a group of victims when they were tested in separate evaluation. When tested in joint evaluation, the identified victim and the group of victims elicited equal amounts of helping motivation. Finally, when one compared the two projects and could only help one of the projects (i.e. an allocation-dilemma), more people preferred to help the group of victims (Kogut & Ritov, 2005b, Study 2). However, there are exceptions. Participants who were exposed to several victims within an fMRI-scanner tended to give more money when they saw pictures of victims rather than silhouettes of victims (Genevsky, Västfjäll, Slovic & Knutson, 2013) and the singularity effect has also been found within-subjects (Västfjäll et al., 2014).

The proportion dominance effect in separate/joint evaluation

The proportion dominance effect is a more robust effect. It remains to some extent even when the projects are presented jointly (Bartels, 2006; Fetherstonhaugh et al., 1997). This also applies to the related pseudo-inefficacy effect (Västfjäll, Slovic & Mayorga, submitted manuscript). It seems like the proportion dominance effect exists in both separate and in joint evaluation, but that people with a high relative preference on rational over intuitive thinking show weaker proportion dominance tendencies in joint evaluation (Bartels, 2006). On the other hand, if testing the effect in separate evaluation, then people with higher numeracy show greater proportion dominance tendencies (Kleber et al., 2013). However, it is worth noting that in Bartels' study (2006), the absolute number of victims also varied between the versions (e.g. 120 out of 150 vs. 124 out of 800 otters). In this type of study, there are three numbers that can be compared: (a) the number of people possible to save; (b) the number of people at risk; and (c) the proportion of people possible to save (cf. Kleber et al., 2013). The joint evaluation does then not only make the proportion of victims more comparable, it also makes the number of people possible to save and the number of people at risk more comparable. In this thesis, the absolute number of victims possible to save is always held constant while the size of the reference group is varied.

The in-group effect in separate/joint evaluation

There is not much research on whether separate or joint evaluation matter for the in-group effect. It likely depends on which kind of in-group manipulation that is used. For example, it seems very likely that the higher motivation to help kin than non-kin will remain when one can see projects jointly e.g. due to loyalty norms (Rai & Fiske, 2011; Fiske & Tetlock, 1997; Graham et al., (2011)). A similar effect on nationality as group membership also seems to exist (Loewenstein & Small, 2007). Not only do people prefer to help people from their own country, they also moralize about it (Baron, 2009). It seems less clear that one prefer to help the in-group over the out-group in other situations.

Chapter conclusion

This chapter focused on the *when*-question of helping that refers to how situational differences or framing effects increase or decrease helping. This has been referred to as helping effects. This chapter discussed helping effects in general and summarized previous research on the identifiable victim effect, the proportion dominance effect and the in-group effect. The primary reason that these effects received special attention is that all three of them have been explicitly suggested to be driven by the same psychological mechanism (i.e. sympathy; Loewenstein & Small, 2007), but that this never have been tested systematically. I suggest that this view might be a simplification, and instead propose that the three helping effects are primarily driven by three different psychological mechanisms. These three mechanisms will be discussed in the next chapter.

4. The *why* of helping – Psychological mechanisms

This chapter deals with a different question. Whereas the *when* of helping referred to the tangible, concrete, situational differences between helping scenarios or charity appeals, the *why* question refers to the intermediating psychological factors (feelings, thoughts and beliefs) that can make us more motivated to help. I will refer to these factors as *psychological mechanisms*.

Psychological mechanisms of charitable giving have indeed been researched before. Bekkers and Wiepking (2010, also 2011a; 2011b; Wiepking & Bekkers, 2012) suggested a taxonomy including eight psychological mechanisms (awareness of need, solicitation, cost & benefit, altruism, reputation, psychological benefits, efficacy and values). Bekkers and Wiepking does an outstanding job in summarizing literature on charitable giving from different fields but they use a broad definition of psychological mechanisms and include what I would refer to as situational differences (the *when*-question; e.g. solicitation), individual differences (the *who*-question; e.g. values), and psychological mechanisms (the *why*-question; e.g. efficacy). In this chapter, focus will be exclusively on the *why*-question.

One way to understand what the psychological mechanisms refer to in this thesis is to imagine a charitable organization that considers how to design their new charity appeal. Before deciding anything concrete, they need to decide what kind of psychological strings they want to play on. Three persons within the charitable organization have different ideas about this. Oscar suggests that the advertisement must make the readers emotionally touched and ideally make the potential donors as sympathetic as possible. Artur disagrees and instead wants the ad to make people primarily experience that the donated money can be used efficiently and that a very high percentage of the donations will reach the beneficiaries. Finally, Per suggest that one could emphasize moral principles and virtues such as fairness, equality, responsibility and duties, and remind potential donors that the primary reason they live in relative luxury is that they were lucky to be born in a developed country by comparably affluent parents, and make the solidarity toward the ones less well-off more salient.

These suggestions differ about which psychological strings to play on in order to increase donations. Oscar wants to play on the emotional string; Artur wants to play on the utility-string and Per wants to play on the responsibility-string. This chapter will focus on

these three psychological mechanisms – emotional reactions; perceived utility and perceived responsibility. It is not suggested that these three are the only psychological mechanisms that can motivate helping, or that the suggested classification is the ultimate one. It is, however, suggested that the three suggested psychological mechanisms can be distinguished theoretically and empirically and that all three mechanisms can predict helping motivation independently of each other.

This chapter will first discuss the taxonomy of decision modes that most has inspired which mechanisms to include in this thesis. Then, each of the suggested psychological mechanisms will be discussed in turn and the chapter will be concluded with a summary of other theories that have some obvious overlap with the suggested mechanisms.

Helping with the heart, with the head, or by the book

The taxonomy that has inspired the current classification was first proposed by Elke Weber on her presidential address at the Society of Judgment and Decision Making (1998, see also Weber, Ames & Blais, 2004). In that presentation, she suggested that we make decisions in several qualitatively different decision modes and that depending on what decision mode we use, the outcome could be very different. In later publications, Weber and Lindemann (2007) had narrowed down the number of decision modes to three neatly referred to as *deciding with the heart* (i.e. the emotional decision mode); *deciding with the head* (i.e. the calculative decision mode) and *deciding by the book* (i.e. the recognition/relational decision mode). In their classification, deciding with the heart means that decisions are governed by conscious or unconscious drives or feelings; deciding with the head means decisions that are based on analytical thought and deciding by the book means decisions that involve recognition of the situation as one of a type for which the decision maker knows the appropriate action (Weber & Lindemann, 2007, p. 192). In Krosch, Figner & Weber (2012) participants read a moral dilemma where they could prefer either a humanitarian choice or a military choice and rate which type of decision mode they used. Participants who preferred the military choice (e.g. turn in a disobeying soldier) stated that expected consequences (i.e. the calculative decision mode) and their occupational role (the recognition/relational decision mode) played a large role for their choice whereas those who chose the humanitarian choice (e.g. give him a break) used more emotion and care considerations (the emotional decision modes) when making their choice. In a study combining decision modes and helping situations, (Ames, Flynn & Weber (2004) focused on how different types of helping were perceived by others. Helping with the heart (e.g. because I like you), was perceived more preferable than helping with the head (e.g. because I will get something good in return) or helping by the book (e.g. because it is my duty). However, when helping involved a greater effort, head-decisions and by the book-decisions were more acceptable.

The decision modes suggested by Weber have a clear resemblance to the three psychological mechanisms that is suggested in this thesis. I will refer to Weber's helping with the heart as the *emotional reaction mechanism*, to Weber's helping with the head as the *perceived utility mechanism* and to Weber's helping by the book as the *perceived responsibility mechanism*.

There are however some differences between the two types of classifications. First, the helping by the heart in Weber's taking simply means liking the person one helps. The emotional reaction mechanism suggested in this thesis rather refers to the emotional reactions that people often feel when seeing a need-situation (personal distress and sympathy for the victims). Second, helping with the head suggested by Weber, seems to focus on costs and benefits for the helper. The perceived utility mechanism suggested in this thesis shares the calculative features, but importantly includes costs and benefits not only for the helper but for the victim as well. The by the book helping suggested by Weber is, however, very similar to the responsibility mechanism suggested in this thesis. In the following sections, the suggested three mechanisms will be discussed in turn.

Emotional Reactions

Helping is first and foremost not an economical question but a moral question (Mayr et al., 2009). Affect and emotions have been intimately linked to moral attitudes and moral behavior in general (Haidt, 2001; Greene, Sommerville, Nystrom, Darley & Cohen (2001) and even stronger so to attitudes about helping and helping behavior (Loewenstein & Small, 2007; Slovic, 2007). Both affect and emotions are often strongly related to helping motivation and feeling more is sometimes equalized to helping more. In fact, just trying not to express emotions, can reduce negative feelings when seeing a need-situation and consequently reduce helping behavior (Xu, Bègue & Bushman, 2012). Charity appeals can be more or less emotional and this can influence helping motivation. For example, compared to a more factual homepage, an emotional homepage increased the number of donations (although the mean donations were lower; Bennett, 2009).

A common problem when discussing affect and emotion is that important concepts can refer to many very different things and that affect and emotions in helping situations can be researched from several perspectives. Emotional reactions in this thesis will be operationalized narrowly and include only two types of emotions – personal distress and sympathy. The purpose is not to offer a full account of all types of affect and emotions that can motivate helping, but rather to be clear what is included and what is not included when I refer to emotional reactions in the current thesis.

In this thesis, emotional reactions will be limited to include immediate emotions that a helper experiences as a response to being exposed to a need situation (e.g. hearing a story about a child who died from malnourishment). The two types of emotional reactions

most commonly discussed in this context are personal distress and sympathy towards the victim. Distress refers to a self-directed negative emotion whereas sympathy refers to an other-directed negative emotion. Both distress and sympathy could be claimed to belong to the “other-suffering” family of moral emotions meaning that the inherent action tendency of these emotions is to help (or, in the case of distress, to escape from the negative feeling in another way; Haidt, 2003). These two emotional reactions are here defined in a way very reminiscent of Batson (2011) and both distress (Kogut & Ritov, 2005a) and sympathy (Kogut & Ritov, 2005b; Davis, 1983a) have previously been shown to predict helping.

It is important to acknowledge that in this definition, feeling more emotional reactions can, and often do, increase the motivation to help. However, this is not the same as to say that more emotional reactions necessarily increase helping. Also, it is not the same as to say that an increase in helping is always a result of an increase in emotional reactions. Instead, emotional reactions can increase even without a subsequent increase in helping, and helping can increase even without a preceding increase in emotional reactions.

In the next two sections, distress and sympathy will be explained more in depth. In the section after that, it will be specified what other types of affect and emotions that is not included in the current operationalization of emotional reactions.

Distress

Distress refers to the negative inward-directed feeling a helper might experience when seeing a need-situation. It has been argued that the tendency to offer help begins with the aversive arousal caused by perceiving the distress of others in need (Dovidio, Piliavin, Gaertner, Schroeder & Clark, 1991). It can include low-arousal sadness, high-arousal anxiety or both (Cialdini et al., 1987; Fultz, Schaller & Cialdini (1988). Supporting this idea, it has been repeatedly shown that distress felt as a result of learning about a need situation can motivate helping (e.g. Gaertner & Dovidio, 1977, see also Dovidio et al., 2006). In fact, even arousal elicited by exercise or by seeing erotic or aggressive films can increase helping behavior in some situations (Sterling & Gaertner, 1984; Mueller & Donnerstein, 1981; Mueller, Donnerstein & Hallam, 1983). A possible explanation of this is that visceral arousal can be attributed as distress if one simultaneously learns about a need situation.

Several models of helping include distress as the main reason people help. One example is the *Negative state relief model* (Cialdini et al., 1987). This model predicts that the main reason people help others is to avoid feeling bad. Feeling bad might be totally unrelated to the helping situation (i.e. a negative current mood) but it can also be a direct result of the need situation (seeing someone cut off her finger). In both cases, the negative state relief model predicts that if the helper believes that helping will reduce the negative feelings, she

will help. Importantly, if the helper believes that there are other, more efficient ways to reduce her own distress, she is less likely to help.

Another example is the *Arousal: Cost reward model* (Dovidio et al., 1991) of helping. This model also includes distress as a key reason for people helping and according to this model, helping motivation begins with the aversive arousal one get when seeing others in distress. If the helper expect that helping will reduce aversive arousal, she is more likely to help. Both self-rated distress and physiological arousal have been shown to be good predictors of helping if the arousal is attributed as a response to the need situation, but less so if the arousal is misattributed as a side effect of a medicine (Gaertner & Dovidio, 1977). The difference between the Negative state relief model and the Arousal: cost-reward model is that the latter (but not the former) proposes that if the negative emotions are not related to the need situation, then one will not feel motivated to help. In addition, the Arousal: Cost reward model seems to focus primary on avoiding the negative emotions, whereas the Negative state relief model also include helping in order to gain positive emotions (Dovidio et al., 2006).

It has been suggested that people donate more only when they feel some amount of distress and when they believe that donations will improve how they feel (Manucia, Baumann & Cialdini, 1984). Current guilt (not to be confused with anticipated guilt) is a form of distress, and if one believes that helping will reduce guilt, one will be more motivated to help (Baumeister, Stillwell & Heatherton, 1994). It has also been suggested that compared to charity appeals that induce pride, charity appeals that induce distress make female donors, but not male donors, help more (Kemp, Kennet-Hensel & Kees, 2013), and a helper who is not experiencing distress is perceived less positively than a helper who is (Barasch, Levine, Berman & Small, 2014). Distress is often measured with items such as worried, uneasy, distressed and upset (Davis, 1983a) but it can also include less aroused emotional reactions such as sad, downhearted and depressed (Dovidio et al., 2006).

Batson (2011) also believes that personal distress is a strong motivator of helping and that it constitutes an egoistic motive for helping. However, whereas Cialdini see distress as the main emotional force motivating helping, Batson suggest that there is another type of emotional reaction that can motivate us to help – sympathy towards the victim.

Sympathy

This thesis will use the word sympathy to refer to the other-oriented emotion that is elicited by and congruent with the perceived welfare of someone else. This is the same definition that Batson (2011) uses when defining empathic concern and I will use these words interchangeably. Sympathy (like distress) refers to an emotion with negative valence that a helper might experience when seeing a need situation (Batson, 2011; Dickert & Slovic, 2009). However, whereas distress is directed inwards (I feel bad, I want

to feel better), sympathy is directed outwards toward others (I care about that person, I want her to feel better).

It is worth noting that empathy is sometimes believed to include something more cognitive than sympathy. It can for example be understood as a correct understanding of another person's internal state, as imagining how another person is thinking and feeling or to imagine how one would think and feel in the other's place (Batson, 2011; Davis, 1983a). Neither of these cognitive aspects are necessary in order to feel sympathy. To feel sympathy, it is enough to only care for the victims' welfare. Rating of items such as sympathetic, warm, compassionate, softhearted and touched, are often used to measure sympathy (Pavey, Gretemeyer & Sparks, 2012; Davis, 1983b).

Several studies have included sympathy as a predictor of helping (e.g. Graziano et al., 2007; Pavey et al., 2012; Iyer, Leach & Crosby, 2003; Pagano & Huo, 2007). Sympathy has been found to predict helping well in many situations but less well in other situations. For example, in one study, native Germans and Turkish immigrants read either about Markus (a German) or Mohammed (a Turk) who had problems. The experimenters then measured distress, sympathy and self-rated helping motivation. When hearing about an in-group victim, sympathy predicted helping motivation, but when hearing about an out-group victim, sympathy did not predict helping motivation (Stürmer, Snyder, Kropp & Siem, 2006; see also Maner & Gailliot, 2007 for similar results). In another study, among participants in the control-condition (no priming), people with high socioeconomic status volunteered less than people with low socioeconomic status. If priming compassion however, both groups volunteered equally much (Piff, Kraus, Côté, Cheng & Keltner, 2010). In one study, priming participants to feel emotions (by asking how they felt about different things) made them donate more often and higher hypothetical amounts than participants who were primed into a calculative or neutral mindset (Dickert, Sagara & Slovic, 2011). Like with distress, helping that is done without feeling sympathy is interpreted negatively by observers (Barasch et al., 2014).

There are some concepts and words that sometimes are used to illustrate sympathy, but that occasionally also have been used to illustrate other concepts that do not fit into the current definition of sympathy. For example, compassion is often used synonymous to sympathy (e.g. Haidt, 2003), but sometimes it is defined not by only motivational factors but also by subsequent behaviors. One example comes in a review article by Goetz, Keltner & Simon-Thomas (2010), where compassion is defined very broadly. It is argued that the difference between distress and compassion is that compassion implies having the resources to help. It is also suggested that compassion appraisals include some judgments of fairness and justice. This definition of compassion seems problematic as it appears to beg the question that compassion (i.e. a type of emotional reaction) underlies helping motivation. It seems to imply not only that compassion can motivate helping (which I agree with), but that compassion precedes helping per definition (which I do not agree with).

The confusion can go the other way around as well. Words commonly referring to emotional reactions are sometimes used as proxies of helping motivation. For example, Molinsky, Grant and Margolis, (2012) measured the number of hours one could volunteer and called it compassion. In one study participants were told that the child that elicited the highest amount of sympathy would receive a donation from the experimenters (Dickert & Slovic, 2009). Also, compassion was measured with items such as “To what extent do you think it is appropriate to give money to aid this child” in the article by Cameron and Payne (2011). These kinds of overlaps between the emotional reaction variable and the helping motivation variable would be problematic for the purpose of this thesis. Therefore neither the operationalization of distress nor sympathy includes any behavioral aspects.

Another concern is if sympathy and distress can be aggregated into a general emotional reaction mechanism or not? For Batson, it is important to separate them on theoretical grounds as one is considered to motivate altruistic helping and the other is considered to motivate egoistic helping. Although the two types of emotional reactions sometimes relate differently to helping (e.g. Davis, 1983a), one can also note that when asking people about their distress, sadness and sympathy, these emotions correlate strongly (e.g. Maner et al., (2002). Sometimes even so strongly that distress-items load higher on the sympathy-factor and vice versa (see Batson et al., 1991; Shaw, Batson & Todd., 1994). The main aim here is not to propose the correct classifications of emotional reactions but only to make the terminology used in this thesis clear for the reader. Distress refers to self-directed negative emotions that arise as a result of learning about a need situation (i.e. feeling personally bad when hearing about a need-situation). Sympathy refers to other-directed negative emotions that arise as a result of learning about a need situation (i.e. feeling bad for the victim when hearing about a need-situation). These two together make up the broader term *emotional reactions*.

Although it can be argued that distress and sympathy does not cover all kinds of emotional reactions that are relevant in helping situations, it can hardly be argued against that distress and sympathy are two important types of emotional reactions that have been discussed at length in relation to helping.

What is not included in emotional reaction?

To better understand what is included in the current operationalization of emotional reactions, it might be useful to discuss the types of emotions that are not included.

Not current mood

There are many studies on how current mood influence helping (Anik et al., 2011; Carlson, Charlin & Miller, 1988). Current mood refers to how the donor feels before even observing the need situation. That is different from how the donor feels after learning about the need situation (emotional reactions), different from how the donor

feels after deliberating about helping or not helping (anticipated emotions), and different from how the donor feels after helping or not helping (actual consequences for the helper).

It is not totally clear whether or not a positive or negative current mood increases helping. On the one hand, a positive mood makes it more likely that we notice need situations as negative moods make us more self-focused and a happy mood make us more energetic, approach-oriented and interested in others well-being (Dovidio et al., 2006). Participants who are smiled at by an unrelated person tend to help more when seeing a need situation, possibly as a result of an improved mood (Guéguen & de Gail, 2003), and an induced positive mood in combination with a high self-awareness have been suggested to increase helping (Berkowitz, 1987). On the other hand, if a happy person needs to be exposed to a situation that will make her distressed, or if helping is costly, it is possible that she will refrain from helping in order to maintain her positive mood (Isen & Simmonds, 1978). Also, if a sad person believes that helping will make her feel better (due to introspection or due to others praise as a result of helping), she is more likely to help. In relation, it has been suggested that happiness makes us selfish whereas sadness make us take moral principles such as fairness into account (Tan & Forgas, 2010). In one study, priming people with a negative self-image made them donate more, and priming them with a positive self-image made them donate less compared to a control condition (Sachdeva, Iliev & Medin, 2009).

It seems like both positive and negative current mood can increase helping motivation compared to a neutral mood (O'Malley & Andrews, 1983), but that people in a happy mood help out of altruistic concerns (help for the sake of others) whereas people in a negative mood help for hedonic reasons (Cunningham, Shaffer, Barbee, Wolff & Kelley, 1990). Some articles find evidence that the current mood interacts with the valence of the helping request. For example participants who are induced with a positive mood are generally more likely to help when they receive a positively framed appeal (smiling child or request framed as a favor) whereas participants who are induced with a negative mood are generally more likely to help when they receive a negatively framed appeal (angry looking child or request framed as an obligation (Cunningham, Steinberg & Grev, 1980; Aderman, 1972). In the current study, current mood is not included when referring to emotional reactions.

Not general feelings towards helping

One important thing to notice is that the emotional reactions in this thesis refer to the emotional reactions toward the victim and toward the helping situation in itself, not to emotional reaction towards the act of helping. I am aware that several scholars suggest that affect, emotions or the even broader “feelings” underlie most helping (e.g. Slovic, 2007). Example of items to measure these feeling could include “How good do you feel about donating to help Child A” (e.g. Västfjäll et al., 2014; Västfjäll, Slovic & Mayorga, submitted manuscript). In my interpretation, these feelings seem to be directed not

toward the victim or toward the need situation, but as feelings toward the act of helping itself. The general idea in these studies is that if we have a positive (as opposed to negative) general feeling about a certain helping project, we will be more likely to support that project.

Admittedly, this claim surely has some merit. However, it is different to help because one has negative emotions that arose as a consequence of seeing a need situation (distress or sympathy towards the victim), and emotional reactions that arose as a consequence of considering helping. In my interpretation, asking participants about their feelings towards helping seems to make the proposed explanatory variable (i.e. feelings towards helping) and the proposed dependent variable (i.e. helping motivation) conceptually very similar, and this would be an obvious problem when attempting to test mediation. In the current study, feelings towards helping are therefore not included when referring to emotional reactions.

Not anticipated emotions if helping or not helping

Relatedly, another type of emotions not included in the operationalization of emotional reactions refers to the emotions one anticipate to feel if one actually helps (e.g. anticipated warm glow, pride, satisfaction) or if one does not help (e.g. anticipated guilt, shame; Basil, Ridgway & Basil., 2008). For example, Västfjäll, Slovic and Mayorga (submitted manuscript), asked participants to rate the amount of warm glow (positive emotions) they felt when considering helping children in need. By my definition, this is primarily an anticipated emotion as it refers to a feeling one will experience after helping (one could also anticipate negative feelings such as guilt if not helping). Without doubt, anticipated emotions have an influence on our helping motivation and helping behavior, but the suggestion is that there is a difference between emotional reactions that one feel as a result of the need situation (e.g. learning about the victims) and the emotional reactions one feel as a results of deliberating about helping (Mellers, Schwartz & Ritov, 1999; Dickert, Sagara & Slovic, 2011). The role of anticipated emotions is elaborated more in the general discussion.

Summary of the emotional reaction mechanism

The emotional reaction mechanism in this thesis includes the emotion that have been labeled distress and the emotion that have been labeled sympathy (defined as in Batson, 2011). Both distress and sympathy has negative valance but whereas distress refer to self-directed emotions (e.g. feeling anxiety, feeling uneasy, feeling sad) sympathy refer to other-directed emotions (e.g. feeling compassion towards victims, feeling pity towards victims, feeling sympathetic towards victims). Both an increased level of distress and an increased level of sympathy have been shown to motivate helping behavior. Distress and sympathy are sometimes seen as closely related and part of a single feeling-construct (e.g.

Small et al., 2007), but at other times the focus is on the differences (Batson, 2011; Cameron & Payne, 2012).

Perceived Utility

Although different types of emotional reactions are often mentioned first when discussing underlying reasons for helping, a central assumption in this thesis is that there are other, more deliberate, psychological mechanisms that can motivate us to help. It might be the case that a certain level of emotional reactions is necessary for helping. A person not having any aversive emotional reaction when seeing others suffering will probably not help unless social motivational factors are present (e.g. avoid blame and punishment or to gain reputational benefits). However, to say that emotional reactions are necessary for helping is not to say that emotional reactions are sufficient for helping or that emotional reactions always can explain increases in helping motivation.

One alternative reason people help more is the *perceived utility* of helping. This thesis will use the term perceived utility, but perceived impact, effectiveness, or efficacy have also been used for referring to the same mechanism (and the different articles use different terms to refer to the same psychological mechanism). It has been suggested that a cost-benefit calculation of helping imply that people are rational and mainly concerned with their self-interest (Dovidio et al., 2006), and utility in its economic interpretation often refer only to one's own well-being. Therefore, it is very important to emphasize that utility should here be understood in its utilitarian meaning referring to the total utility of everyone affected, not in its economical meaning referring to one's subjective utility (cf. Baron, 2008).

The perceived utility of helping is determined by two factors – the perceived cost of helping (e.g. money, time, discomfort – usually only experienced by the helper) and the perceived benefit of helping (primarily the benefit for the victim, but possibly also benefits for the society as a whole; Rubaltelli et al., submitted manuscript; Rubaltelli & Agnoli, 2012). Everything else equal, if the perceived cost of helping one victim decreases (e.g. we thought that you had to donate your kidney to save this person, but now you only need to donate some of your blood) then the perceived utility of helping should increase and you should be more motivated to help. Similarly, if the perceived benefit of helping decreases (e.g. we thought that by donating your kidney, the victims chance of surviving increase from 5% to 95% but now we see that if you donate your kidney the chance of the victim surviving increases only from 5% to 10%), then the perceived benefit of helping will go down, and you will probably be less motivated to help. Some scholars separate self-efficacy (belief in that I have what it takes to make a difference) and response-efficacy (belief that a project is efficient; e.g. Basil et al., 2008). As this theses

focuses on indirect helping, it will primarily concern response-efficacy but it is recognized that self-efficacy could possibly influence perceived utility as well.

A higher perceived utility has been shown to increase helping motivation. Non-profit organizations perceived as professional, efficient and effective will elicit more support in the US (Sargeant & Woodliffe, 2007). Sending out a charity appeal in a gloss envelope with a printed color-picture to sporadic givers actually rendered fewer donations than an identical charity appeal in a blank simple envelope (Bekkers & Crutzen, 2007). One likely reason for this is that a fancy envelope seems wasteful and hence that the perceived utility of donating decreased. Overhead costs is often (sometimes mistakenly; see Caviola, Faulmüller, Everett, Savulescu & Kahane, 2014) understood as a marker of how effective a charity organization is, and high overhead costs will likely decrease motivation to donate money to a certain organization (Sargeant & Woodliffe, 2007). In one study, the efficiency of a charity organization (a 2-star rating or a 4-star rating from a homepage rating how efficiently charities use their money) increased the proportion of people who donated money by forfeiting a personal discount, and this tendency was much stronger among interdependent participants than independent participants (Winterich & Barone, 2011, Study 3). Not knowing anything about the benefits of one's effort reduces helping. In one study, sympathy towards a victim was measured and half of the participants learned that in case they helped, they would receive feedback from the help recipient at a later stage. The other half learned that they would not. Participants who felt high relative sympathy and anticipated feedback helped almost always (93%), but participants who did not anticipate feedback helped clearly less often even if they felt high sympathy towards the victim (53%; Smith, Keating & Stotland, 1989).

Impact philanthropy is a phenomenon that refers to helpers who at times have a desire to personally make a difference in helping situations. This can give rise to a preference to give directly to a homeless person rather than to an organization, or a preference to personally contribute with a large proportion of the total donations to a specific cause (Duncan, 2004). A recent field study by Gneezy, Keenan and Gneezy (2014), showed that if a large sum of money is used to cover all overhead costs of a charity organization (implying that 100% of the subsequently donated money will reach the beneficiaries) donations from the public will increase much more than if the large sum of money is used as seed money or as matching money. The authors suggested that this is because people perceive that the impact or efficacy of their contribution is greater. Impact philanthropy seems intimately related to the perceived utility mechanism.

Perceived utility has in recent years often been included as a variable in studies about helping. Especially relevant for this thesis, it has been included as one possible psychological mechanism underlying helping, and tested as a compliment to emotional reactions (e.g. Cryder, Loewenstein & Scheines, 2013; Cryder, Loewenstein & Seltman, 2013; Cameron & Payne, 2011; Dickert, Kleber et al., 2011; Friedrich & McGuire, 2010).

An important assumption in this thesis is that emotional reactions and perceived utility are two correlated but clearly distinguishable mechanisms that both can increase helping motivation independently of each other. One of the proposed mechanisms seems exclusively based on emotions whereas the other seems more based on calculations of costs and benefits. Before continuing, a natural step would be to connect these two psychological mechanisms to the very influential dual-process theories about thinking in general and decision making in particular.

Dual-processes theories

There are several versions of dual-process theories, but to quickly summarize the two processes, the quick, effortless, intuitive, often emotionally based System 1 is contrasted against the slow, effortful, deliberative and often calculation-based System 2. To simplify, these two systems will be referred to as the intuitive system vs. the deliberative system. (Kahneman, 2011; Epstein, Pacini, Denes-Raj & Heier, 1996; Greene, 2008; Loewenstein & Small, 2007; Slovic, 2007; Slovic & Västfjäll, 2010)

The intuitive system is the default and the one we trust for most of our daily decisions as it does not take as much effort. The deliberative system kicks in when we need to put different values against each other. Using the deliberative system in situations where one needs a quick decision (should I go to the bathroom now or wait), or in situations when the potential outcomes of the different choices are very similar (should I first pour water into the cup, and then add the tea-bag, or the opposite order) is not functional. On the other hand, using the intuitive system in situations where it is very important to reach a good conclusion (e.g. when planning a national budget) can be equally detrimental.

In helping situations, one can either use the intuitive system or use the deliberative system, and a very fundamental question is whether the intuitive or the deliberative system makes us the better decision makers in helping situations (Vohs, Baumeister & Loewenstein, 2007). The question seems to be two-fold. It has been suggested that we should rely on our intuition for decisions about whether to give or not, and rely on deliberative thinking for decisions about how to give (Cryder & Loewenstein, 2011). People using their intuitive system, help more than people using their deliberative system, but people using their deliberative system commit fewer biases. In one famous experiment, half of the participants were primed to trust their emotions (intuitive thinking) whereas the other half of the participants were primed into analytic thinking (Small et al., 2007). In a second factorial manipulation, half of the participants read an identifiable victim appeal whereas the other half read a statistical victim appeal. People who were primed to think intuitively showed an identifiable victim effect (they were more motivated to support the appeal with an identified victim than the statistical appeal). People who were primed into deliberative thinking helped equally much in the two appeals, but this was only because they were less motivated to help the identifiable victim.

Put differently, trying to reduce the helping effects and make people give more rationally often comes at the expense of less helping.

On a related note, several studies have shown that exposing participants to economic concepts (e.g. calculations, money) make them less likely to donate to charity (Vohs, Mead & Goode, 2006) or to share in social dilemmas (Molinsky et al., 2012). One reason for this might be that cost-benefit thinking reduces the influence of emotional reactions on helping decisions. One study found that priming participants with cash made them donate less but that priming them with credit cards, made them donate more (Chatterjee, Rose & Sinha, 2013). The authors suggested that priming cash makes costs more salient whereas priming credit cards makes benefits more salient. Likewise, Zhong (2011) primed systematic thinking or intuitive feeling and found that systematic thinking decreased donations to charity. Asking people to help with their time before asking for money increases not only their willingness to volunteer but even subsequent donations (Liu & Aaker, 2008) and the authors suggested that this is because helping with one's time primes an emotional mindset, whereas money-donations prime a calculative, value-maximizing, mindset.

Thinking in cost-benefit terms does not necessarily have to decrease helping motivation. One study increased empathy in a charity appeal ("imagine that you are a child with no home" instead of "many children have no home") and self-efficacy ("your \$2 can help these children" instead of "your \$200 can help these children"). The results showed that both manipulations increased helping independently of each other (Basil et al., 2008). In a sociological study about helping, key factors for predicting annual amount of donations were pinpointed (Sargeant, West & Ford, 2001). The best predictors (believing that helping will reduce personal distress and believing that one's donation could make a difference) map very well on the emotional reaction and perceived utility mechanisms respectively.

Although speculative, one could argue that the emotional reaction mechanism is related to the intuitive system whereas the perceived utility mechanism is related to the deliberative system. If so, this would mean that both the intuitive system and the deliberative system could play a role in helping decisions. Admittedly, utility estimates are often made quickly and involve affect-based heuristics, so it would be unwise to suggest that perceived utility estimates are reached only via the deliberative system. Nevertheless, whereas the emotional reaction mechanism seems exclusively intuitive, the perceived utility mechanism at least seem to have deliberative components.

Summary of a dual-process approach of psychological mechanisms

Dual-process theories are very prominent and influential in most kinds of judgment and decision making research and in moral psychology. It has also been used to explain people's behavior in helping situations (Loewenstein & Small, 2007). A general

assumption in this thesis is that our helping motivation can increase as a result of being more emotionally touched, but also as a result of perceiving a higher utility of helping (cf. Cryder, Loewenstein & Scheines, 2013).

However, in the taxonomy proposed in this thesis, two processes are not enough to cover all motivational factors of helping. In addition to the emotional reaction mechanism and the perceived utility mechanism, I will add a third mechanism that can increase our motivation to help – perceived responsibility.

Perceived Responsibility

The third type of psychological mechanism is neither emotion-based nor calculation-based but based on personal norms regarding moral rules and moral principles. This thesis will refer to this type of psychological mechanism as perceived responsibility but it is important to note that the notion of responsibility is only one of the many moral principles that could make us more motivated to help. Other examples of moral principles that could increase helping motivation are fairness, rights, justice and equality (e.g. Ajzen et al., 2000).

To illustrate what is meant by perceived responsibility; if a victim is suffering because of a mistake that you made, you will likely be more motivated to help than if the victim is suffering because of her own mistake or because of someone else. One could suggest that the reason you help more in this situation is not primarily because you feel more sympathy towards the victim (emotional reactions), nor because you think that you can do more good (perceived utility), but because you believe that you are responsible to help when you have caused the problem (but not when someone else has caused the problem). In one study where different costs of helping and different costs of not helping were tested as predictors of helping motivation, having caused the situation was the best predictor (Fritzsche, Finkelstein & Penner, 2000).

Although causing the situation might be the most obvious example of when perceived responsibility motivates us to help, there are other types of situations that also can render a high perceived responsibility that in turn motivates helping. For example, some occupations come with an increased responsibility (Jeske, 2008). A police officer observing a crime has a higher responsibility to act compared to an accountant observing a crime. Likewise, helping seems to be part of the job for nurses and doctors. Another factor that seems to increase our perceived responsibility to help is promise-making (Vanberg, 2008; Kerr, Garst, Lewandowski & Harris, 1997). We perceive ourselves to be much more responsible to act when we have made a promise to do so, than if we have not made a promise to do so. In fact, just the mere existence of an (justified or unjustified) expectation to receive support could increase the perceived responsibility to actually support. Ascription of responsibility has been suggested as a dispositional variable that

determines people's motivation to engage in helping behavior (Bekkers & Wiepking, 2010). Likewise, Wilhelm & Bekkers (2010) suggest that the predictive power of empathy drop in magnitude and often lose significance after moral principles about helping are controlled for. Even mere self-focus might increase helping via perceived responsibility. One study primed participants with themselves (either by seeing a picture of themselves or by writing a short self-presentation) and then presented them with a helping situation. Participants primed with a higher self-focus reported more personal responsibility to help and did report a stronger intention to actually help (Duval, Duval & Neely, 1979).

Relatedly, it has been suggested that people differ in what extent they help out of pleasure motives or out of pressure motives (Gebauer, Riketta, Broemer & Maio, 2008). Pleasure motives to help are typically intrinsically motivated, and focused on the promotion of pleasure whereas pressure motives are typically extrinsically motivated and focused on the prevention of pain. Whereas the positive effect of sympathy on helping have been linked to an intrinsic motivation to help (Pavey et al., 2012), the perceived responsibility mechanism rather illustrates a form of pressure-based prosocial motivation, as it imply helping not primarily because one wants to help, but because one believes one ought to help (Gebauer et al., 2008).

Responsibility, obligation and other types of perceived moral principles are sometimes included in studies on helping, sometimes as proxies for helping motivation (e.g. Jenni & Loewenstein, 1997) but more often as possible underlying mechanisms of helping (e.g. Kleber et al., 2013; Lee et al., in press; Cameron & Payne, 2011; Basil, Ridgway & Basil, 2006). For example, people with a higher power distance (people who accepts inequalities) generally donate less to charity and Winterich and Zhang (in press) have showed that this effect is mediated by less perceived responsibilities.

A general assumption in this thesis is that responsibility can motivate helping motivation even after controlling for the other mechanisms. It is, however, difficult to deny that there are some overlaps with perceived responsibility and the other two mechanisms. Maybe the link between perceived responsibility and emotional reactions is the most obvious. Perceiving a responsibility to help (especially if one has caused the need-situation) is likely to influence personal distress, and sympathy and responsibility to help might be confused by people who externalize and moralize around their emotional reactions (Greene, 2008). One could also argue that in cases where one believes one can do a lot of good (high perceived utility) one might also experience a stronger responsibility to help. Nevertheless, this thesis assumes that perceived responsibility (and other types of moral principles) are theoretically and empirically distinguishable from emotional reactions and perceived utility, and also that perceived responsibility can motivate people to help independently of the other two psychological mechanisms.

This thesis does not claim that the heart-head-book taxonomy is the only possible way to classify psychological mechanisms underlying helping. Still, it proposes that these three mechanisms could promote a better understanding of the *why*-question of helping in

many situations. In the next section, we will look for overlaps between the proposed classification of psychological mechanisms and theories proposed by other researchers.

Overlap with other theories

Other researchers have also discussed different predictors of helping that can be linked to the three suggested psychological mechanisms. Batson, Klein, Highberger & Shaw (1995), suggest that there are three motivational sources in helping. First, empathy-induced altruism is when the ultimate goal is to increase the welfare for the person for whom empathy is felt (i.e. sympathy). Second, egoism is when the ultimate goal is to gain personal benefits and avoid personal costs (perceived utility for oneself). Third, principilism is when the ultimate goal is to uphold a given moral principle. This classification is similar to the three proposed mechanisms but whereas Batson mention these as three types of motivations, the three mechanisms (emotional reactions, perceived utility and perceived responsibility) rather represent three types of feelings and thoughts that can increase motivation. Another important difference is that Batson equals cost-benefit thinking with egoism whereas the perceived utility mechanism refer to total (not personal) costs and benefits.

There is also a rather obvious link to three schools in moral philosophy. Helping driven by emotional reactions can be linked to moral intuitionism, helping driven by utility-calculation to consequentialism/utilitarianism and helping driven by moral principles to deontology (Bartels, 2008; Bartels & Medin, 2007, but see Greene, 2008). As noted by Dickert, Sagara & Slovic, (2011), when asking people who do not donate to charity, they often justify their refusal by emphasizing factors that deflect their personal responsibility or that highlight the lack of impact. Although these might be post-hoc justifications of a gut-feeling choice not to donate, a nonexistent personal responsibility or a low perceived utility could very well be real factors influencing the decision to donate or not.

Dutch sociologist René Bekkers has also discussed mechanisms of helping and some of his mechanisms seem related to the ones proposed here. In one study, empathic concern (i.e. sympathy) and endorsement of the principle of care (i.e. perceived responsibility) were explicitly separated and investigated as two correlates of helping behavior (Wilhelm & Bekkers, 2010). They concluded that the principle of care mediated the influence of empathic concern especially on planned helping (donating blood, volunteering, or giving money to charity). Bekkers also explicitly included cost & benefits calculations and efficacy estimates as two proposed mechanisms underlying helping in his taxonomy (Bekkers & Wiepking, 2010). Although there are differences in the theories suggested by different scholars, the idea that helping motivation can be driven by the heart (emotional reactions), by the head (perceived utility) or by the book (perceived responsibility) seems to exist, not only for me and Elke Weber, but among others as well.

Chapter conclusion

To summarize, this chapter has discussed different psychological mechanisms that can motivate us to help. This chapter suggests emotional reactions, perceived utility and perceived responsibility to be three distinguishable mechanisms that each can increase helping motivation. In the next chapter, the *when* question is combined with the *why* question. The question whether different helping effects are driven by similar or different psychological mechanisms is the main research question of this thesis.

5. Underlying mechanisms of different helping effects

In this chapter, the *when* question and the *why* question will be combined. More specifically, we will consider whether different helping effects are driven by the same psychological mechanism or by different psychological mechanisms. Simply put, the overarching hypothesis is that different helping effects increase helping motivation primarily by playing on different psychological strings.

This chapter begins with a section about what it means to systematically study the interaction between helping effects and psychological mechanisms. After that, three sections will summarize previous research that has linked the three included psychological mechanisms to the identifiable victim effect, proportion dominance effect and in-group effect respectively.

A systematic approach to the *when* × *why* interaction

A possibly overambitious aim of this thesis is to make the research field of charitable giving a bit more systematic. This academic field is undoubtedly very productive and plenty of novel articles with well-designed studies are being published every year, but it is also acknowledged that the field would benefit from a more methodical approach. The aim in this thesis is to look at the interaction between the *when* and the *why* of helping (i.e. are different helping effects driven by different psychological mechanisms), and to do this in an as systematic way as possible.

As we will see in this chapter, previous studies have indeed discussed possible underlying mechanisms of different helping effects. On many occasions the underlying mechanisms were not part of the main research question, and therefore only tested parenthetically. In other studies, the main aim was to test underlying mechanisms of helping behavior (e.g. Lee et al., in press; Cryder, Loewenstein, Scheines, 2013). It should be noted however, that testing if a psychological mechanism underlies a helping effect can be done in more or less systematic ways. To illustrate how an unsystematic way to test the *when* × *why* interaction can become more systematic, a fictitious experiment will be used.

Imagine an unexperienced researcher that were to find that helping motivation was higher when reading about Baby Jessica than when reading about the famine in Eastern Africa, and that self-rated feelings toward the situation and helping motivation correlated strongly positively. This could possibly (but incorrectly) be used as an argument for that we help identified victims more than statistical victims because we feel more sympathy for them.

This type of experiment does not tell us very much about the underlying mechanisms of the identifiable victim effect for a number of reasons. In order to systematically test the *when* × *why* interaction in charitable giving one could improve the fictitious experiment in several steps: (1) distinguishing helping effects, (2) distinguishing psychological mechanisms, (3) testing mediation, (4) testing several psychological mechanisms as possible mediators of a single helping effect, (5) testing several psychological mechanisms as possible mediators of several helping effects.

Distinguishing helping effects

First, as pointed out in Chapter 3, it is important to separate different helping effects (cf. Jenni & Loewenstein, 1997). In the fictitious experiment, an appeal with Baby Jessica was tested against an appeal with starving children in Africa. These appeals differ on several situational aspects (including all the three main helping effects included in this thesis). Thus, if the unexperienced researcher wanted to test the isolated identifiable victim effect, the two appeals should only differ on the identifiability aspect (e.g. a story about baby Jessica with or without a picture of her).

Distinguishing psychological mechanisms

Second, as pointed out in Chapter 4, it is equally important to separate different psychological mechanisms. An example from the actual literature is the “feeling”-scale used by e.g. Small et al. (2007), Friedrich and McGuire (2010), Smith et al. (2013) and Sah and Loewenstein (2012) that includes the following items: (1) How upsetting is this situation? (2) How sympathetic do you feel? (3) How much responsibility do you feel? (4) How touched are you? (5) To what extent is it appropriate to help? Aggregating these very different types of reactions and referring to them as feelings (hence linking it to emotional reactions), might be problematic. The fictitious experiment could circumvent this problem by using items that test a more narrow type of emotions (e.g. sympathy toward the victims).

Testing mediation

Third, one should test mediation. Admittedly, there are other ways to investigate the interaction between the *when* and *why* of charitable giving (e.g. moderation) but if the aim is to explain why (in psychological terms) a situational difference makes us help more, one should use a mediational analysis. Importantly, showing mediation is not the same as showing that a certain psychological mechanism is correlated with helping

motivation in a certain context. In the fictitious experiment, if self-rated sympathy is identical for those reading Charity appeal A compared and those reading Charity appeal B, then sympathy cannot mediate the helping effect even if sympathy is strongly correlated with helping motivation. There are different approaches to test mediation (Hayes, 2008). In the traditional approach (e.g. Baron & Kenny, 1986), three steps are required to show that a psychological mechanism mediate a helping effect: (1) the psychological mechanism needs to be influenced by the manipulation (the helping effect); (2) the psychological mechanism needs to be correlated with helping motivation; (3) one must establish that the indirect effect via the psychological mechanism account for a non-negligible amount of the direct effect. In the more contemporary approach (e.g. Preacher & Hayes, 2008), only the strength of the indirect effect is tested. A section in the general discussion will be devoted to this topic.

Testing several psychological mechanisms as possible mediators of a single helping effect

Fourth, testing only a single psychological mechanism as a mediator of a helping effect, might not always tell the whole story. To assume that psychological mechanisms are distinguishable does not imply that one assume that they are unrelated. Even if using a well-defined measure of sympathy in the fictitious experiment, and finding that sympathy mediate e.g. the identifiable victim effect, would not, in itself, imply that sympathy is the primarily mediator of the effect. To further support this, one should test multiple possible mediators on the same effect. This is done by measuring not only sympathy, but also other mechanisms that one has reason to believe could explain the effect (e.g. perceived utility and perceived responsibility), and test each of these mechanisms as mediators of the helping effect (either one at the time, or simultaneously). Doing this, one could determine not only existence, but also the absence of mediation, and possibly pinpoint which one, if any; of the included mechanisms that is the primary mediator of the helping effect. This illustrates a systematic approach to test the underlying psychological mechanisms of a single helping effect. This approach has been undertaken some times previously (e.g. Cryder, Loewenstein, Scheines, 2013).

Testing several psychological mechanisms as possible mediators of several helping effects

Fifth, to systematically test the *when* \times *why* interaction, one should not limit oneself to a single helping effect. The reason is that it is possible that one psychological mechanism might be more influenced by situational differences in general either due to a stronger correlation with helping motivation or due to being more sensitive to socially desirable responding. However, if one tests three distinguishable psychological mechanisms (always measured in the same way) as possible mediators of three distinguishable helping effects, and is able to show that each helping effect is primarily mediated by a different psychological mechanism, this provide support for the idea that the *when* and *why* of helping actually interacts. To my knowledge this type of approach has only been undertaken once before (Lee et al., in press). Their study tested both empathy (an emotional reaction) and perceived justice (a moral principle) as possible mediators

between moral identity (an individual difference) and helping motivation. They also tested this mediation in two situations. When the victim was totally innocent, a high moral identity positively predicted helping motivation, and this was mediated by empathy (but not perceived justice). However, when the victim was not totally innocent, a high moral identity negatively predicted helping motivation, and this was mediated by perceived justice (but not empathy). One important difference between the study by Lee et al. (in press) and this thesis is that whereas they focused on individual differences in moral identity (the *who*-question), the current thesis focuses on situational differences (the *when*-question). This thesis contributes to the field by being the first one to systematically test three different psychological mechanisms as mediators of three different helping effects.

Next, each of the three helping effects (the identified victim effect, the proportion dominance effect and the in-group effect) will be discussed in turn. For each helping effect, It will be summarized what have been suggested and empirically shown in relation to the three suggested underlying mechanisms.

Underlying mechanisms of the identifiable victim effect

Why are people more likely to help an identified victim than statistical victims? In the vast literature about the identifiable victim effect, most articles that say something at all about the underlying mechanisms suggest emotional reactions as a key mechanism of this effect.

Emotional reactions

Both distress and sympathy have been frequently linked to the identifiable victim effect. For example, Kogut and Ritov (2005a) showed that both distress and helping motivation are higher when manipulating vividness (name and picture of the child vs. no name and picture) as well as when manipulating singularity (one identified child vs. eight identified children). In addition, their study also showed that distress partially accounted for condition differences in helping motivation. In line with this, as long as the victims came from the in-group, reading about one identified victim made people more distressed than reading about eight identified victims (Kogut & Ritov, 2007). In another article, Kogut and Ritov (2005b) showed that identifiability increased sympathy when there was a single victim in serious need, but decreased it for groups of victims in serious need. Also, sympathy predicted helping motivation in this study (Study 3). Similarly, Dickert and Slovic (2009) showed that sympathy was higher when people could help a single identified child presented alone than when this child was presented as one among many. In another study, for people with low (but not with high) numeracy, an identifiability

manipulation increased mental imagery that in turn elicited more affect than in turn increased helping motivation (Dickert, Kleber et al., 2011). Determined victims make people feel more sympathy and also make them help more (unpublished study reported in Loewenstein & Small, 2007, p. 119). People with a lower rationality score have been shown to help more when reading an appeal with identified victim Rokia, than when reading a statistical appeal, but this is not the case for people high on rationality (Friedrich & McGuire, 2010). The tendency to help groups of victims that are moving and behaving similarly, more than groups of victims that are moving and behaving differently has been shown to be driven by emotional reactions and not by increased effectiveness (Smith et al., 2013). In a study where vividness of an advertisement against child abuse was manipulated, people helped more when they saw a very graphic and unpleasant ad, and this effect was mediated by distress and sympathy (Bagozzi & Moore, 1994). In the study by Sah and Loewenstein (2012), the interaction between singularity and identifiability was mediated by what they referred to as empathy. Both sympathy and distress generally correlate positively with helping motivation, and studies indicate that the correlation between emotional reactions and helping is higher in the identifiable victim condition (Small et al., 2007). Small, and colleagues (2007) further showed that the identifiable victim effect disappears when participants know about the effect (Study 1), and when participants are primed to think deliberatively (Study 4). Although few of these studies have tested mediation of the identifiable victim effect per se, they suggest that emotional reactions are intimately connected to the identified victim effect. As a consequence, both distress and sympathy have been suggested to underlie both the identifiable victim effect and the narrower singularity effect (Kogut & Ritov, 2005a; 2005b; Small et al., 2007)

The most common way to explain the higher emotional reaction toward identified victims is via a collapse of compassion model – that we experience stronger emotional reactions when seeing a single identified victim because it is easier to mentally imagine a single identified victim than many statistical ones (Kogut & Ritov, 2005a; 2005b; Slovic, 2007; Västfjäll et al., 2014; Dickert et al., 2012). An alternative interpretation has been put forward by Cameron & Payne (2011) who suggest that people actually feel similar amount of emotional reactions when seeing a large group of victims as when seeing a single victim, but that they proactively regulate down these emotions in order not to feel overwhelmed. In their study, only relatively good emotion regulators (Study 2) and participants told to regulate their emotions (Study 3) displayed a singularity effect whereas bad emotion regulators and participants told to experience emotions freely did not. In another study, participants who believed that they would be asked to help and that helping involved a relatively high cost were less willing to listen to a emotion-inducing request from a homeless man, compared to participants who did not believe they would be asked to help, or who believed that helping involved a relatively low cost (Shaw et al., 1994). Relatedly, participants with a high sense of power tend to regulate down both distress and sympathy when they hear about an unfortunate other more than participants with a low sense of power (van Kleef et al., 2008).

In several studies by Daniel Batson, sympathy is induced by asking participants to take the perspective of a single identified victim in need (see Batson, 2011 for a review). Some of these studies have showed that priming people to feel emotional reactions in this way, makes them sacrifice statistical others or go against fairness principles. For example, in Batson, Batson et al., (1995), participants had the opportunity to allocate raffle tickets to themselves (the egoistic choice), the group (the utility maximizing choice as the money increased before being divided) or an identified person. In the no communication condition, participants did not have any contact with any of the others. In the low sympathy condition, they talked with the identified other (who revealed some personal problems) but were told to listen as objectively as possible. In the high sympathy condition, they talked with the identified other and were told to listen emphatically. In the no communication or low sympathy conditions, only 3% allocated the raffle tickets to the identified other. In the high sympathy condition, 38% did (see Batson et al., 1999 for similar results). In another study, Batson, Klein et al. (1995), primed half of the participants to feel sympathy and the other half not to feel sympathy. Participants then read about Sheri – a sick girl in need of a new expensive drug. They were told that Sheri was on the waiting list and that it would be a long time until she was next in line to receive the drug. Participants then had an opportunity to move Sheri forward on the waiting line (no one else would know about their choice) In the no sympathy condition, around 33% helped Sheri but in the sympathy condition, 73% helped her by moving her up the waiting list. This shows that sympathy towards an identified victim can make us sacrifice principles of fairness (see also de Hooge, Nelissen, Breugelmans & Zeelenberg, 2011). Similar results were found by Oceja (2008). In his study, participants could move up a sick identified victim on a waiting list for an operation. Being asked to listen emphatically to the story about the sick child made people more likely to help the child (hence, making it worse for the statistical children). However, if participants were reminded about fairness principles, these tendencies weakened. These studies further strengthen the link between emotional reactions and the identifiable victim effect.

Although technically a different helping effect, the reference-dependency effect (i.e. victims who suffered a loss are helped more than victims in constant plight) has been shown to be driven by increased sympathy as long as the victim is identified (Small, 2010). Interestingly, not only negative emotions have been shown to relate to the identifiable victim effect. Genevsky et al. (2013) found the identifiable victim effect within subjects and also found support for the notion that positive arousal (activity in a part of the brain called nucleus accumbens) rather than negative arousal explained this effect.

As noted previously, the identifiable victim effect exists not only in helping situations but also in punishment situations. In these situations, the effect (being more motivated to punish identified criminals than statistical criminals) is mediated by anger (Small & Loewenstein, 2005). Similarly, whereas both anger and pity are correlated with motivation to punish non-innocent identified victims, only perceived severity is correlated with the motivation to punish non-identified perpetrators (Kogut, 2011a).

Perceived utility

Although emotional reactions has been by far the most suggested mechanism for the identifiable victim effect, others have been suggested and occasionally tested. Scholars have suggested that an identified victim is more tangible and concrete than statistical victims and thus that helping will be perceived as more efficient (Duncan, 2004). Cryder, Loewenstein and Scheines (2013) included both emotional reactions and perceived impact as possible mediators of an identified intervention effect (i.e. providing more detailed information about a situation or organization increases helping), and they found some support for the idea that impact but not emotional reactions mediated this effect. It is thus possible that perceived utility, rather than sympathy could mediate the identified victim effect as well. In one study where identifiability of a victim (picture or no picture) and familiarity (famous or non-famous charity organization) were manipulated, both emotional arousal and perceived effectiveness were slightly higher in the picture-condition and so was expected helping from people in general (Thornton et al., 1991, Study 1). Friedrich & McGuire (2010) tested both perceived impact and feelings as possible mediators of the identifiable victim effect using the famous Rokia-scenario, but found no mediation on neither of the two suggested mediators.

A study by Sharma and Morwitz (submitted manuscript) tested efficacy as a force driving the singularity effect (in this study clearly separated from the identifiable victim effect). The results showed that if making people feel efficacy (both self and response-efficacy) they helped eight victims more than one victim (no singularity effect), but when making people feel low efficacy, they showed the singularity effect and helped one victim more than eight victims. Bendapudi, Singh & Bendapudi (1996) also suggest that one way to increase perceived self-efficacy is to frame appeals as one child in need, rather than many statistical victims.

Perceived responsibility

Although not nearly as often measured in studies on helping as emotional reactions and perceived utility, perceived responsibility has also been suggested as an underlying factor of the identifiable victim effect. In one study, perceived responsibility mediated the effect of guilt appeals (Basil et al., 2006), but as this study used identified individuals and/or vividness to create guilt appeals, this finding could be understood as a possible link between responsibility and the identifiable victim effect.

Prediction

Without doubt, there are plenty research that directly or indirectly links the identifiable victim effect to the emotional reaction mechanism (distress and sympathy). However, to my knowledge an emotional reaction mediation of the identifiable victim effect has still not received clear empirical support. This is surprising given all the studies that show a connection between the identifiability and singularity manipulation and emotional reactions. In addition, although the connection between the identified victim effect and the two other suggested mechanisms – perceived utility and perceived responsibility – seems less obvious, these mechanisms have not been properly tested at possible mediators of the identifiable victim effect yet. This thesis will therefore test emotional reactions, perceived utility and perceived responsibility as possible mediators of the identifiable victim effect. Based on previous research, the prediction is that emotional reactions will be the primary mediator of the identifiable victim effect.

Underlying mechanisms of the proportion dominance effect

Why are people more likely to help a group of victims when that group is part of a small reference group (i.e. when it is a high rescue proportion) than when the same group is part of a large reference group (i.e. when it is a low rescue proportion)?

Emotional reactions

As noted previously, the proportion dominance effect has on many occasions been seen as a part of the broader identifiable victim effect, so several scholars have assumed that these effects have similar underlying mechanisms. The proportion dominance effect has been suggested to be a “sympathy bias” when sympathy is defined as negative emotions in response to others suffering (Small, 2010), and even more explicitly, Loewenstein and Small suggested sympathy to underlie both the identifiable victim effect and the proportion dominance effect:

When the proportion is high, the lives become more identifiable. Ten lives out of a group of 100 is a high proportion and thus more sympathy inducing than 10 lives out of 1,000,000 (Loewenstein & Small, 2007)

The actual empirical support for this notion is, however, not as strong as one might expect. A possible indirect link between the proportion dominance effect and sympathy has been offered by Molinsky et al (2012) who show that priming people with an economic schema (e.g. calculating the proportion of victims one can help) dampen feelings of sympathy which in turn decrease helping. Cameron & Payne’s (2011) theory

of emotion regulation could also be applied on the proportion dominance effect. If keeping the number of victims possible to help constant, a larger reference group (i.e. more people not possible to help) would mean that we would regulate down our emotions more and this would lead to less helping in the low rescue proportion version. If this were the case, it would illustrate an emotional reaction explanation of the proportion dominance effect.

One reason for doubting that emotional reactions mediate the proportion dominance effect is that this effect, but not the identifiable victim effect, remains in joint evaluation. As it has been shown that joint evaluation reduces the effect of emotions on decisions (Ritov & Baron, 2011), this could suggest that the proportion dominance effect is driven by another, more deliberative, psychological mechanism. Another reason for not believing that emotional reactions underlie the proportion dominance effect is that a statistical scenario (as the proportion dominance effect-scenarios tend to be) generally elicits very weak distress and sympathy in the first place. Nevertheless, the fact that people still help in these statistical scenarios, as well as the fact that the size of the reference group influence helping, seems to suggest that there is something else than emotional reactions that underlie the proportion dominance effect.

Perceived responsibility

Although there is not a lot of data backing it up, it has been claimed that people regard saving lives as less obligatory when these lives are construed as few among many at risk (Unger, 1996). If so, this would suggest a link between the proportion dominance effect and perceived responsibility (and other types of moral principles). In one study where proportional reasoning in an affirmative action plan scenario concerning race-neutral admissions was tested, perceived fairness (as well as perceived impact) mediated the framing effect created by describing the victims at risk either in percentage or in frequencies (Friedrich, Lucas & Hodell, 2005).

Futility thinking is the moral equivalent to the proportion dominance effect. The difference is that while the proportion dominance effect concerns helping motivation, futility thinking refers to what we think is morally obligatory. In one study, it was indeed shown that participants claimed that people in general have a greater responsibility to help when they can save a high proportion of the victims than when they can save a low proportion of the victims (Bartels & Burnett, 2011). Also, if presenting a victim as an isolated case (i.e. a high rescue proportion scenario), people with a high belief in a just world show higher helping motivation than people with a low belief in a just world. However, if the victim is presented as one victim among many victims in a similar situation (i.e. a low rescue proportion scenario), then there is no difference in helping between people high or low on just-world beliefs (Miller, 1977). As people with a high belief in a just world can be assumed to accept higher personal responsibility for bad

things in the world, these findings could possibly suggest a link between the proportion dominance effect and the perceived responsibility mechanism.

Perceived utility

Several scholars have offered perceived utility as a possible main cause of the proportion dominance effect (Baron, 1997; Bartels & Burnett, 2011; Friedrich & McGuire, 2010). The main reason for this seems to be knowledge of dual-process theories, combined with the fact that there are some noteworthy differences between the identifiable victim effect and the proportion dominance effect.

First, whereas the identifiable victim effect so far has been found mostly in between-group designs; the proportion dominance effect has on several occasions been replicated in within-subject designs and when participants easily can compare helping projects (Bartels, 2006; Jenni & Loewenstein, 1997). Second, unlike many other helping effects, the proportion dominance effect does not disappear when people think they will be held accountable (Friedrich et al., 1999). Third, contrary to the identifiable victim effect, priming participants to think calculative or economical seem to increase rather than decrease the proportion dominance effect. For example, in a study with a within-subject design, proportion dominance-tendencies increased as cost-benefit thinking was primed, both when the victims came from the out-group, and from the in-group (Friedrich & Dood, 2009). Fourth, the people not prone to the proportion dominance effect are unlikely to make any quantitative comparison at all, but rather hold protected values and be equally motivated to save one person as they are to save 300 persons (Baron & Spranca, 1997; Friedrich & Dood, 2009).

Fetherstonhaugh et al. (1997, Study 2), tested benefit-ratings to different projects and found that these ratings predicted helping motivation. In another study, participants were asked over phone about how much collateral damage they would accept, and the size of reference group was manipulated within subjects (Friedrich & Dood, 2009). At the beginning of the interview, half of the participants were told that the interview was about costs and benefits while the other half was told it was about community service. People showed the highest proportion dominance tendencies if the victims came from the out-group and they had been primed to think that the interview was about cost and benefits rather than community service. Also, in one study, participants were asked to indicate how many lives that must be saved in order to motivate an expenditure. The number of lives that had to be saved in order to motivate the cost was overall higher when the size of the reference-group was large than when it was small, and people motivated this choice primarily in cost-benefit terms (Friedrich et al., 1999). Also, as noted earlier, the proportion dominance effect is stronger among people that are good with numbers (Kleber et al., 2013)

Prediction

Altogether, these studies taken together suggest an especially strong link between economic cost-benefit thinking and proportional reasoning. As the perceived utility mechanism is a form of cost-benefit thinking, this mechanism seems like a very possible mediator of the proportion dominance effect. The results from previous studies indicate that unlike the identifiable victim effect, which seems to be driven by emotional reaction processes, the proportion dominance effect seems at least to some extent driven by a calculative process or more specifically a misguided cost-benefit utility calculation. The connection between the proportion dominance effect and the two other psychological mechanisms (emotional reactions and perceived responsibility) seems not as theoretically strong, but as they both have been linked as underlying mechanisms to the proportion dominance effect, they will be included, and tested together with perceived utility as possible mediators of the proportion dominance effect. Based on the aforementioned literature, the prediction is that perceived utility will be the primary mediator of the proportion dominance effect.

Underlying mechanisms of the in-group effect

Why are people more likely to help in-group victims than they are to help out-group victims? Like with the other two effects, emotional reactions have been intimately linked to the in-group effect.

Emotional reactions

Many researchers have suggested and occasionally showed that we experience more emotional reactions when hearing about in-group victims in need, and that these increased emotional reactions in turn increase helping motivation (Loewenstein, 2010; Goetz et al., 2010). For example, Ritov & Kogut, (2011) found that sympathy was higher toward in-group victims than toward out-group victims, but in this study, the in-group and out-group were in an obvious conflict with each other. The friend of victim-effect presented by Small and Simonsohn (2008) has been shown to be mediated by sympathy. However their study manipulated the identifiability and in-group aspects simultaneously, and let participants rate sympathy and distress (but not perceived responsibility) after (not before) the decision to donate was made, suggesting that sympathy could have been used as a post-hoc justification of the decision to donate.

Also in a study by Stürmer et al. (2006), sympathy toward the victim was a good predictor for helping if the victims were part of the in-group, but not a good predictor if the victim was part of the out-group. However, no main effect on helping (not more help

to ingroup than to outgroup victims) nor condition differences in sympathy toward the victims (equal sympathy toward ingroup and outgroup victims) were found in that study. Similarly, sympathy has been shown to be a significant predictor for helping own kin, but not for helping strangers when controlling for distress and perceived oneness (Maner & Gailliot, 2007). Wilhelm & Bekkers (2010) likewise suggested that empathy is a stronger force to evoke helping for in-group victims, but that normative considerations may evoke help to out-group victims. Seemingly contradictory results were found in another study where perceived innocence, liking and emotional reactions were more positively correlated with out-group helping than with in-group helping (Dovidio et al., 1997). Important to note is that the studies by Stürmer and Dovidio did only show that the correlation between emotional reactions and helping motivation was different between the two conditions (in-group or out-group victims). As noted earlier, this is not the same as to suggest that emotional reactions mediate (underlie) the in-group effect.

Even if one can find studies supporting a link between group-belonging and some type of emotional reactions, there are also a noteworthy number of studies not finding this link. For example, studies by Mark Levine seem to go against the possibility of emotional reactions as the primary underlying mechanism of the in-group effect. In one study, self-rated likelihood of intervening was measured when seeing a scene with either an in-group victim (fellow student) or an out-group victim (non-student), being attacked on a CCTV recording (Levine, Cassidy, Brazier & Reicher, 2002). People reported higher likelihood to help in-group victims than out-group victims, but there was no difference in emotional reactions towards in-group and out-group victims. In another study, when making European group-membership salient for British students, they felt equally much emotional reactions, but they were still more likely to help European disaster victims than South American disaster victims (Levine & Thompson, 2004). Making relatedness salient (by priming words such as “community” and “relationship”), made people donate more to charity compared to a neutral prime, but there were no differences in sympathy (Pavey et al., 2011, Study 3). Also, Batson, Lishner, Cook & Sawyer (2005), found that increased similarity with a victim did not increase empathy towards the victim.

Perceived utility

One could argue that we are more motivated to help victims from our in-group than victims from our out-group because of utility reasons. This way of thinking would suggest that we can create more welfare in the long run by focusing on our in-group. One could argue that everyone will benefit if each person took care only of people that were close to themselves, because one is aware of more efficient ways to help ones friends, families and fellow countrymen, but less aware of efficient ways to help complete strangers from the out-group (see Bendapudi et al., 1996). A study that manipulated not group-belonging but physical distance between the helper and the victim suggested that the main reason people help spatially close victims more, is that they believe they can help them more

effectively (Nagel & Waldmann, 2012). The possible merits of this way of thinking are unclear, but the line of thoughts nevertheless seem to exist among people, making it interesting to investigate if perceived utility might mediate the in-group effect.

Perceived responsibility

Perceived responsibility is another mechanism that has been argued to underlie the in-group effect. This would imply that people have similar levels of emotional reactions and perceived utility when learning about in-group victims and out-group victims but that they feel more responsibility to help in-group victims than out-group victims, and that these differences in perceived responsibility explain the higher helping motivation toward in-group victims. Although the empiric articles on this topic are rather few, this line of thought has been very prominent in philosophy.

Jeske (2008) argues that we have duties towards everyone but that we also have additional duties toward some people (e.g. our in-group). It has also been argued that partial behavior towards ones in-group is generally seen, not only as a human need, but also as justified, and even desirable, from a moral perspective. A possible reason for this normative belief is that people perceive a responsibility to help in-group, and this belief is not dependent on one's personal feelings for specific members of the group (Nisan, 2005).

Findings from some empirical studies point in the same direction. It has been shown that whereas empathic concern, personal distress and sadness does not mediate helping differences when relationship closeness is manipulated, perceived oneness does (Cialdini et al., 1997). In Cialdinis study, a hierarchical regression analysis was conducted where participant sex was entered in the first step (non-significant), empathic concern was inserted in the second step (significant), distress and sadness were inserted in the third step (these reduced but did not eliminate the influence of empathic concern). In the fourth step, perceived oneness was inserted. Not only did perceived oneness strongly predict helping, but the influence of empathic concern also became non-significant (Cialdini et al., 1997; see also Maner et al., 2002). Perceived oneness in this study could possibly be seen as merely a manipulation check of the in-group effect, but this finding could still indicate that other factors than emotional reactions might underlie the in-group effect.

A study that primed participants either with an interdependent mindset (more emphasize on social roles, obligations and relationships) or an independent mindset (more emphasize on oneself and one's own feelings), found that the in-group effect was only found for those primed with an interdependent mindset whereas people primed with an independent mindset helped in and out-group victims equally much (Duclos & Barasch, 2014). In one study, two thirds of the American participants reported that they perceive themselves to have a moral responsibility to help in-group victims (other Americans) but

less than a third believed they had any responsibility to help out-group victims (people from another country; Baron & Miller, 2000). Also, many people believe that they have a duty to support nationalistic policies even when they expect that these policies will make it worse as a whole, and perceived duties seem to override expected consequences when it comes to actual behavior (Baron, Ritov & Greene, 2013).

Prediction

The in-group effect is without doubt the helping effect where it is most difficult to provide a clear hypothesis about the underlying mechanism. One might intuitively connect the stronger helping motivation people have towards their in-group to stronger emotional reactions when seeing in-group victims in need. However, the results from previous studies are not as clear about this as one might expect. Especially noteworthy is the studies that find an in-group effect (more helping to the in-group than to the out-group victims) but no differences in emotional reactions (e.g. Levine et al. 2002; Levine & Thompson, 2004). As perceived utility and perceived responsibility have not been included in studies explicitly testing the in-group effect, it is difficult to predict how they relate. However, looking at the more philosophical literature, moral principles in general and role-responsibilities in particular seems closely linked to the in-group effect. The in-group effect could thus be driven more by the willingness to do one's moral responsibility, rather than by a heightened emotional reactions or increased perceived utility when hearing about in-group victims. In this thesis, all three psychological mechanisms will be tested as possible mediators of the in-group effect. The slightly speculative hypothesis is that perceived responsibilities will be the primary mediator of the in-group effect.

Summary and hypotheses

The main aim of this thesis is to systematically test three underlying psychological mechanisms (emotional reactions, perceived utility and perceived responsibility) as possible mediators of three helping effects (identifiable victim effect, proportion dominance effect and in-group effect). Although it is expected that all three mechanisms will correlate positively with helping motivation and with each other, the prediction is that different psychological mechanisms will primarily underlie the three different helping effects.

First, it is predicted, that emotional reactions (distress and sympathy) will be most strongly affected when identifiability is manipulated, and that emotional reactions will be the primary mediator of the identifiable victim effect. It is also predicted that people who prefer an identified victim charity project over a statistical charity project in an allocation

situation will justify their choice more with emotional reasons than those preferring a statistical project.

It is further predicted that perceived utility will be most strongly affected when the size of the reference group is manipulated and that perceived utility will be the primary mediator of the proportion dominance effect. It is also predicted that people who prefer a high rescue proportion charity project over a low rescue proportion charity project in an allocation situation will justify their choices more with utility reasons than those preferring a low rescue proportion project.

Finally, it is predicted that perceived responsibility will be most strongly affected when the degree of ingroupness is manipulated, and that perceived responsibility will be the primary mediator of the in-group effect. It is also predicted that people who prefer a charity project focusing on in-group victims over a charity project focusing on out-group victims will justify their choice more with responsibility reasons than those preferring the out-group project.

6. Summary of the empirical articles

The overarching aim of this thesis is to investigate whether three helping effects (the identifiable victim effect, the proportion dominance effect and the in-group effect) are mediated (driven) by, or connected to, three specific psychological mechanisms (emotional reactions, perceived utility, perceived responsibility & other moral principles respectively). This is done in three articles summarized below. The articles are closely related, but investigate the overarching research questions from different perspectives and with different methods.

In this chapter, the aim, methodology and results of each study in the three articles will be presented. The chapter should be seen as an alternative to reading the full articles.

Article 1

Article 1 only focused on the proportion dominance effect. The aim of the article was to systematically test three possible mediators of the isolated proportion dominance effect (not confounded with the identifiable victim effect or the singularity effect). Although theoretical articles have suggested that sympathy is the main reasons for most helping effects (including the proportion dominance effect), this has previously not been empirically tested. This inspired me to investigate this question empirically.

Study 1

Study 1 in this article was conducted in three steps to confirm each link in the mediation model independently. Six vignettes very inspired by the vignettes used by Bartels (2006) were used. Each vignette described an emergency project and a suggested rescue project. The rescue project in each vignette could always save the same number of victims, but the total number of victims at risk was manipulated to create one high rescue proportion version and one low rescue proportion version (e.g. If you choose to support this industry, 56 of the 60 [560] employees will be able to keep their jobs). A mixed between-within subject design was used meaning that all participants read three vignettes written in the low rescue proportion version and three vignettes written in the high rescue proportion version. In Study 1a, the proportion dominance effect was simply replicated. Self-rated

helping motivation (measured with a single item) was higher when people read the vignettes in the high rescue proportion version than in the low rescue proportion version. In Study 1b, it was tested if the rescue proportion manipulation influenced the three suggested mediators (sympathy, perceived utility and perceived rights of the victims). The same vignettes and procedure as in Study 1a was used but rather than rating their helping motivation, participants responded to nine questions about how much emotions they felt when reading about the victims (sympathy); how much good they thought could come out of helping (perceived utility); and to what extent the victims had a right to receive help (perceived rights). The results showed that sympathy and perceived rights did not differ between the high and low rescue proportion versions, but that perceived utility was clearly higher when reading the high rescue proportion version.

A full mediation analysis was done in Study 1c. Participants responded first to the nine questions about sympathy, perceived utility and perceived rights and after that they reported their motivation to help (this time measured with four items). The results from Study 1a and 1b were replicated. Helping motivation and perceived utility (but not sympathy and perceived rights) were higher when participants read a high rescue proportion version of the vignette than if they read a low rescue proportion version. In addition, it was tested if perceived utility mediated the effect the rescue proportion manipulation had on helping. This was done using a method designed to test within-subject mediation (Judd, Kenny & McClelland, 2001; see the discussion chapter for a justification of this method). The results showed that condition differences in helping were fully explained by condition differences in perceived utility. This supports the hypothesis that perceived utility, but not sympathy or perceived rights, mediates the proportion dominance effect.

Study 2

Study 2 tested the proportion dominance effect in joint evaluation. In addition, Personal distress was included as a second type of emotional reaction that possibly could motivate helping. Also, the nature of the third principle-based psychological mechanism was changed from perceived rights of the victims to perceived responsibility to help. Participants read and responded to four easily comparable versions of a single vignette that concerned bacterial meningitis. In the first version, participants were told that according to estimates 275 of the 8000 children that annually die could be saved. In the second, third and fourth versions, 275 of the 2000, 275 of the 900, and 275 of the 300 could be saved respectively. After reading each version, participants were asked to rate their personal distress, sympathy towards the victims, perceived utility to help and perceived responsibility to help (each measured with three items) towards this very version. On the last page (after rating the psychological mechanisms for each version), participants rated their helping motivation to each of the four versions.

The results showed that helping motivation increased as the size of the reference group got smaller. To see which of the four psychological mechanisms that was most influenced by the manipulation, the linear trends created by each mechanism were compared using simple contrasts. Perceived utility was more strongly influenced by the rescue proportion manipulation than the other psychological mechanisms (distress and to a lesser extent sympathy in fact decreased when the rescue proportion got smaller). Finally, within-subject mediation using the method suggested by Judd et al., (2001) was tested again. Version 1 (275 of 8000) was compared with Version 4 (275 of 300). As in Study 1c, condition differences in perceived utility fully explained condition differences in helping motivation. Sympathy and perceived responsibility were not affected by the rescue proportion manipulation. Distress was influenced in the opposite direction (more distress when the reference group was large) but condition differences in distress did not explain condition differences in helping motivation.

In summary, the results from Article 1 strongly supports the idea that the isolated proportion dominance effect is mediated not by emotional reactions or by perceived rights or responsibilities, but by perceived utility.

Article 2

Whereas the first article did a solid job in systematically isolating the proportion dominance effect from other helping effects, and testing three psychological mechanisms as possible mediators of that effect, one could possibly argue that the three psychological mechanisms included were chosen to find the obtained results and that emotional reactions and perceived responsibility never mediate any helping effects as long as perceived utility is controlled for.

Like Article 1, the second article tested the three psychological mechanisms as possible mediators. However, in order to broaden the scope, instead of testing them as mediators on a single helping effect, this article systematically tested the three psychological mechanisms as possible mediators of three clearly separated helping effects (the identifiable victim effect, the proportion dominance effect, and the in-group effect). The hypotheses were that the identifiable victim effect would be primarily mediated by emotional reactions (distress and sympathy), that the proportion dominance effect would be primarily mediated by perceived utility and that the in-group effect would be primarily mediated by perceived responsibility.

Studies 1-3

The first three studies in this article all used a within-subject joint evaluation design very similar to the second study in Article 1. Study 1 focused on the identifiable victim effect, Study 2 on the proportion dominance effect and Study 3 on the in-group effect. In all these studies, participants first read a background story followed by four easily comparable versions of a helping situation (different in each study). After each version, participants rated their personal distress, sympathy toward the victims, perceived utility and perceived responsibility (each measured with three items). Importantly, the psychological mechanisms were measured in identical ways in all three studies. On the final page (after rating the psychological mechanisms to all four versions) participants rated their motivation to help on each version.

Study 1: The identifiable victim effect

Participants read four easily comparable versions of a single helping situation. In Version 1 participants were told that if they donated money, it would go to a children's village in Mozambique (statistical version). In Version 2, they were told that they would sponsor a determined but unidentified child. In Version 3, they were told that they would sponsor an identified child (name and age was provided). In Version 4 they were told that they would sponsor an identified child (additional picture and vivid background information of the child was provided). In all versions it was made explicit that donated money would always go to the village as a whole (not be earmarked for the identified victim). It should, however, be noted that two supplementary studies showed similar results when testing the identified victim effects where the money was earmarked for the victims, and when the victim was iconic (i.e. had already passed away).

Helping motivation increased as the victim got more identified hence replicating the identifiable victim effect with a within subject-design. The linear simple contrast analyses showed that sympathy and to a lesser extent distress were more influenced by the identifiability manipulation than perceived utility and perceived responsibility. The within subject mediation analysis (comparing Version 1 and Version 4) showed that condition differences in sympathy independently could explain all condition differences in helping motivation (complete mediation). Condition differences in perceived utility and perceived responsibility could independently explain some, but not all, condition differences in helping motivation. These results indicate that sympathy was the primary mediator of the identified victim effect in this study.

Study 2: The proportion dominance effect

This study used almost the exactly same helping situation and versions as the second study in Article 1 (but obviously tested on a different sample). The only difference between these studies was that parenthesis showing the rescue proportion in percentage after each version was added. E.g. in Version 1, participants read that it was possible to save 275 of the 8000 (3%) children that annually die from meningitis.

Helping motivation increased as the rescue proportion got larger (i.e. the size of the reference group decreased). The linear simple contrasts showed that perceived utility was clearly more influenced by the rescue proportion manipulation than the other psychological mechanisms. The within subject mediation analysis (comparing Version 1 and Version 4) showed that condition differences in perceived utility independently could explain all condition differences in helping motivation (complete mediation). Sympathy and perceived responsibility could independently explain some but not all condition differences in helping motivation. These results replicate Study 2 from Article 1, and further strengthen the notion that perceived utility was the primary mediator of the proportion dominance effect in this study.

Study 3: The in-group effect

In this study, in-group was manipulated with kinship. Participants read a background story about a girl in need of a kidney and they were asked to assume that they were a suitable donor. In Version 1, participants were told to imagine that the girl in need of a donor was the daughter of a former male classmate (non-kin). In Version 2, they were asked to imagine that the girl was the daughter of a male second cousin. In Version 3, the girl was the daughter of a male first cousin. In Version 4, they were told to imagine that the girl was the daughter of their brother (close kin). It was always made explicit that the helper did not know the victim personally.

Helping motivation increased as the kinship of the victim increased hence replicating the in-group effect (manipulated as kin) with a within subject design. The linear simple contrast analyses showed that perceived responsibility was more influenced by the in-group manipulation than the other psychological mechanisms. The within subject mediation analysis (comparing Version 1 and Version 4) showed that condition differences in perceived responsibility independently could explain all condition differences in helping motivation (complete mediation). Condition differences in sympathy and perceived utility could independently explain some, but not all, condition differences in helping motivation. These results indicate that perceived responsibility was the primary mediator if the in-group effect in this study.

Study 4

Whereas Studies 1-3 systematically tested and found the expected mediation patterns on all three helping effects, an obvious problem with the methodology is that the effects were tested within subjects and with joint evaluation of the different versions (participants could easily compare the versions and detect the manipulated variables). The helping effects found in these studies could be the result of demand characteristic where participants understood that the experimenter expected helping motivation to increase in each version and answered accordingly. However, the expected pattern of the psychological mechanisms is not as easily explained by demand characteristics. Each

participant was only tested on a single helping effect, and it is unlikely that participants could guess that only one of the psychological mechanisms was hypothesized to increase steeply over the versions. Still, as pointed out by several of the reviewers, it would be very useful to show that the proposed mediational pattern (three helping effects are primarily mediated by different psychological mechanisms) holds even when the effects are tested between-groups.

Therefore, this study tested the three helping effects with a between-group design. This means that each participant only read one of the two conditions. To increase power, participants instead responded to all three helping effects. To illustrate, all participants read three helping scenarios each representing one helping effect. For each effect, they read only one of the versions (e.g. only the identified victim version or only the statistical version). The order of the three helping effects was balanced between subjects.

The identified victim effect scenario presented a charity appeal from an organization focusing on child cancer. Participants reading the identified victim version read a charity appeal including a touching letter from two parents to their daughter who passed away one year ago. The daughter was identified with name and picture and the letter included vivid information about her and her relationship with her parents. Participants reading the statistical version instead read about child cancer prevention and about the organization. The last section of the appeal, where the organization asked for donations, was identical in the two versions.

The proportion dominance effect scenario presented a charity appeal from an organization focusing on distributing Polio-vaccines. Participants reading the high rescue proportion version read a charity appeal where they were told that if the organization reached the expected amount of private donation, it would be possible to save almost all of the 500 children than annually die from Polio in Botswana. Participants reading the low rescue proportion version read the same appeal, but were told that it would be possible to save 500 of the 60,000 children annually dying from Polio in Africa.

The in-group effect scenario presented a charity appeal focusing on protecting the rights of children. The content of the two versions were identical except that the in-group version was written in Swedish, ostensibly written by a Swedish organization and described how donated money could benefit Swedish children. The out-group version was written in English, ostensibly written by a Canadian organization, and described how donated money could benefit Canadian children.

After each scenario, participants rated their distress, sympathy towards the victims, perceived utility of helping, and perceived responsibility to help (each measured with two items). On the same page they also rated their helping motivation (two items) and the amount of money they would donate to this project if asked (hypothetical donations). On the last page, after responding to all the scenarios, participants could also allocate 10 Swedish kronor between the three projects they had read.

The identifiable victim effect

Participants who read the identified victim version wrote higher hypothetical donations and allocated more real money to the child-cancer organization compared to participants who read the statistical version but the difference in self-rated helping motivation was not significant. Emotional reactions (distress and sympathy items aggregated) were more influenced by the identifiability manipulation than perceived utility and perceived responsibility. Mediation was tested with a bootstrapping technique suggested by Preacher & Hayes (2008) designed to test multiple mediators. The dependent variable was an aggregate of all three measures of helping. Confidence intervals from the bootstrap analysis did not include zero for the emotional reaction mechanism, but did so for perceived utility and responsibility. This suggests that only emotional reactions mediated the identified victim effect when controlling for the influence from the other mediators.

The proportion dominance effect

Participants who read the high rescue proportion version had higher self-rated helping motivation and allocated more money to the organization distributing vaccines compared to participants who read the low rescue proportion version. However, hypothetical donations were not higher for participants who read the high rescue proportion version. Perceived utility was clearly more influenced by the rescue proportion manipulation than emotional reactions and perceived responsibility. Confidence intervals from the bootstrap analysis did not include zero for the perceived utility mechanism but did so for emotional reactions and perceived responsibility. This suggests that only perceived utility mediated the proportion dominance effect when controlling for the influence from the other mediators.

The in-group effect

Participants who read the in-group version were significantly higher on all the included measures of helping motivation (i.e. higher self-rated helping, higher hypothetical donations, and more allocated money to the children's rights organization) compared to participants who read the out-group version. Perceived responsibility to help was more influenced by the in-group manipulation than emotional reactions and perceived utility. The mediation analysis showed that all three suggested mediators predicted helping motivation even after controlling for the other mediators. Therefore bootstrap contrasts were used to compare the unique mediation of each of the mediators. These showed that perceived responsibility was the comparably better mediator of the in-group effect.

In summary, Article 2 suggests that the three helping effects are primarily mediated by three different psychological mechanisms. Specifically, the identifiable victim effect seems primarily mediated by emotional reactions; the proportion dominance effect seems primarily mediated by perceived utility and the in-group effect seems primarily mediated by perceived responsibility.

Article 3

The rationale of the third article is similar as the rationale for Article 2, but this article differs in a number of ways from the two previous ones. (1) Whereas the two first articles were clearly within the judgment & decision making paradigm, Article 3 was purposely written to be of interest for readers interested in marketing and consumer behavior. (2) Whereas the previous two articles tested helping effects in the traditional way (where helping motivation to one version is independent of helping motivation to the other version) the third study tested allocation decisions in helping-dilemmas. Three dilemmas were included and each dilemma represented one helping effect. In each dilemma, two charity appeals were put against each other and helping one project more meant helping the other project less. As resources are finite, this might even represent a truer picture of actual helping. (3) Whereas the first two studies focused on whether different psychological mechanisms mediated different helping effects, the third study focused on how people justify their choices post-decision. The types of justifications that were of particular interest were emotional reasons, efficacy-reasons and responsibility-reasons. These three types of reasons correspond nicely to the three psychological mechanisms in the two previous studies.

All participants in this study responded to three helping dilemmas each representing one helping effect. The order of the three helping dilemmas was balanced between participants. As each dilemma can be perceived as a separate study, the method and results of each helping dilemma will be discussed separately.

Study 1a: The identifiable victim effect dilemma

In this dilemma, participants read two helping projects proposed by the same organization. The first project concerned HIV-inhibitors for children whereas the second project concerned TBC-medicine for children. Half of the participants read the HIV-project in the identified victim version and the TBC-project in the statistical version. The other half read the HIV-project in the statistical version and the TBC-project in the identified victim version. The identified victim versions included a picture and information about one of the children affected by the disease whereas the statistical versions only included general information about the disease. Participants were told that 5 Swedish kronor would be donated on their behalf and that they should allocate the money between the two projects. They could not allocate the money evenly so they had to prefer one project over the other. After the allocation decision, participants were asked to rank the relative importance of eight reasons for why they chose as they did. Two reasons were emotion-based (e.g. "I get more emotionally touched when reading about the victims in one of the projects than the other"), two were efficacy-based (e.g. "My money will do more good in one of the projects than the other"), two were responsibility-

based (e.g. “I believe that I have a greater obligation to help in one of the projects than the other”) and two were filler reasons (e.g. “One project feels more interesting than the other”).

The number of participants preferring the project written in an identified victim version and the project written in the statistical version did not differ significantly. Also, the mean allocation to each version was identical ($M = 2.50$ SEK). The TBC-project was preferred by more people than the HIV-project, but preferred type of project did not interact with preferred version. When looking at the choice-justifications, the relative importance of the emotion-based reasons was rated as relatively more important by the 82 participants who preferred the identifiable victim version than by the 99 participants who preferred the statistical version. There were no differences in relative importance of the efficacy-reasons, responsibility-reasons or any of the filler-reasons.

These results suggest that people in general do not have a clear preference when choosing between one identified victim appeal and one statistical appeal. However, those who do prefer the identifiable victim appeal, justify their choice relatively more with emotional reasons.

Study 1b: The proportion dominance effect dilemma

In this dilemma, participants read two helping projects proposed by the same organization. The first project concerned saving eagles whereas the second project concerned helping seals. Half the participants read the eagle-project in the high rescue proportion version (375 of 400 eagles annually dying can be saved) and the seal project in the low rescue proportion version (190 of 1500 seals annually dying can be saved). The other half read the eagle-project in the low rescue proportion version (375 of 6000 eagles) and the seal project in the high rescue proportion version (190 of 200 seals). As in the previous dilemma, participants allocated 5 SEK between the two projects and were then told to justify their allocation by ranking the relative importance of same eight reasons.

More participants preferred the project written in the high rescue proportion version. Also, the mean allocation was higher for the high rescue proportion version ($M = 2.78$ SEK) than for the low rescue proportion version ($M = 2.22$ SEK). The eagle-project was preferred by more people than the seal-project, but preferred type of project did not interact with preferred version. When looking at the choice-justifications, the relative importance of the efficacy-reasons was rated as relatively more important by the 105 participants who preferred the high rescue proportion version than by the 73 participants who preferred the low rescue proportion version. There were no difference in emotional reasons or in any of the filler reasons, but responsibility-reasons were relatively more important for those who preferred the project written in the low rescue proportion version.

These results suggest that most people prefer to help a project framed as a high rescue proportion appeal when it is contrasted with a project framed as a low rescue proportion appeal. Also, those who do prefer the high rescue proportion appeal, justify their choice relatively more with efficacy reasons.

Study 1c: The in-group effect dilemma

In this dilemma, participants read two helping projects proposed by the same organization. The first project aimed to help underprivileged children whereas the second project aimed to help lonely senior citizens. Half of the participants read the children-project in the in-group version (Swedish children) and the seniors-projects in the out-group version (Canadian seniors). The other half of the participants read the children-project in the out-group version (Canadian children) and the seniors-project in the in-group version (Swedish seniors). Participants again allocated 5 SEK and were told to justify their allocation by ranking the relative importance of the same eight reasons.

More participants preferred the projects focusing on in-group victims. Also, the mean allocation was higher for the in-group version ($M = 2.96$ SEK) than for the out-group version ($M = 2.04$ SEK). The children-project was preferred by more people than the seniors-project, but preferred type of project did not interact with preferred version. When looking at the choice-justifications, the relative importance of the responsibility-reasons was rated as relatively more important by the 116 participants who preferred the project with in-group victims than by the 64 participants who preferred the project with out-group victims. There were no differences in emotional reasons, efficacy reasons or any of the filler-reasons.

These results suggest that most people prefer to help a project including in-group victims (Swedish) when it is contrasted with a project including out-group victims (Canadian). Also, those who prefer to help in-group victims, justify their choice relatively more with responsibility reasons.

In summary, Article 3 differed from the previous articles in that it tested the helping effects using allocation-dilemmas and that it measured the psychological mechanisms with choice justifications. Still, the results were in line with the overarching hypothesis that each of the three helping effect can be primarily linked to one of the three suggested psychological mechanisms.

7. Extended discussion

The final chapter of this thesis will cover several rather diverse topics. The topics will be presented in separate sections. The first section discusses the empirical findings in a traditional way. Here, the findings from the articles will be connected to existing literature about charitable giving. Results that are congruent as well as results that seem to go against previous research will be pointed out and areas where this thesis contributes will be highlighted. In the second section, the aim is to take a step back and discuss the possible theoretical-methodological benefits of the current approach to research on charitable giving. The third section will be focused on different ways to test the *when* × *why* interaction in helping situations. Specifically, the rationale of mediation analysis will be discussed. The fourth section will take a further step back and look at possible practical implications with this type of research as well as suggesting topics for future studies. This section will bring up a number of practical questions that was not empirically tested in this thesis but that is worth taking into account in future studies about charitable giving. In the fifth section, I will take a preemptive stance and try to respond to some of the criticism that I anticipate from other researchers. The sixth and final section will introduce a very preliminary first draft of a broader model of charitable giving.

Discussion about the findings

The empirical contribution of this thesis can be seen from two perspectives; (1) underlying mechanisms of separate helping effects, or (2) the interaction between situational differences and underlying psychological mechanisms. First, one can see the three helping effects as three separate research topics. If so, then this thesis has contributed a bit to each of these topics. This thesis systematically tested three psychological mechanisms as possible mediators of each helping effect. Under the following sub-headings, empirical implications for each helping effects are discussed in turn.

Empirical contribution concerning the identifiable victim effect

Looking only at the identifiable victim effect, the results seem to be in line with the many others who link the tendency to be more motivated to help a single identified victim than to help statistical victims, to more emotional reactions (Kogut & Ritov, 2005a; 2005b; Small et al., 2007; Slovic, 2007; Loewenstein & Small, 2007). The identifiable victim effect was shown to be primarily mediated by sympathy rather than by perceived utility or by perceived responsibility (Article 2, Study 1 and 4), and people who preferred a project including an identified victim justified this choice with emotional reasons more than those preferring the project framed statistically (Article 3). The results suggest that people feel more emotional reactions when they read a charity appeal with an identified victim than when they read a charity appeal with only statistical information, and that these differences in emotional reactions fully account for the differences in helping motivation that make up for the identifiable victim effect.

Although perceived utility of helping and perceived responsibility to help correlated strongly with helping motivation, these mechanisms were not as influenced by the identifiability manipulation and did consequently not mediate the identifiable victim effect as well as emotional reactions. As mentioned previously, the “identified intervention effect” found by Cryder, Loewenstein & Scheines (2013) was shown to be relatively better mediated by perceived impact than by emotional reactions and at first glance this might seem to go against the results found in this thesis. However, the identifiable victim effect and the identified intervention effect are different. The identified intervention effect is first and foremost about the existence of (relevant) details in the presentation of the project. In my interpretation, it is not surprising that adding information about a charity project increases the perceived utility (as long as the information is relevant and does not contain any discouraging information) and that a higher perceived utility in turn can motivate helping. The results could also be seen to stand in contrast to the results found by Basil et al., (2006). They found some support for the idea that people felt a higher perceived responsibility to help after reading a “guilt appeal” than after reading a control appeal, and that this higher sense of responsibility explained the higher motivation to help after reading a guilt appeal. The main difference between this thesis and their study is that they did not clearly isolate the identifiable victim effect from other aspects. Possibly, the guilt appeal and the neutral appeal differed in more ways than only the identifiability of the victims.

The finding that the emotional reaction mechanism is the primary mediator of the identifiable victim effect is admittedly not a new empirical contribution as the link between the identifiable victim effect and emotional reactions has been established previously. However, to my knowledge, an emotional reaction mediation of the identifiable victim effect has not been shown until now. By separating emotional reactions from perceived utility and perceived responsibility, and testing them all as possible mediators, this thesis seems to have contributed to the more detailed understanding of the underlying mechanisms of the identifiable victim effect.

Empirical contribution concerning the proportion dominance effect

Looking only at the proportion dominance effect, the results seem to suggest that the tendency to be more motivated to help a high rescue proportion project than a low rescue proportion project is primarily explained by an increased perceived utility to help the high rescue proportion project. This link has been suggested previously (e.g. Bartels & Burnett, 2011; Friedrich et al., 1999; Friedrich & Dood, 2009, but not empirically tested until now. In this thesis, the proportion dominance effect was shown to be primarily mediated by perceived utility rather than by emotional reactions or by perceived rights and responsibilities (Article 1, Article 2, Study 2 and 4), and people who preferred a high rescue proportion project in a helping dilemma justified this choice with efficacy-reasons more than those preferring the low rescue proportion project (Article 3).

The results suggest that although emotional reactions and perceived responsibility correlate with helping motivation, they are relatively unaffected by a rescue proportion manipulation, meaning that they cannot mediate the proportion dominance effect. This result might not seem too surprising at first sight; but it has a number of important implications. First, it shows that helping motivation can increase even when emotional reactions are stable, which seems to go against theories that put emotional reactions as the key mechanism when it comes to motivating helping (Loewenstein & Small, 2007). Second, it shows that a higher perceived utility can make us more motivated to help. This links a more analytical and number-focused type of mental processing to helping motivation, and could possibly imply that not only the intuitive system, but also the deliberative system in a dual-process framework can increase our motivation to help (for similar lines of thought, see Cryder, Loewenstein & Scheines, 2013; Greene, 2008; Friedrich & McGuire, 2010). Third, this thesis links a specific helping effect to a specific psychological mechanism and finds that the proportion dominance effect is primarily mediated by perceived utility rather than by emotional reactions or perceived responsibility.

Empirical contribution concerning the in-group effect

Looking only at the in-group effect, the results suggest that the tendency to be more motivated to help in-group victims than out-group victims is primarily explained by a higher perceived responsibility to help in-group victims. Although not tested empirically before, similar lines of thought have been proposed previously (Baron et al., 2013; Levine et al., 2002; Levine & Thompson, 2004; Nisan, 2005). The in-group effect was shown to be relatively stronger mediated by perceived responsibility than by emotional reactions or by perceived utility (Article 2, Study 3 and 4) and people who preferred a helping project with in-group victims justified this choice more with responsibility-reasons than those preferring the project with out-group victims (Article 3).

Emotional reactions and perceived utility toward in-group and out-group victims differed not as much as one could have thought, and although both these mechanisms uniquely mediated the in-group effect in Study 4, perceived responsibility had a significantly stronger unique mediation. This finding could possibly go against the predictions of Goetz et al., (2010) and Loewenstein & Small (2007) who suggest compassion and sympathy as the main underlying mechanisms of the in-group effect. However, the results are consistent with the results from Levine et al., (2002) where in-group victims were helped more than out-group victims, despite not eliciting more emotional reactions (see also Stürmer et al., 2006). Also, the results does not give support for the notion that we help in-group victims more because we think we can help them more effectively than out-group victims. This suggests that spatial proximity and in-group belonging should not be seen as equivalent (cf. Nagel & Waldmann, 2012)

Again, there are a number of implications from this finding. First, it suggests yet another possible mechanism that can make us more motivated to help. This extends the traditional dual-process framework with one additional process (at least in helping situations). Not only can emotions and utility calculations make us more motivated to help, moral principles of e.g. responsibility, can do so as well. To be clear, this thesis does not claim that feelings and affect in general are irrelevant for the in-group effect, but it does suggest that perceived responsibility is a stronger mediator of the in-group effect than emotional reactions (distress and sympathy) as well than perceived utility.

The broader empirical contribution

One can also see the empirical contribution from a broader perspective. This broader perspective has to my knowledge not received much attention so far, mostly because few articles have written about the interaction between situational differences and the psychological mechanisms. The broader perspective implies that the empirical contribution is not just the aggregated parts of each helping effect, but potentially something that can be a starting point for a new type of studies, where the *when* and *why* of helping is looked at simultaneously. This new type of studies could test these psychological mechanisms as mediators of other helping effects (or more detailed aspects of the included helping effects). Also, there is surely room to refine this classification of psychological mechanisms to even better pinpoint the *why* of helping in different contexts. This takes us to the next section, which will relate less to previous research, but rather discuss the very theoretical-methodological approach that was used in this thesis.

Discussion about the theoretical-methodological approach

Whereas the empirical contributions refer to the actual results – the findings, the theoretical contribution refers to the framing of the research problem and the methodology used to test it. This thesis took a number of existing lines of thought in the literature and tried to divide them into more comprehensible chunks (to paraphrase one of the reviewers). Admittedly, one can have legitimate objections towards the provided classifications and operationalizations of helping effects and psychological mechanisms put forward in this thesis. Nevertheless, the very idea is that there are conceptually different helping effects and conceptually different psychological mechanisms, and that these could interact so that not all helping is driven by the same mechanism is the main theoretical contribution, and an idea that the field of charitable giving possibly could find useful in the future.

Separating helping effects

One aim of this thesis was to separate different helping effects from each other and to manipulate only one aspect at each time. At the same time, the aim was to use charity appeals that were at least similar to requests used by real organizations (several of the appeals used were in fact inspired by text found on the homepages of different charitable organizations). Especially for the identifiable victim effect, this meant some compromises, meaning that the singularity-manipulation, the determinedness-manipulation and the vividness-manipulation were aggregated (these are sometimes manipulated independently; Kogut & Ritov, 2005a, 2005; Dickert, Kleber et al., 2011). It also meant departing from the classic approach to display one identified victim and claim that donations are earmarked for that victim. Thus, although recognized that the identified victim effect can be separated further into several effects, it still seems like the identifiable victim effect was clearly separated from the proportion dominance effect and the in-group effect in this thesis. The contribution here is not how the helping effects were separated, but that there are many situational aspects that influence helping motivation, and that one should aim to manipulate only one aspect at the time to better understand the *when* of helping.

Separating psychological mechanisms

Another aim of the thesis was to separate different psychological mechanisms that can underlie helping. This was done partially as a response to the not too uncommon practice to bunch together a number of seemingly disparate emotions, thoughts and beliefs into a single variable (e.g. Small et al., 2007).

The heart-head-book taxonomy of decision modes (Weber & Lindemann, 2007) was the main inspiration when suggesting three diverse psychological mechanisms that each could motivate helping. The emotional reaction mechanism refers to helping with the heart, meaning that we help more when we feel more emotional reactions. The perceived utility mechanism refers to helping with the head, meaning that we help more when we believe that we can do very much good for someone else for a relatively small personal cost. The perceived responsibility mechanism refers to helping by the book, meaning that we help more when we believe we have a duty, obligation or other type of moral pressure to do so. The purpose was not to suggest that these three mechanisms offer the ultimate explanation of the *why*-question, but rather to suggest that there are several underlying reasons for why we help.

Testing the *when* × *why* interaction

The single most important theoretical contribution of this thesis is not the separation of helping effects or the separation of psychological mechanisms that could motivate helping. The main contribution is instead the combination of these two. In this thesis, three different psychological mechanisms were systematically tested as mediators of three different helping effects. Previous research have indeed separated helping effects (e.g. Loewenstein & Small, 2007; Small, 2011), and also discussed different mechanisms that can underlie helping (e.g. Batson, 2011). There is also research about the psychological mechanisms underlying specific helping effects (e.g. Winterich & Zhang, in press), and sometimes, several possible mechanisms are tested as possible mediators of a specific helping effect (e.g. Cryder, Loewenstein & Scheines, 2013). This thesis is however, to my knowledge, the first one that systematically tests three relatively clearly separated psychological mechanisms as possible mediators of three relatively clearly separated helping effects. This is the main contribution.

Discussion about the mediation analyses

A third kind of contribution that might come out from a thesis is of methodological or statistical nature. To make things clear, this thesis has not contributed with a revolutionizing methodology or with any novel statistical approach. It has however, tested mediation of helping effects in a more systematic way than many other studies, and this chapter is written to explain the rationale of the methodology used in this thesis. This will be discussed under three sub-headings: First, moderation, which is a different way to investigate the interaction of the *when* and *why* of helping, will be discussed. Second, a discussion about different types of mediational analyses will be provided, and the aim is to

motivate why mediation was tested in the way it was. Third, the problem of meaningless mediation will be discussed.

Non-mediation ways to look at the interaction of the when and why

One often used method to investigate the *when* \times *why* interaction has been to e.g. compare the sympathy–helping correlations when participants read about an identified victim or when they read about statistical victims. If the correlation between sympathy and helping motivation is stronger when people read about identified victims than when they read about statistical victims, this is sometimes interpreted as a special link between the identifiable victim effect and the emotional reaction mechanism (e.g. Small et al., 2007). This is called moderation and should not be confused with mediation (Hayes, 2008; James & Brett, 1984).

Moderation has been tested in studies by Stürmer and colleagues who investigated predictors of helping in-group victims and out-group victims. In one of those studies, heterosexual participants chatted online with a victim of the same sex. The victim told them that they have gotten hepatitis from either their girlfriend or boyfriend (thus making them heterosexual [in-group] or homosexual [out-group]). Participants later rated the victim on several scales as well as their helping intentions towards the victim. For in-group victims, empathy best predicted helping but for out-group victims, perceived attractiveness (rated before they knew about the sexual orientation) was the better predictor of helping (Stürmer, Snyder & Omoto, 2005). In another previously mentioned study, native Germans and Turkish immigrants read either about an in-group member or an out-group member who had personal problems. They then rated their distress, sympathy and self-rated helping motivation towards the person with problems. When hearing about an in-group victim (i.e. same nationality), sympathy predicted helping motivation but when hearing about out-group victims, sympathy did not predict helping motivation (Stürmer et al., 2006). Noteworthy in this study was that there were neither any condition differences in sympathy or in helping motivation, thus making a sympathy-mediation impossible.

Although these kinds of results are interesting in their own right, they should not be confused with mediation as nothing is said about how the manipulation (group-belonging of the victim) influence the intermediating variable (here sympathy). Instead, these kinds of analyses represent moderation where the value on one variable influences the relationship between two other variables.

Different types of mediation analyses

We now turn to different types of mediation analyses. The main reason for including this discussion in the thesis is that the choice of mediational analysis rendered confusion among reviewers during the review process. Simply put, the mediational analysis suggested by Judd et al. (2001) was unfamiliar to several of the reviewers. In addition some of them suggested that either the traditional, comprehensible Baron and Kenny (1986) causal steps method, or, even more preferably, the contemporary bootstrap method (e.g. Preacher & Hayes, 2008; Zhao, Lynch & Chen, 2010). To clarify and respond to these concerns, first the logic behind the casual steps approach of mediation and the contemporary approach of mediation will be explained. Then, it will be argued for why the Judd-mediation was preferred in several of the studies in this thesis.

The casual step approach to mediation

The causal steps approach means first, to establish an effect between the independent variable (IV) and the dependent variable (DV). This means that the manipulation must significantly predict helping motivation. Second, one must establish an effect between the IV and mediating variable (MV) meaning that the manipulation must significantly predict the psychological mechanism in question. Third, one must to establish a relation between the MV and the DV (i.e. the psychological mechanism must correlate with the helping motivation). Fourth, one must show that the direct effect between the IV and the DV is significantly reduced when accounting for the indirect effect (Baron & Kenny, 1986). This has traditionally been done with a Sobel z -test which tests whether the difference between the total effect and the direct effect is significant. A significantly reduced direct effect is often referred to as partial mediation and a fully explained direct effect is often referred to as a complete mediation.

The contemporary bootstrap approach to mediation

The contemporary approach means looking only at the indirect $IV \rightarrow MV \times MV \rightarrow DV$ effect. This means not relying on the existence of a significant direct effect that gets significantly weakened once one take the indirect effect into account. To establish mediation using the contemporary approach, one must only show that the indirect effect is significant. However, rather than showing this with a Sobel-test, the contemporary approach suggests testing the indirect effect by generating an empirical sampling distribution of the $IV \rightarrow MV \times MV \rightarrow DV$ effect. It takes the observed sample and draws with replacement a specified number of values of IV, MV and DV to create a new sample, allowing estimation of $IV \rightarrow MV$, $MV \rightarrow DV$ and the full $IV \rightarrow MV \times MV \rightarrow DV$ effect (Zhao et al., 2010). After the indirect effect has been tested with several thousands of iterations, estimations of the actual indirect effect can be provided by SPSS macros (e.g. Preacher & Hayes, 2008). A significant mediation (i.e. the $IV \rightarrow MV \times MV \rightarrow DV$ effect) is indicated by a confidence interval not including zero. The contemporary model has

received a lot of support and although the causal step method still has its advocates (e.g. Kenny, 2014), the contemporary approach is often the preferred one (Zhao et al., 2010).

The Judd-mediation

The Judd et al., (2001) mediation technique was used over the Baron & Kenny traditional causal steps technique and the Bootstrap-technique only because the aim was to test mediation in a within-subject design. Critically, neither the traditional Baron & Kenny method nor the Bootstrap method are specified to do that. The Judd-mediation is based on the same underlying rationale as the causal steps approach but it is specifically designed to test mediation and moderation in within-subject designs. The contemporary Bootstrap-mediation was not used in these studies because there is, to date, no published Bootstrap-mediation technique designed for within-subject design (Lynch, 2011). Although the Judd-mediation is not ideal as it is based on the causal steps approach, and that is not designed to test multiple mediators in a single model, it was the best one possible for testing within-subject mediation.

In the Judd-mediation, condition differences in the dependent variable (e.g. helping motivation toward the high rescue proportion scenarios minus helping motivation toward the low rescue proportion scenarios) are regressed on two predictors. The first predictor is the condition differences in the mediating variable (e.g. perceived utility toward the high rescue proportion scenarios minus perceived utility toward the low rescue proportion scenarios). The second predictor is the sum of the perceived utility scores from both conditions. A significant difference-predictor would then indicate that condition differences in perceived utility explain condition differences in helping motivation. A significant sum predictor would indicate that perceived utility moderate the effect. (e.g. if the proportion dominance effect was found only for participants who rated very high perceived utility independent of condition, then perceived utility would moderate the proportion dominance effect). If the sum score is centered (meaning that each participants sum-score is subtracted from the sample mean sum-score), then a non-significant intercept in the regression analysis suggest that the original effect is no longer significant. A significant difference-predictor together with a non-significant intercept thus indicates a complete mediation.

The Judd-mediation was used in Article 1 and in study 1-3 in Article 2. However, in Article 2, study 4, mediation was tested between subjects and consequently a bootstrap method designed to include multiple suggested mediators was used (Preacher & Hayes, 2008). Similar results were found using both types of mediation suggesting that the results are not a consequence of the type of mediation analysis.

Meaningless mediation

It is not uncommon with so called “meaningless mediation” where the mediating variable is either conceptually very similar to the independent variable (hence being a manipulation check) or conceptually very similar to the dependent variable (hence not adding much information; (see Zhao et al., 2010; Lynch, 2011 for discussions about this). Acknowledging that I might have misunderstood something in the following articles, it seems that for example the study by Smith et al., (2013), include something that is close to a meaningless mediation. In their study, entitativity was manipulated by having individuals move in unison or in a disorderly manner, the mediating variable was perceived entitativity and this was shown to mediate helping motivation. Another possible example come from Zagefka et al., (2013) where Chinese donors in Britain were more likely than non-Chinese donors to donate money to Chinese earthquake victims and this effect was found to be mediated by identification with Chinese victims. Both these studies have mediating variables that seem to be conceptually very close to the manipulation.

A benefit with the current approach for testing mediation

An obvious benefit with the current way of investigating mediation is that it tested several mechanisms at once. It also predicted that each of the three mechanisms would be the relatively better mediator on one of the three helping effects. As the suggested mechanisms unavoidably are correlated with each other, testing them one at the time would likely render many significant mediators. Testing them all together, however, make it possible to rank the mechanisms in the order of their mediational force. Whereas the identifiable victim effect and proportion dominance effect (in Article 2, Study 4) were completely mediated only by emotional reactions and perceived utility respectively, the in-group effect was shown to be uniquely mediated by more than one mechanism. However, the results suggested that the unique mediation of perceived responsibility effect on the in-group effect is significantly stronger than the unique mediation of the other suggested mechanisms.

Potential practical implications and future directions

In an ideal world, a thesis about helping should make a practical contribution. In a charitable giving context, a practical contribution primarily refer to concrete advice that charitable organizations can use to recruit new donors, as well as maximizing the size of donations from donors already on their hot-lists.

Although many of the studies in this thesis included charity requests that were inspired by homepages of charitable organizations, the main aim was to separate the three helping effects and to emphasize the differences rather than the similarities of the three psychological mechanisms. This made the included vignettes and response scales more

artificial than in real life, and this is an obvious limitation for the direct practical implications. This does not, however, mean that there are no practical implications, but it does mean that these implications lie mostly on an indirect level. The current section will introduce three research questions that are of a more practical nature and that to some extent can be linked to the topic of this thesis: (1) Psychological reactance. (2) How do different psychological mechanisms interact to predict helping, (3) Sad or happy charity appeals.

Reactance: When emotional appeals backfire

As previously noted, one important conclusion of the findings is that helping motivation can increase even without an increase in emotional reactions (distress and sympathy). This could be an important piece of information for charitable organizations who are about to design their charity appeals. In addition, the results from Article 3 showed that when people had to allocate money between two charity appeals, the project with an identified victim was not given more money than the project framed statistically. Although this null-result in itself does not allow any inferences, there are an increasing number of studies showing that the identified victim effect is not as robust as one would imagine (and results from my studies suggest that it is clearly weaker and less robust than the proportion dominance effect and the in-group effect). As this thesis has linked the identifiable victim effect to increased emotional reactions, one could possibly argue that it is not the identifiable victim effect in itself that is less robust. Could it be the emotional reaction mechanism in itself that is the problem?

Research clearly suggest that playing on the emotional reaction strings when designing charity appeals can increase helping motivation under the right circumstances, but also that overly emotional appeals can give rise to some serious problems. One such problem is called psychological reactance. Reactance occurs when a potential donor is faced with a charity-request that seems to make it obvious what the donor should think and feel. To illustrate with an extreme example: Imagine yourself already donating \$20 per month to Organization A. Imagine next that you receive a charity request from Organization A, picturing vivid and distressing pictures of a starving child. Organization A informs you that for a \$10 extra per month from you, they can prevent the child from dying. The charity request also insinuates that people who do not respond to these kinds of needs are cold-hearted and unsympathetic.

According to reactance theory, this type of charity request could easily backfire (Brehm, 1966; Berkowitz, 1973; Aderman 1972; Eckel, Grossman & Milano, 2007; Isen & Noonberg, 1979). Reactance happens in situations where the donor experiences that his or her ability to make a free choice is threatened. To feel that one loses the ability to make a free choice is disturbing and to avoid this, people sometimes react aversively towards the organization or the person making the request. In the situation above, this might result not only in that you refuse to pay the extra \$10. You might even punish Organization A

for their attempt by canceling your existing monthly donation. To illustrate, in an article by Hung & Wyer (2009), participants who first read about child trafficking and at a later stage were asked to help, gave more if a picture with an identified child was included. However, if they first were asked to help and then read about the victims, an identified child decreased helping motivation.

A related phenomenon is that people help more if they receive gratitude for helping (Grant & Gino, 2010; Berkowitz, 1973). Showing gratitude is a well-known method to retain already existing donors. However, being asked to make additional donations could be considered the opposite of being thanked; it rather increases the feeling of exploitation that in turn likely will increase reactance. Donors might even have a positive attitude about the cause of a charity project, but build up an aversion towards an organization who they perceive as using manipulative methods to increase donations.

Some organizations with aggressive request methods might succeed in the short run (as it is difficult to say no) but lose out in the long run (as people who are giving reluctantly as a result of pressure, is very unlikely to approach charities in the future). Jackson and Latane (1981) refer to this type of aggressive requests as “social mugging” where donors give just to get away from an annoying solicitor. In one study where proximity of the person making the request was manipulated, participants gave more to close requesters, but at the same time they thought better of a requester standing further away (Baron & Bell, 1976). People consciously avoid situations where they might be requested to help – for example by taking a longer way in order to avoid a donation requester (Pancer, McMullen, Kabatoff, Johnson & Pond, 1979). This is in line with Sargeant & Woodliffe, 2007 who suggest that charity appeals should be powerful enough to arouse some sympathy but not powerful so they become personally burdensome. This is also in line with results found by Agerström, Björklund & Allwood, (2009) where a plainly described charity appeal combined with statistical victims as well as the opposite (vividly described appeal combined with an identified victim) rendered lower donations than the other combinations. Perhaps, plain appeal + statistic victims did not elicit enough emotions, but the vivid appeal + identified victim combination elicited reactance (cf. emotional regulation; Cameron & Payne, 2011).

In the recent years, beggars and panhandlers have increased dramatically in number in Sweden. These beggars often use emotion-based appeals (e.g. begging on their knees, showing pictures of their children). Giving a handful of change to beggars is from a helper’s perspective similar as to give to an organization that sends out multiple charity requests asking for more. No matter how often you give, you will be asked to give the next time as well. In fact you might even be asked to give more often if the reputation of you as a generous person spreads. For a person who receives personal joy from giving directly this might not be a problem, but for people who give because they want to relieve the distress they get from seeing poverty that close, or because they feel sympathy, helping beggars will not relieve them of any of these feelings as they will be exposed to the same just a few blocks later. An additional risk is that people that used to be very emotionally

responsive and helpful, has to regulate their emotional reactions in order not to be overwhelmed by suffering and this could make them less helpful, even in situations not related to beggars (Cameron & Payne, 2011). Obviously, the very fact that beggars might cause psychological reactance is not a normative argument for not helping them; it is merely one of several possible psychological explanations for why people do not help them more.

Emotional appeals seem to be efficient if they are few and come in isolation. If the appeals gets too emotional or too many, and we believe that we are being manipulated, we might experience emotional reactance and punish the requester or others by stop helping at all. If the emotional appeal still does not go away, we might have to protect ourselves by regulating down our emotional responses. This illustrates the problem of focusing too much on the emotional strings when designing charity requests (inducing distress or sympathy). Making use of the utility-mechanism or the perceived responsibility mechanism could possibly be a way to at least partially overcome these problems.

Epstein (2006) suggests that long-term fundraisers and charities focusing on prevention might be better off emphasizing utility aspects than emphasizing emotional aspects in their appeals. Indeed, many charity organizations try to inform their donors about low overhead costs and emphasize the effectivity of their projects. Relevant for the context of begging, a Swedish newspaper recently published an article about the EU-migrant Bebe who after one year of begging in Malmö, finally had collected enough money to pay for his daughter's heart operation and therefore went back to his family in Romania (Hansson & Dahlkvist, 2014). This article played to some extent on the utility-string as it highlighted the benefits of donating money to beggars (especially for Bebe and his family but possibly also for people who felt distressed by seeing Bebe's situation). One reason for people not giving more to beggars is surely that the actual utility of giving is very uncertain. A possible path for beggars could possibly be to be explicit about how much money they need to collect either in order to go back to their home country, or in order to go home for the day, and importantly to provide potential givers with updated information about their progress.

Emphasizing responsibility aspects might also be one way to go. Possible ways to do this would be by referring to principles such as universal human rights, solidarity with all humans, and making reciprocity-norms more salient. In the case of begging, one reason for people refusing to help is that the responsibility to help can be put on others than oneself. Responsibility could be put on the country the poor people origin from, on the tax-financed municipalities, or on the beggars themselves (cf. just world theory; Hafer & Bègue, 2005). Putting responsibility on others will obviously reduce the perceived personal responsibility to help. Referring again to the newspaper article about Bebe, one possible reason for him being rather successful as a beggar was that he sat outside the same supermarket for a whole year rather than alternating between several stores. This made both the owner and the customers recognize and acknowledge him as "our beggar \approx in-group victim" rather than "a beggar \approx out-group victim" and. This in combination of

Bebe being polite and thankful might have increased the perceived responsibility to help among some of the customers.

How does the psychological mechanisms interact to predict helping

Going back to Oscar, Artur and Per at the charity organization, who are to decide if their new charity appeal should play on the emotional strings, the utility strings or the responsibility strings. Imagine that they cannot agree and therefore decide to play on all strings at the same time. How will this work? More specifically, is it beneficial or detrimental to try to increase all psychological mechanisms at once or is it more beneficial to concentrate on one of the mechanisms?

This is a question yet to be empirically tested, but one could speculate about this from different perspectives. On one hand, in the often cited study by Small et al., (2007), people were highly motivated to help when they read about the single identified child Rokia and less motivated to help when they read statistical information about starving children. More interestingly, showing both the Rokia-information and the statistical information did not significantly increase helping motivation compared to the only statistics-condition. The authors concluded that one should be careful when mixing emotional appeals and non-emotional (calculative) appeals. In itself, this would suggest that emphasizing costs and benefits in an emotional charity appeal will decrease rather than increase helping motivation.

However, one could also argue that all three psychological mechanisms are necessary to make a person help. It is also possible that the three suggested mechanisms could come in different steps in the decision process, and that these steps come in a specific temporal order.

A multi-step model of the psychological mechanisms

Multi-step models have been suggested by others. For example Latane & Darley (1968; see also Dovidio et al., 2006) proposed that helping is done in five steps (1) notice event, (2) interpret that help is needed, (3) assume personal responsibility, (4) choose way of helping (5) implement decision.

In Figure 1 below, I present a preliminary suggestion for how the three psychological mechanisms could be incorporated in a multi-step model. The first step (notice need situation) is identical to the first step in Latane & Darley's model. Not all need situations are perceived as such by bystanders, and as the spatial distance increases, noticing events might even require a conscious choice to educate oneself about different need situations around the world. Not noticing a need situation imply unawareness and consequently no helping.

The second step involves the emotional reactions. Some type of emotional reaction might be necessary to initiate helping motivation in the first place, and for most people, just

recognizing that there exists a need-situation will render at least some degree of distress and sympathy. There are some cases where a potential helper is either totally indifferent to the welfare of the victim (e.g. psychopaths), or even puts negative value to the welfare of the victim and becomes happy when the victim is suffering (i.e. *schadenfreude*; Leach, Spears, Branscombe & Doosje, 2003). Still, it is far more common that at least some degree of distress and sympathy for the victim is felt as long as a need situation has been noticed. If no emotional reaction is felt, the decision to not help is made at this step.

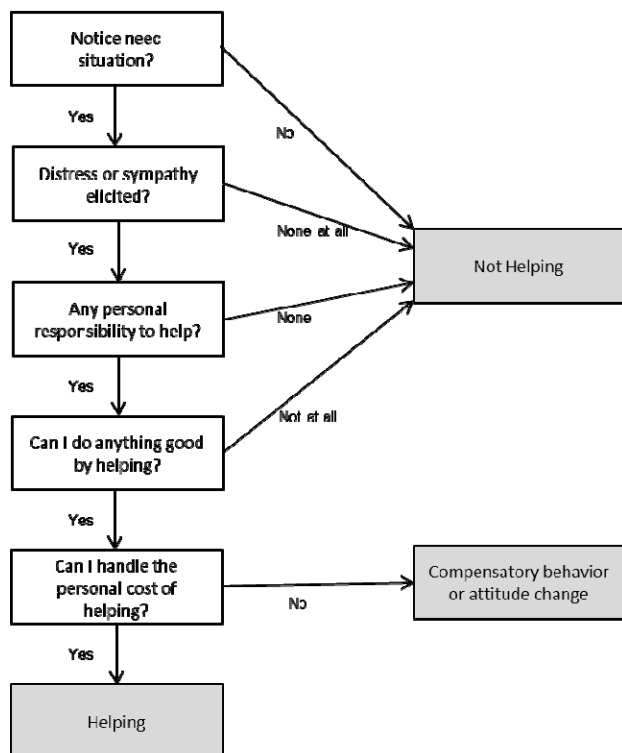


Figure 1: Suggestion for a multi-step model including the psychological mechanisms.

In the third step (perceived responsibility), one might try to establish the moral principles surrounding this very situation, (e.g. who caused the situation? are there others who are in a better position to help?). In case Jimmy is emotionally touched by a need situation but does not perceive himself to have any personal responsibility to help, Jimmy will be angry either toward the people responsible for the very existence of the need situation (i.e. the ones who caused the problem) or toward the people who Jimmy believe are responsible to provide the help (e.g. people who are in better position to help). This anger might arouse motivation to punish the responsible ones (Harth, Leach & Kessler, 2013), but it rarely motivates helping. In case no responsibility is felt, the decision not to help will be made on this step.

In the fourth step (perceived benefit of helping) one estimates how much good one can do by helping. If one believes that one cannot make any contribution at all by helping, (despite being emotionally touched and accepting some degree of responsibility), then this will lead to a feeling of frustration and futility, but it will usually also lead to a decision not to even try to help.

The fifth step is the personal cost of helping. Together with the perceived benefit of helping, this step makes up the perceived utility mechanism. A potential helper who is emotionally touched, accept some responsibility and who believes that helping would benefit the victim might still choose not to help if the perceived cost of helping seems too high. An extreme example would be donating a kidney to a stranger which is considered a too high personal cost for most people. A more realistic example involves people who easily could donate \$300 per month to charity without any major loss in welfare, but who don't because the cost of helping (less travels and dining out for oneself) is perceived too high. Being aware that one did not help because a lack of resources or out of stinginess is likely to cause negative self-directed emotions such as shame and guilt. These emotions are aversive, and in order to avoid them one can either compensate with a different prosocial behavior (e.g. by helping in a cheaper way) or avoid cognitive dissonance by justifying ones choice not to help by changing attitudes about responsibility or benefits (e.g. "after all, this is not my responsibility at all" or "my money will not reach those who need it anyway").

Speculatively, this would then mean that if only one of psychological mechanisms were totally non-existent (absolutely no emotional reactions, absolutely no perceived personal responsibility, absolutely no perceived benefit for the victim if helping), people would not help at all. Also, people would not help if the requested help were perceived as too costly for oneself. However it also means that if all mechanisms are above the zero level, each of them can increase helping independently of the others.

Should we use sad or happy charity appeals?

The identifiable victim effect in this thesis refers to the existence of a single vividly described determined victim. One related aspect, not discussed so far, is whether or not the identified child pictured on a charity appeal should look happy or sad? This question is part of a broader question about whether charity appeals should aim to make donors feel positive or negative (Kemp et al., 2013). For example, emphasizing what will happen if people do not help is a negatively framed appeal (Dyck & Goldevin, 1992) whereas emphasizing the best-case scenario is a positively framed appeal.

There are some conflicting findings regarding this question. On one hand, messages framed to make people feel good are statistically more likely to be responded to than messages framed to make people feel bad (Benson & Catt; 1978). In one study, charity appeals with positive pictures (e.g. playing puppies) rendered more donations than charity

appeals without a picture (Perrine & Heather, 2000). Positive fantasies make us help more if we are asked to give a little, but not if we are asked to give a lot (Kappes, Sharma & Oettingen, 2013).

However, there is support for the opposite side as well. For example, a study by Small and Verrochi (2009) showed that pictures of sad children in need elicited more donations than pictures of happy-looking children in need or children with a neutral expression. The authors attributed this to emotional contagion where potential donors begin to feel the emotion of the children in the picture and give more if the child looks sad than if it looks happy. In line with this, framing a request for blood donations as a way to “prevent a death” elicited more helping than a similar request framed as “save a life”, and this effect was neither driven by more empathy nor by more positive feelings (Chou & Murighan, 2013). Female donors (but not male donors) gave more when they saw a negative charity appeal than when they saw a positive charity appeal (Wang, 2008). Also, in a study about donations to one’s alma mater, a mail charity request was factorially manipulated in two ways (Smith & Berger, 1996). Potential donors either got a vivid narrative appeal or a statistical appeal and either a positive (this is what will happen if you donate) or negative (this is what will happen if you don’t donate) appeal. The results indicated that a vivid plus negatively framed charity request elicited less likelihood of donating, but higher mean donations than the other combinations.

One relatively stable pattern in the literature is that it is important to have congruence between the current mood of the donor and the frame of the charity appeal. Happy participants donate more when exposed to positive appeals but sad participants donate more when exposed to negative appeals (Cunningham et al., 1980). Speculatively, one might expect that a sad appeal works better in the short term (as negative feelings motivate us more than positive feelings), but that happy appeals make people more motivated in the long run, as we are less likely to avoid positive appeals than we are to avoid negative appeals. In line with this, negatively framed appeals plus negative pictures render higher donations if the problem is presented in the close temporal frame (1250 children die every day). However, positively framed appeals plus positive pictures render higher donations if the problem is presented in the far temporal frame (11 million children die every year; Chang & Lee, 2009). Also, in a non-donation consumer choice context, negatively framed appeals were more efficient than positively framed appeals, but primarily so for consumers with low need for cognition who were in a bad mood (Putrevu, 2014).

Although the current thesis did not test the seemingly complex happy/sad appeal helping effect, the general idea to combine the *when* and *why* of helping is applicable on this helping effect as well. Based on previous literature, both sad and happy charity appeals seem to work, but in different situations. A very tentative advise to organizations would be to aim for congruence of positive and negative aspects, both within the charity appeal (e.g. do not mix happy information with sad information), and in the charity appeal \times situation interaction (e.g. do not display a sad charity appeal at an amusement park).

Responding to anticipated criticism

Although I honestly think that the thesis in general and the three articles in particular contribute empirically, theoretically and somehow methodologically to the field of charitable giving, I am also very aware that there are aspects of the formulation of the research question, study designs and general conclusions that can, should and will be questioned or even criticized. In this section, the aim is to at least mention and where possible reply to some of the more anticipated criticisms before it even gets thrown at me.

Your conceptualization of emotional reactions is problematic

The possibly slightly controversial claim put forward in this thesis is that a higher perceived utility and a higher perceived responsibility can increase our helping motivation even if controlling for emotional reactions. Other researchers who put affect (e.g. Slovic, 2007) or sympathy (e.g. Loewenstein & Small, 2007; Small, 2011) in the absolute center of charitable giving would probably question my conclusion that the proportion dominance effect and in-group effect are not driven by emotional reactions. Several of these emotion-helping advocates would probably claim that this thesis use a too narrow inclusion-criterion when operationalizing emotional reactions. In this thesis, I have been clear that emotional reactions were operationalized narrowly including only personal distress and sympathy toward the victims. Both distress and sympathy have been shown to relate to helping in previous studies, so including them is by no means controversial. What might be controversial, however, is that other types of emotional reactions were not included. This section will discuss other types of emotions that can influence helping decisions, and at least provide a rationale for why they were not included.

You are not including anticipated emotions

Two emotions frequently discussed in the field of charitable giving is guilt and warm glow. Guilt is a self-conscious negative emotion that most typically arises when one appraises one's action or inaction as morally bad (Baumeister et al., 1994). Warm glow is a self-focused positive emotion that primarily arises when one has actively engaged in an action that is perceived as morally praiseworthy (Andreoni, 1990).

Guilt and warm glow can both be seen as current emotions. Guilt felt before a helping decision (reactive guilt or existential guilt; Baumeister et al., 1994) can influence helping positively, and it is not obvious if it does so via the emotional reaction mechanism or via the perceived responsibility mechanism. Guilt can be seen as a type of personal distress as it is negative and self-focused, but it also includes some appraisal-aspect similar to perceived responsibility. Warm glow is rarely an antecedent of helping but rather a consequence of helping. However, the suggestion here is that guilt and warm glow influence helping decisions, not in the same way as distress and sympathy (emotional

reaction to the situation), but primarily as anticipated emotions if one decides to help or if one decides not to help.

These anticipated emotions were left outside the scope of this thesis as they seem to enter the decision process at a later stage compared to emotional reactions. Psychological mechanisms are immediate reactions occurring when perceiving a need situation; even when one does not deliberate over helping or not helping. Anticipated emotions, on the other hand, depend on the deliberation of helping or not helping.

To illustrate, imagine India, a nation with vast income differences, where some very wealthy people live in luxurious multi-room houses, next to the slums where millions of children are living in serious poverty. Hearing this short scenario can give rise to emotional reactions (distress and sympathy towards the poor), perceived utility (how \$100 could do more good if possessed by a poor family rather than a rich family) and perceived responsibility (believing that the rich have a duty to help the poor).

Imagine instead that you hear the same story, but in addition you are asked if you would be willing to anonymously donate \$100 to an organization working in the Indian slum. You will likely feel some degree of emotional reactions, perceived utility and perceived responsibility this time as well, but in addition, you will consider whether to donate \$100 or not to the organization. Doing so means that you will start to imagine how you will feel if not donating (e.g. no guilt at all or very guilty). You also imagine how you will feel if donating (e.g. nothing special or very proud of myself). In this example, both the immediate emotional reactions (distress and sympathy) and the anticipated emotions (anticipated guilt and anticipated warm glow) can influence the choice to donate or not, but the psychological mechanisms occur at an earlier stage, and even in situations where one does not consider helping or not helping. Anticipated emotions on the other hand are dependent on the consideration process to help or not help.

Admittedly, when asking participants to read a charity appeal as was done in the included studies, the psychological mechanisms and the anticipated emotions will probably occur at about the same time. However, the very possibility that one can have emotional reactions (distress and sympathy) without the anticipated emotions (anticipated guilt and warm glow) provides a rationale for separating them.

This distinction between emotional reactions and anticipated emotions is surely a delicate one and one that is difficult to support empirically. I am also aware that anticipated emotions are not mere thoughts and cognitions about the future but also include affective parts. For example, anticipating guilt if not helping can thus cause distress that is not directly linked to the situation of need, but rather to the helping deliberation.

Anticipated emotions are undoubtedly important for predicting helping, but in this thesis they are assumed to be something else than emotional reactions and arrive at a later stage in the decision process. In the final section of this thesis, a preliminary model of helping will be presented and in that model, anticipated guilt and anticipated warm glow will be included.

You are not including positive emotions.

On a related note, a possible objection about the emotional reaction mechanism is that it includes only negative emotions. Although I am not the only one to make this classification (e.g. Fultz & Nielsen, 1993; Kemp et al., 2013), one could suggest that it is not a negative emotion-mechanism but a positive emotion-mechanism that primarily make us more motivated to help. This line of thinking found support in a neuroimaging study by Genevsky et al. (2013), where positive arousal but not negative arousal explained the higher donations to identified victims. Daniel Västfjäll and colleagues (Västfjäll et al., 2014; Västfjäll, Slovic & Mayorga, submitted manuscript) used both self-reports and psychophysiological measures, and showed that we feel positive emotions when seeing identified children that are possible to help and that we feel negative emotions when seeing identified children not possible to help, and that positive affect make us more motivated to help whereas negative affect make us less motivated to help. My interpretation of this is that it is not the sight of the needy children that induce positive emotions but rather the prospect of helping these children. Hence, it is not the single identified victim that elicits the positive affect, but the prospect of helping the single identified child. This in turn takes us back to the previous concern about anticipated warm glow when considering helping.

Similarly, several researchers discuss emotions and affect in relation to helping but focus on emotions toward the very act of helping rather than emotions towards the victims. For example “How do you feel towards helping in this situation” has been used to measure “feelings” (Västfjäll et al., 2014). This type of item differs from distress and sympathy as it refers to a feeling towards helping, rather than emotional reactions toward the need-situation.

In my taking, affect would always be the main predictor of helping if affect is defined broadly and includes not only moods and emotions but also attitudes, evaluations and preferences (as in Zeelenberg et al., 2008). However, a definition of the emotional reaction mechanism including attitudes, evaluations and preferences would make this mechanism conceptually very similar to the dependent variable (i.e. helping motivation). This is the main reason why emotional reactions were limited to include only sympathy and distress in this thesis.

You are aggregating distress and sympathy into a single mechanism

A different kind of concern is that the emotional reaction mechanism consists of too many, rather than too few types of emotions. Indeed, in this thesis, both self-directed emotions (distress) and other-directed emotions (sympathy) were included when referring to emotional reactions. There are surely many scholars who would question aggregating distress and sympathy into a single variable.

One theoretical reason for separating distress and sympathy is that distress gives rise to an egoistic motivation to help whereas sympathy gives rise to an altruistic motivation to help (Batson, 2011). However, as noted earlier, the egoism/altruism question is not of interest

in this thesis. However, a more relevant reason for separating them is that distress and sympathy at times seem to have different effect on helping motivation (e.g. Cameron & Payne, 2012; Davis, 1983a).

Initially, the idea was to define the emotional reaction mechanism as only sympathy as defined by Batson (2011). However, as reviewers, commenting on Article 1 suggested including distress as well, measures of distress were included in the subsequent studies. In the taxonomy suggested by Weber, however, distress seems to be a part of the heart-helping (i.e. the emotional reaction mechanism). Therefore, the discussion about differences in distress and sympathy in the thesis has been largely omitted, in concern of space and readability. However, this does not mean that distress and sympathy showed identical patterns. In summary, the results from the articles seem to suggest that although distress and sympathy are strongly correlated, and similarly influenced by the helping effects manipulations, sympathy is a much stronger predictor of helping motivation. The discussion about distress and sympathy as predictors of helping, as well as the discussion about how to measure these emotional reactions will surely go on.

Your conceptualizations of utility and responsibility are problematic

It can be argued that while the perceived utility mechanism is theoretically defined as the perceived costs and benefits, it is operationalized in the studies only as the perceived benefits of a helping project. This could possibly be seen as a problem. Perceived costs for oneself have been shown to increase steeper than perceived benefits for the victims when one can either help 2 children for \$5 or help 90 children for \$225 (Rubaltelli et al., submitted manuscript). Similarly, the willingness to donate \$1 to one person has been shown to be equal to the willingness to donate \$1.59 to two persons (Andreoni, 2007).

To be clear, the perceived cost of helping is never measured in the studies but rather assumed to be constant over the different conditions. The perceived cost of donating money to charity is likely to depend on the financial situation of the potential donor. However, as the included studies used within-subject designs or random allocation to experimental groups, individual differences in perceived costs of helping is not very likely to have had a major influence on the results.

In help decision situations, perceived utility can increase both by reducing costs (less negative consequences for oneself) or by increasing benefits (more positive consequences for others). The included studies were admittedly focused on the latter way of increasing utility. In real life, costs and benefits are positively correlated meaning that a higher costs for me (I donate more money) means a higher benefit for the victims (more vaccine can be sent to Africa). In people's minds however, the correlations between perceived cost (risk) and perceived benefits of different activities and technologies have been found to be weak and even slightly negative (Slovic & Västfjäll, 2010). For example, people

simultaneously perceive a high risk and a low benefit of nuclear power (Fischhoff et al., 1978).

As noted, although I have used the term “perceived utility” in the thesis. The empirical articles use different terms to refer to the same concept. The second article use the term “perceived impact” as this was suggested by a reviewer in order not to confuse “economic utility” (costs and benefits only for the actor) with “utilitarian utility” (costs and benefits for everyone involved). Perceived impact has been used previously in studies about helping decisions (Cryder, Loewenstein & Scheines, 2013; Cryder, Loewenstein & Seltman, 2013). In my taking, perceived impact refer to the same concept as perceived utility. The third article use the term “efficacy-reasons” to refer to choice-justifications that emphasize consequences and effectiveness. Although different terms are used for the same concept, all of them are assumed to go under the calculative decision mode and involve “helping with the head”.

Perceived utility and perceived responsibility are also emotional mechanisms

One might argue that not only sympathy and distress but also perceived utility and perceived responsibility are fundamentally emotional experiences. This thesis has claimed that both an increase in perceived utility and an increase in perceived responsibility can motivate helping, and emotions and motivation are traditionally intimately linked.

In my taking, whereas distress and sympathy are two types of emotions, perceived utility refers to beliefs about objective facts and perceived responsibility refers to beliefs about morality. Although these beliefs rarely are totally emotion-free, they seems conceptually distinct from emotional reactions (sympathy and distress) and from each other. To be clear, I do not claim that perceived utility and perceived responsibility are unrelated to all kinds of emotions. What I do suggest is that perceived utility and perceived responsibility do not primarily give rise to distress and sympathy but to different types of feelings (for example anticipated emotions if helping or not helping).

Your studies are artificial and have limited ecological validity

Admittedly, the included studies had to sacrifice some degree of ecological validity both in order to distinguish the three helping effects and in order to distinguish the three psychological mechanisms. This is a fair criticism and it is part of the explanation why the direct practical implications are limited.

Differentiating helping effects in real life

In real life, the helping effects are rarely as cleanly separated as they were in these studies. Often, the single identified victim effect and the proportion dominance effect appear together meaning that a single identified victim is framed as his or her own reference group implying that the rescue proportion is 100%. Nevertheless, one can easily imagine

cases where the identifiability is high but where the rescue proportion differs (e.g. you read a vivid story about a single identified child suffering from Malaria, and also either learn that this child is one of three children in the village that suffers from Malaria (high rescue proportion), or learn that this child is one of 1.2 million children in Africa that suffers (low rescue proportion). In this situation, identifiability is held constant but the rescue proportion is manipulated.

Alternatively, one can imagine situations where the rescue proportion is held constant (e.g. you can save 1 of the 5 people at risk) but where the identifiability (name, age, vivid details) of the victim possible to save is manipulated. Naturally, one could also manipulate the identifiability of the victims not possible to save. Admittedly, when testing the proportion dominance effect and the in-group effect in this thesis, the victims were always statistical. This could be seen as a limitation but the main reason for this was either practical (it is very difficult to present thousands of identified victims) or had theoretical justifications (cf. Kogut & Ritov, 2007; Ritov & Kogut, 2011).

In summary, although the three helping effects often appear together in real life (as the case with Baby Jessica), they seem to be able to differentiate without sacrificing too much of the ecological validity.

Differentiating psychological mechanisms in real life

Another type of criticism is that the included psychological mechanisms are not as cleanly separated in real life as they are portrayed in this thesis. It can be argued that emotional reactions, perceived utility and perceived responsibility are just different words to convey a general positive attitude towards helping and that all these mechanisms are strongly inter-correlated.

To be very clear, all bivariate correlations between all three mechanisms were positive and the effect-sizes ranged from medium to strong. Especially perceived responsibility was strongly positively correlated with both emotional reactions and perceived utility. This means that in general, when people report a high perceived responsibility they also report high emotional reactions and a high perceived utility of helping. One explanation of this correlation could be that participants do not pay enough attention to the actual meaning of the specific questions and answer in a holistic and categorical fashion. Another reason could be that one of the included mechanisms is primarily affected by the manipulation, but that participants “lift up” their responses of the other mechanisms in order to avoid the risk of answering inconsistently.

The aim in the studies was to make the participants notice and recognize the difference between the included psychological mechanisms rather than seeing them as a generic “pro-helping” mechanism. For that reason, the questions for each mechanism came in clusters rather than being intermixed in Article 2. It can be argued that this methodology creates differences that are not there in the real world.

Surely, emotional reactions, perceived utility and perceived responsibility has considerable overlap with each other in most situations. However, the aim of this thesis was to investigate the unique characteristics of the parts of the mechanisms that did not overlap. The used methodology might have enhanced the non-overlapping characteristics of the mechanisms in a slightly artificial way, but this was a conscious decision in order to surpass the tendency to answer questions about positive and negative attitudes overly consistent.

What is important to notice is that despite the high correlation between the three mechanisms, one of the mechanisms was significantly more influenced than the others. If the mechanisms would have been perfectly correlated, they would have been equally influenced by the manipulation. The high correlation between the mechanisms would work against the chance of finding differences between the mechanisms, but despite this, they were found. Also, for each of the three helping effect manipulations, different psychological mechanisms were the most influenced.

It is also worth noting that e.g. in Article 2, Study 4, each of the psychological mechanism could predict helping motivation even after controlling for both the other mechanisms. This suggests that although the mechanisms are correlated, each of them can increase helping independently of the others.

In summary, the three included psychological mechanisms were highly correlated in these studies, and they are probably even more correlated in the real world. However, this thesis suggests that they are conceptually and empirically distinguishable, and that each mechanism is the primary underlying mechanism of different helping effects.

You are not testing the interactions of helping effects

As previously noted, testing helping effects means testing the difference in helping motivation between two versions of a helping situation, where the versions only vary on a single pinpointed aspect. As also previously noted, this makes it very different from the real world where charity appeals differ on many aspects. One obvious limitation of the studies in this thesis is that they only refer to the three helping effects tested in isolation, but does not say anything about the possible interactions of the helping effects.

In fact, previous research has sometimes investigated the interaction between different helping effects. The most well-known is probably the complicated identified victim effect \times in-group effect interaction described earlier. We help single identified victims more than several statistical victims if the victims come from the in-group, but not when the victims come from the out-group (Kogut & Ritov, 2007). However, when there exist a conflict between the in- and out-group, this pattern is reversed (Ritov & Kogut, 2011).

The proportion dominance effect \times in-group effect interaction has also been investigated and the results suggest that the proportion dominance effect is stronger when the victims

are easier to perceive as a flock rather than separate individuals (Bartels & Burnett, 2011). As out-group victims (and especially non-human victims) are easier to perceive as a unison group than in-group victims, this would suggest a greater proportion dominance effect when the victims are from the out-group.

Testing the identified victim effect \times proportion dominance effect interaction would imply manipulating both the rescue proportion (e.g. 2 out of 3 vs. 2 out of 10 can be saved) and manipulating the identifiability (name and pictures) of both the victims possible to save and the victims not possible to save. To some extent, this is done in studies about pseudo-inefficacy, but the identified victim effect \times proportion dominance effect interaction can surely be investigated even more systematically. Speculatively, it is very possible that a situation where a single identified victim cannot be helped (e.g. you can help 9 of the 10 victims at risk but you cannot save Lisa) leads to less helping than a situation with a larger number of statistical victims cannot be helped (you can help 9 of the 15 unknown victims at risk).

Moving beyond the main helping effects, both the identified victim effect and the in-group effect have been suggested to interact with perceived innocentness. For victims that can be blamed for their own plight, identifiability decrease rather than increase help motivation (Kogut, 2011b), and the black-sheep effect predict that we will be less forgiving of in-group members (compared to out-group members) who repeatedly behaved badly (Biernat, Vescio & Billings, 1999; Gollwitzer & Keller, 2010).

To be clear, avoiding the interactions was a conscious choice as the main research question concerned psychological mechanisms as possible mediators of isolated helping effects. Still, one should be aware that helping effects can interact with each other, and that the interaction effects might have their own mediating psychological mechanisms. Investigating the interactions of helping effects even more systematically, and testing mediation of these interaction effects could be a fruitful next step in the field of charitable giving.

You have no measures of real donations

One obvious critique is that self-rated helping motivation e.g. “How motivated are you to support this project?” or “How likely is it that you would support this project?” does not measure actual helping. This is true, but most previous studies on helping that tested both actual helping and hypothetical donations or self-rated helping motivation, did not find any interaction effect with the manipulations (e.g. Kogut & Ritov, 2005a; 2005b; 2007; Kogut, 2011b). Also, asking participants to rate hypothetical donations come with a problem as these are rarely normally distributed which means worse psychometric properties than scales about motivation or likelihood of helping. According to Kahneman et al., (1993), questions about willingness or perceived importance to help might be preferable compared to hypothetical donation measures. As the aim of this thesis was not

very related to the practical applications, the choice to test helping effects with logistically simpler types of measures seems justified.

Article 2, Study 4, and Article 3 did include real monetary allocations as the dependent variable. However, in neither of these studies, participants received the money. Instead, they were merely asked to allocate the money between different projects. Although the monetary allocations were real (the money was later donated to the respective organizations), this might not be equivalent to real helping were money is taken from one's own resources. The most common way to test actual helping within this field is to provide the participants with some money, and then let them either keep the money or donate any sum to a helping project. One might argue that not even this should be considered real helping as the money one donated had not been mentally accounted for yet. Acknowledging the limitations that come with this type of methodology, the types of dependent variables used in this thesis seems adequate as the purpose was not to find new helping effects but to test underlying mechanisms of already established helping effects.

A preliminary model of helping effects

In the introduction of the thesis, several aspects of helping that were considered outside the scope of this thesis were briefly discussed. Now, the time has come to incorporate two of these aspects again – individual differences and anticipated emotions.

Figure 2 displays a simplified model of the results found in this thesis. The top row of boxes illustrates different types of situational differences that previously have been shown to increase helping behavior. In this thesis, it has been suggested that these situational aspects increase helping primarily through three different psychological mechanisms (mid row of boxes). It is important to note that the claim here is not that only a specific mechanism predicts helping in a specific situation, but rather that a specific mechanism primarily mediates a specific helping effect. All three psychological mechanisms can increase helping independently of the other mechanisms, but different situational aspects of a situation influence the different psychological mechanisms to different degrees. In-group victims (rather than out-group victims) primarily influence perceived responsibility. An identified victim (rather than statistical victims) primarily increases emotional reactions. A high rescue proportion (rather than a low rescue proportion) primarily increases perceived utility.

Individual differences

One important factor that influences helping but barely has been mentioned so far is the notion of individual differences. There are many individual differences that influence helping but for this model, the most relevant individual differences are those that can be related to the three psychological mechanisms. People differ in their inclination to accept personal responsibility, their propensity to feel distress and sympathy when seeing others suffer, and in their general beliefs about the efficacy of helping. Very likely, all these individual differences play a big role in explaining actual helping independently of situational differences.

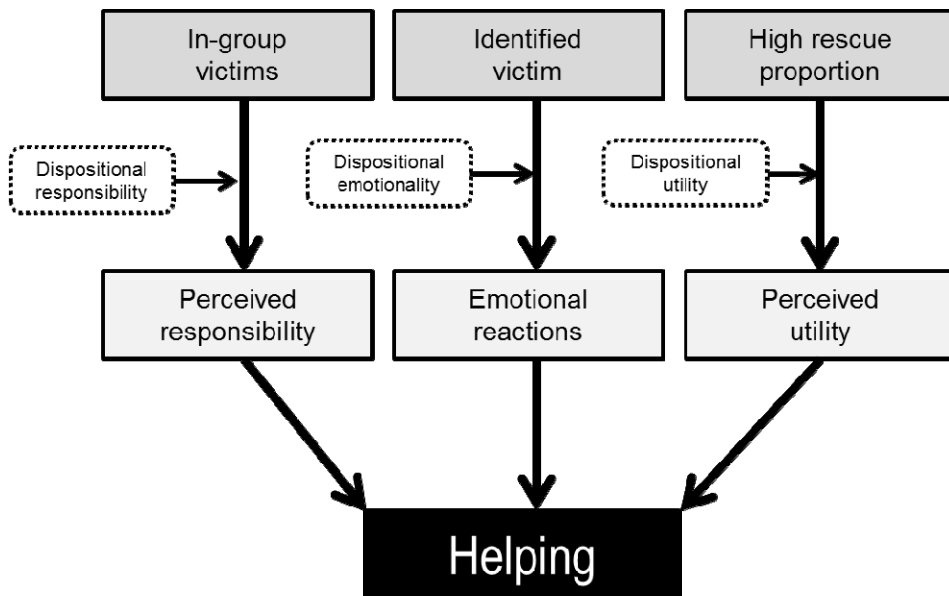


Figure 2: Proposed model including individual differences.

Dispositional responsibility refers to the general inclination to accept responsibility for something. There are several ways to measure dispositional responsibility. For example, the displacement of responsibility and diffusion of responsibility subcomponents in the moral disengagement scale (Detert, Treviño & Sweitzer, 2008) seems suitable. It appears plausible that both the dispositional inclination to accept responsibility and the situational characteristics (e.g. in-group victims or out-group victims) determine the perceived responsibility to help in a specific situation.

Dispositional emotionality refers to the general inclination to be emotionally touched when seeing or hearing about victims in distress. Whereas some people have strong emotional reactions even to rather non-vivid situations, others are relatively emotionally unaffected no matter situation. Possible ways to measure dispositional emotionality could

be with trait emotional empathy (Mehrabian, & Epstein, 1972; Davis, 1983a, 1983b) or with individual differences in emotion regulation when seeing disturbing images (John & Gross, 2007). It is likely that both dispositional emotionality and the situational characteristics (e.g. single identified victim or statistical victims) determine the emotional reactions in a specific situation.

Dispositional utility refers a general efficacy-belief in helping situations. This could be individual differences in self-efficacy (do I have what it takes to make a difference; Bandura, 1994) or response-efficacy (can charitable organizations ever make a real difference). It could possibly also be measured as a general attitude or trust toward charitable organizations (Sargeant & Lee, 2004; Webb, Green & Brashear, 2000). It seems probable that both dispositional utility and the situational characteristics (e.g. the proportion of victims in need that is possible to help) determine the perceived utility of helping in a specific situation.

In this thesis, the focus has been on how situational differences influence the psychological mechanisms. Individual differences were assumed to be balanced out over the experimental conditions. An interesting path for future studies would naturally be to add individual differences in dispositional responsibility, emotionality and utility to the model and look for main effects, as well as interaction effects (how are different people affected by different helping situations). Using the terminology of this thesis, the *when*-question refers to situational differences, the *why*-question to psychological mechanisms, and the *who*-question to individual differences.

Anticipated emotions

The model presented so far includes the key concepts of this thesis and seems for the most part consistent with the obtained findings. It should, however, only be seen as one piece of the puzzle about charitable giving. We now add an aspect of helping that has been previously mentioned – anticipated emotions.

Figure 2 illustrates a possible extension of the proposed model. The two added boxes represent two types of anticipated internal emotions that previously have been shown to motivate helping behavior. These are anticipated warm glow if one helps (e.g. Cryder, Loewenstein & Seltman, 2013) and anticipated guilt if one does not help (e.g. Ahn et al., 2013; Lindsey, 2005). It is central to this model to recognize that these boxes represent anticipated emotions that will arise either after one decides to help (how will I feel if I help?) or after one decides not to help (how will I feel if I do not help?). These anticipated emotions were left outside the scope of this thesis as they were seen as different from the psychological mechanisms and assumed to enter the model at a later stage (as discussed earlier). In my interpretation, psychological mechanisms are immediate reactions occurring when perceiving a need situation; even when one do not deliberate over helping or not helping. Anticipated emotions, on the other hand, depend on the deliberation of helping or not helping.

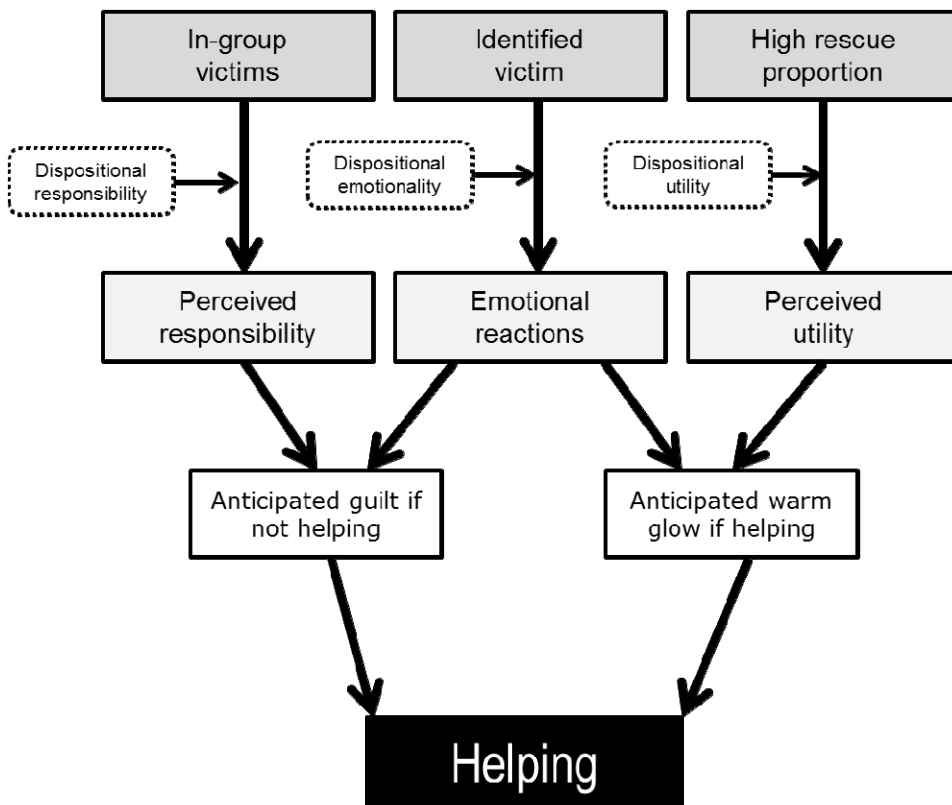


Figure 3: Extension of the proposed model, including anticipated emotions if helping and if not helping

An important extension to the model would be to include both anticipated guilt if not helping and anticipated warm glow if helping as two motivational factors of helping. Notice that the model does not include a single box called anticipated emotions, but one box for anticipatory emotions if helping (anticipated warm glow) and one box for anticipated emotions if not helping (anticipated guilt). The role of anticipated emotions could possibly be included by only looking at the link between helping effects via anticipated emotions if helping or not helping to helping thus omitting the psychological mechanisms. More preferably, the anticipated emotions could also be incorporated in the broader model: helping effects → psychological mechanisms → anticipated emotions if helping/not helping → helping (as illustrated in Figure 3).

Predictions from this broader model would include a strong link from perceived responsibility to anticipated guilt if not helping. If one imagines not doing something that one consider a responsibility, one will likely anticipate intense feeling of guilt if not helping, and this anticipation will increase helping (Baumeister et al., 1994). However, it is less likely that a heightened perceived responsibility will make people anticipate positive

emotions if helping (warm glow). Helping can be motivated by either pressure or pleasure, and a perceived personal responsibility constitutes a pressure motive (Gebauer et al., 2008; Baumeister et al., 1994). On the other hand, one might expect a stronger link from perceived utility to anticipated warm glow (Cryder, Loewenstein & Scheines, 2013; Cryder, Loewenstein & Seltman, 2013). If one does something that one believes will be efficient and useful, one will anticipate feeling more positive emotions if helping and this could increase helping behavior. However, it is not as obvious why people would anticipate more guilt if not helping in the high rescue proportion version. Emotional reactions are likely to influence both anticipated warm glow if helping (Västfjäll, Slovic & Mayorga, submitted manuscript; Genevsky et al., 2013) and anticipated guilt if not helping (Lindsey, 2005).

A related question that is worth investigating further is to test the relative prediction power of anticipated warm glow if helping, and anticipated guilt if not helping on helping behavior. Whereas anticipated warm glow if helping constitutes an approach oriented pleasure motivation, anticipated guilt if not helping constitutes an avoidance oriented pressure motivation (Gebauer et al., 2008). Bekkers (2010) suggest that both efficacy of the contribution, and psychological distance to the beneficiary increase warm glow. In the framework of this model, I agree with Bekkers regarding efficacy (i.e. a high perceived efficacy increases the anticipated warm glow of helping), but not regarding psychological distance which seems more oriented towards avoiding guilt. Obviously, these are empiric questions that can be tested.

Although not part of the current model, one could also add anticipated reactions from other people if helping or not helping. It has been shown before that people help both to avoid criticism and to gain a better reputation. As people to some extent can predict others reactions, anticipated blame if not helping or anticipated praise if helping might be strong determinants when making a helping decision. Obviously, these social motivators are only relevant if helping is made publicly for others to see, as opposed to the anticipated internal emotions that can be felt by most humans even in private. An obvious link here is between the responsibility mechanism and perceived blame if not helping. Not helping in a situation where you personally think that you are responsible to help, will likely lead to high anticipated blame by others if done publicly.

It should be noted that this model is currently very much on the drawing table. I have conducted a number of studies about anticipated internal emotions (anticipated guilt if not helping and anticipated warm glow if helping) as well as on the social factors (anticipated praise if helping and anticipated blame if not helping), but they are not conducted systematically enough to justify any general conclusions yet. The proposal of this model should first and foremost be seen as a suggestion of how the findings in this thesis could relate to a broader field of charitable giving.

Conclusion

This thesis has proposed that helping behavior in general and charitable giving in particular can be approached from at least two perspectives. These perspectives have here been referred to as the *when*-question and the *why*-question.

The *when*-question means investigating which kind of situational factors that make people help more or less. Going back to the Baby Jessica vs. starving Eastern African children example in the introduction, there are many different situational factors that might have influenced people's helping motivation. There are surely many situational differences that could play a role of determining helping motivation but in this thesis, three situational aspects were in focus; (1) that Baby Jessica was an identified victim whereas the African children were statistical, (2) that Baby Jessica was her own reference group whereas each starving African child was one among many, and (3) that Baby Jessica was an American girl (part of the in-group) whereas the African children were not.

The *why*-question means investigating what kind of psychological mechanisms that best predict people's helping motivation; or more simply put – what kinds of feelings, thoughts and beliefs that make us more likely to help. In this thesis, a taxonomy with three types of psychological mechanisms that can motivate helping were proposed: (1) emotional reactions (or helping with the heart) meaning that people help because they feel distress (self-directed negative emotion) or sympathy towards the victim (other-directed negative emotion), (2) perceived utility (or helping with the head) meaning that people help because they feel they can do a great deal of good for others, for a relatively small personal cost and (3) perceived responsibility (or helping by the book) meaning that people help because they believe they have an obligation or duty to help. Testing the *why*-question in the Baby Jessica context, would mean testing which of these psychological mechanisms that was the best predictor of helping.

The main aim of this thesis was to investigate the interaction between the *when* and *why* of helping. This meant testing all the three suggested psychological mechanisms as possible mediators of all the three helping effects. The results suggest: (1) That the primary reason people are more motivated to help when they learn about identified victims than about statistical victims is that identified victims elicit more emotional reactions (especially sympathy): (2) That the primary reason people are more motivated to help when they hear about a high rescue proportion project (e.g. you can save 94 out of 100) then when they hear about a low rescue proportion project (e.g. you can save 94 out of 8000), is that they perceive a higher utility in helping the high rescue proportion

project. (3) That the primary reason people are more motivated to help in-group victims than out-group victims is that they believe they have a higher responsibility to help victims from their in-group. The novel contribution of this thesis is that it shows that different helping effects can be best explained by different psychological mechanisms.

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Article I

Perceived Utility (not Sympathy) Mediates the Proportion Dominance Effect in Helping Decisions

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ABSTRACT

The proportion dominance effect (PDE) refers to a higher motivation to help when the victims are part of a small (you can help 56 out of 60) rather than a large (you can help 56 out of 560) reference group. In two studies using different experimental paradigms, we investigated possible mediators of the PDE. Study 1 ($N = 168$) was conducted in three separate steps in order to test each link of the mediator model independently. Students read six vignettes where it was possible to help a fixed number of victims but where the size of the reference group was either small or large. When the reference group was small, helping motivation and perceived utility were higher, whereas sympathy toward the victims and perceived rights were not. A within-subject mediation analysis showed that perceived utility mediated the PDE. Study 2 ($N = 36$) presented four versions of a single helping situation in a joint evaluation mode where the size of the reference group became gradually smaller in each version. All participants compared and responded to each version. Helping motivation increased as the reference group became smaller, and this effect was mediated by perceived utility rather than by distress, sympathy, or perceived responsibilities. Our results suggest that unlike, for example, the identifiability and singularity effects, which have been suggested to be mediated by emotional reactions, the PDE is mediated by perceived utility. Copyright © 2013 John Wiley & Sons, Ltd.

KEY WORDS helping motivation; identifiable victim effect; perceived utility; proportion dominance effect; sympathy

Imagine yourself reading about a common form of illness that annually kills 25 000 children. A charity fund has been opened to help the ill-fated children. There exists a 95% effective vaccine that protects against the illness, so a child that is vaccinated soon after birth has a higher chance of surviving. If donations exceed \$3m, about 150 of the 25 000 children that annually die in the illness can be saved.

According to psychological research on charitable giving, this kind of helping project will not elicit much helping motivation despite the cost of saving one life being only \$20 000. This is not mainly a question about general unhelpfulness. Other helping projects enjoy great support even when the cost of saving one life is much higher (Slovic, 2007; Loewenstein & Small, 2007).

One reason for the low helping motivation is that the proportion of victims that can be saved is very low (Bartels, 2006). The present research investigates whether this *proportion dominance effect* (PDE) is mediated by emotional reactions, perceived rights and responsibilities, or perceived utility. We begin by quickly reviewing the literature on how contextual factors affect people's helping motivation, and then clarify how the PDE differs from other effects.

Contextual differences

In their pioneering article on how context affects helping motivation, Jenni and Loewenstein (1997) examined the “identifiable victim effect” by means of four factors: *ex ante/ex post*, *vividness*, *certainty*, and *proportionality*. The *ex ante/ex post* factor refers to the existence of a victim, where in *ex post* the victim already exists and in *ex ante* the victim is yet to be determined. In the aforementioned

situation, the victims that can be helped are not yet born and hence not determined. If the unlucky children already existed, they would elicit more helping motivation. The *vividness* factor refers to the amount of detail and concreteness. In the situation aforementioned, no identifying information about the sick children is included. By presenting an iconic victim with name, picture, and vivid information, helping motivation would probably increase. The *certainty* factor refers to the confidence in the help being successful. The aforementioned situation only provides a probabilistic increase in the chances of surviving but does not give any guarantees. A vaccine providing a 100% protection would certainly save the treated children and hence produce more helping motivation. Finally, *proportionality* refers to the proportion of victims that can be saved. In the aforementioned situation, the proportion of children possible to save is only .6%. If people could save 75 of the 100 children (75%) for the same amount of money, helping motivation would be much higher despite the number of lives saved with \$3m being clearly lower ($150 > 75$).

Help decision effects

Jenni and Loewenstein (1997) presented these four factors as parts of the “identifiable victim effect,” but they may be considered as separate effects that increase helping motivation both independently and in interaction with other effects. We will call these *help decision effects* and briefly explain some of the most well known.

The identifiability effect (Kogut & Ritov, 2005a, b, 2007) is strongly connected to the *vividness* factor.¹ In a nutshell,

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¹Kogut and Ritov use the term “identifiable victim effect,” but as they use a narrower definition than Jenni and Loewenstein; we will refer to this as the “identifiability effect.”

people are more likely to help if they have personal information about a victim than if the victim is anonymous. Age and name of the victim increase helping motivation, and an additional photo increases it further (Kogut & Ritov, 2005a). The identifiability effect can, however, appear without the vividness factor if the victim is presented *ex post*. Asking people to help a specific but unknown victim elicits more helping motivation than asking them to help a victim yet to be decided (Small & Loewenstein, 2003). However, the identifiability effect only appears when there is a single victim. When eight identified children or eight anonymous children are presented, there is either no difference in helping motivation, or even a higher motivation to help the anonymous children (Kogut & Ritov, 2005a, b). Also, as long as the victims are identified, one victim elicits more helping motivation than eight victims (Kogut & Ritov, 2005a, b, 2007). This is called the singularity effect. We are also more motivated to help victims that suffered a loss, rather than victims in a chronic state (reference-dependence effect; Small, 2010), and sad-looking children rather than happy-looking children (sad-face effect; Small & Verrochi, 2009).

However, the only factor that consistently predicted helping motivation in the study by Jenni and Loewenstein (1997) was proportionality, which is very similar to the PDE (Bartels, 2006).² The higher percentage of victims one can save, the more motivated one will be to help. For example, people are more motivated to support a project that can save two out of four people annually killed at a certain intersection (50%), compared with two out of 112 people annually killed on the entire highway (1.8%; Jenni & Loewenstein, 1997). We are sensitive not only to the absolute number but also to the proportion of lives possible to save.

The PDE is one of the more robust help decision effects (Baron, 1997; Bartels, 2006; Bartels & Burnett, 2011), but it differs in many ways from other effects. Whereas the identifiability and singularity effects are found only in separate evaluation mode (when the situations are presented separately; Kogut & Ritov 2005b), the PDE also exist in joint evaluation (when situations are presented side by side to make comparisons easy), although it is stronger in separate evaluation (Bartels, 2006; Fetherstonhaugh, Slovic, Johnson, & Friedrich, 1997). Also, unlike many other help decision effects, the PDE does not disappear when people think they will be held accountable (Friedrich et al., 1999). The PDE does, however, imply that the value of a life decreases when the size of the reference group increases, and this goes against a rational utility theory and is also in sharp contrast to the widespread idea that every human life is of equal worth. If every life is of equal worth, then it will be worth twice as much to save four lives than to save two lives (Slovic & Västfjäll, 2010). Because of this, the PDE is usually seen as a bias, both by scholars (Baron, 1997) and by laypeople upon careful reflection (Bartels, 2006). The aim of this study is to test possible mediators of the PDE.

Mediators of help decision effects

The most commonly suggested mediator of help decision effects in general is probably emotional reactions (Loewenstein & Small, 2007; Slovic, 2007). Emotional reactions in a helping situation can be of at least three kinds; victim-oriented emotions (such as sympathy toward the victims), self-oriented emotions (such as personal distress), and anticipated emotions (such as anticipated guilt and warm glow).³ The main focus in this study will be on the first two kinds, but the role of anticipated emotions will be considered further in the Discussion section.

The identifiability and singularity effects have previously been linked to emotional reactions. Sympathy and distress correlate with helping motivation triggered by these effects, and the correlations are generally stronger in the identifiable victim condition than in the statistical victim condition (Small, Loewenstein, & Slovic, 2007, Study 1). In addition, several condition differences have been found. Kogut and Ritov (2005a) found that distress and hypothetical willingness to pay were higher when a victim was identified rather than statistical (Study 2) and when there was one identified victim rather than eight identified victims (Study 3). Moreover, distress at least partially accounted for condition differences in helping motivation. Kogut and Ritov (2005b) found that identifiability increased sympathy for single victims but decreased it for groups of victims if the victims were in serious need, and that sympathy was related to willingness to contribute (Study 3). Further, Kogut and Ritov (2007) showed that for in-group victims, distress was more intense when people read about one identified victim than about eight identified victims, and a study briefly reported in Loewenstein and Small (2007, p. 119) showed that determined victims elicit greater sympathy and receive more help than undetermined victims.

Other help decision effects have been shown to be mediated by emotional reactions. Giving more to a victim with a sad face is mediated by own sadness (Small & Verrochi, 2009), and reference dependence is mediated by sympathy for the victims (Small, 2010). In summary, the link between emotional reactions (sympathy and distress) and several help decision effects appears very strong, and it has even been suggested that emotional reactions may underlie almost all help decision effects (Loewenstein & Small, 2007; Slovic, 2007).

However, it should be noted that previous studies have often measured emotional reactions crudely and with very diverse items that cover not only different types of emotional but also non-emotional reactions. For example, Small et al. (2007) and Friedrich and McGuire (2010) measured "feelings" with items covering distress, sympathy, perceived responsibility, and appropriateness; and Small (2010) used sympathy to refer to all negative emotions in response to

²Alternative terms for similar phenomena are "psychophysical numbing," "reference group effect," and "drop in the bucket effect."

³An anonymous reviewer pointed out that there can be positive or negative emotions toward a certain helping project as well. We believe that emotions toward a helping project are very hard to distinguish from general positive or negative attitudes toward the helping project. This would imply that these emotions measure the same thing as helping motivation, which is our dependent variable.

others' suffering. Aggregating correlated but conceptually different types of reactions into a single variable is problematic and can possibly explain the lack of results in previous tests of mediation of help decision effects (e.g., Small & Loewenstein, 2003). In the current study, the aim is to include mediators (different reactions) that are distinguishable from each other both conceptually and empirically, and relevant in the helping-situation context.

Possible mediators of the PDE

To our knowledge, no previous studies have systematically examined possible mediators of the PDE in helping situations. We recognize that Friedrich and McGuire (2010) came very close when they tested two mediators on the famous Rokia scenario, but their study did not isolate the PDE from other help decision effects.

One possible reason for the lack of mediational studies on PDE is its assumed similarity with other help decision effects that have been shown to relate to emotional reactions. For example, the PDE is often seen simply as one factor of the broader identifiable victim effect (Jenni & Loewenstein, 1997). The PDE has been called a "sympathy bias," and the tendency to value saved lives differently has been suggested to be swayed by an affective response (Small, 2010). In line with this, people who rely more on intuition than on deliberation have been shown to be more prone to the PDE (Bartels, 2006), and people often try to escape from sympathy when they feel that their helping will be a drop in the bucket (Cameron & Payne, 2011). The most obvious suggestion for a link between sympathy and the PDE comes from Loewenstein and Small (2007), where the PDE is discussed under the same heading as the identifiability effect and the following stated: "When the proportion is high, the lives become more identifiable. Ten lives out of a group of 100 is a high proportion and thus more sympathy inducing than 10 lives out of 1,000,000" (p. 119).

It might be easier to imagine saving the lives of 75 out of 100 sick children, and this could in turn lead to stronger emotional reactions than a situation where 150 out of 25 000 children can be saved. Therefore, in this study, emotional reactions are included as the first possible mediator of the PDE. We separate sympathy (victim-oriented emotional reaction) from personal distress (self-oriented emotional reaction), and whereas Study 1 measures only sympathy, Study 2 includes both distress and sympathy as possible mediators.

However, not all processes behind helping motivation are accompanied by strong emotional reactions. Emotions drive many help decision effects if the victims belong to the in-group, but more systematic and dispassionate processes predict help to out-group victims (Stürmer, Snyder, Kropp, & Siem, 2006). Similarly, the correlation between "feelings" and helping decreases when victims are described without vivid details or when people are primed to think deliberately (Small et al., 2007).

One plausible alternative mediator is the extent to which the helpers believe that the victims have a moral or natural right to be helped and that other people (including themselves) have a responsibility or duty to help. Attributions of personal responsibility, rights, and obligations to help are sometimes measured

in studies on helping (Baron & Miller, 2000; Cryder & Loewenstein, 2012), indicating that these moral concepts are perceived as closely connected to helping motivation. The philosopher Peter Unger (1996) noted that people regard saving lives as less obligatory when these lives are construed as a few among many at risk, thus suggesting a link between the PDE and moral judgments. Just as motivation to help can arise from emotional reactions, it can arise from reason or by acknowledging an absolute moral principle (such as Kant's deontology or Rawls' justice-based ethics). It is possible that we acknowledge the individuals' rights or our own responsibility to help more when it is possible to save 75 out of 100 victims than when it is possible to save 150 out of 25 000 victims, and hence that perceived rights and responsibilities mediate the PDE. To test this, Study 1 includes the perception of victims' rights as the second possible mediator of the PDE, whereas Study 2 includes perceived personal responsibility.

A third possible mediator of the PDE is the perceived utility of helping. Helping involves both benefits and costs. The most obvious benefit is the help the victim receives, which may mean the difference between life and death. But helping may be costly for the benefactor in terms of money, time, and energy. From a utilitarian point of view, people will be motivated to help when they believe that the total benefits will outweigh the total costs. If one is asked to donate \$100 (an obvious cost), the motivation to help will depend on how much benefit one believes the money will generate (the perceived utility). A person who expects the benefits to be great will donate money more often compared with a person who expects the benefits to be small.

Although no studies have explicitly investigated perceived utility of helping in the PDE context, related concepts have been used by James Friedrich in studies on proportional reasoning in different contexts. Friedrich et al. (1999) investigated attitudes toward life-saving interventions to reduce traffic fatalities. Participants were asked to indicate how many lives they felt must be saved to justify a \$850 million expenditure, and the size of the reference group was manipulated within subjects. When using a "lives saved" phrasing, economic priming made students increase the number of lives that had to be saved when the size of the reference group became larger. Participants with this proportional reasoning were also more likely to justify their choice in cost-benefit terms. Friedrich, Lucas, and Hodel (2005) tested proportional reasoning in an affirmative action plan scenario concerning race-neutral admissions, without changing the size of the reference group but instead framing the number of victims either in terms of proportions or in terms of frequencies. Both "perceived impact" and "fairness" mediated the relationship between framing and race-neutral admission endorsement. Friedrich and Dood (2009) investigated proportional reasoning in attitudes about acceptable war casualties, again with a within-subject design. Cost-benefit priming predicted greater proportional devaluation for out-group casualties than for in-group casualties. However in Friedrich and McGuire (2010), both "impact" and "affect" were tested as potential mediators of helping motivation on the Rokia scenario, which includes the PDE, but also the identifiability and singularity effects. Surprisingly, they did not find any mediation for either suggested

mediator. These studies indicate that proportional reasoning is at least partially related to cost–benefit thinking that in turn seems at least partially related to utility estimations. Therefore, perceived utility is included as the third possible mediator of the PDE.

Overview of the studies

The aim of this study was to systematically investigate which psychological processes mediate the PDE. Possible mediators that have been discussed in the literature are included: emotional reactions (sympathy and distress), perceived rights and responsibilities, and the perceived utility of helping. Our results could suggest that one of the included mediators primarily explains the PDE, but alternatively that none of the included mediators explain the PDE, or that several mediators together explain the PDE.

The PDE in helping situations could be mediated primarily by emotional reactions (sympathy and distress) as suggested by Loewenstein and Small (2007). It could also be mediated by increased perceived rights and responsibilities. Alternatively, it could be mediated by perceived utility and thus mirror the link between proportional judgments and cost–benefit thinking that has been suggested in the studies by Friedrich and colleagues.

We test this in two studies using different experimental paradigms. Study 1 is conducted in three steps to confirm each link in the mediation model independently. In Study 1a, the relation between the situation and helping motivation is tested (replicating the PDE). In Study 1b, the relation between the situation and three proposed mediators (sympathy, perceived rights, and perceived utility) is tested. In Study 1c, both links are tested, and a within-subject mediation analysis conducted. Study 2 is a conceptual replication of Study 1c but conducted in a joint evaluation mode and with distress and perceived responsibilities as additional mediators. Four versions of a single helping situation are presented next to each other. The size of the reference group decreases gradually, and participants rate their reactions and helping motivation for each version.

STUDY 1

1a: Replicating the PDE

Forty-eight (27 women, 20 men, and 1 who failed to report sex) Swedish students participated. The mean age was 26.13 years ($SD = 5.28$). Participants were recruited individually and completed a paper-and-pen package in a study room. The package contained six short vignettes based upon the ones used by Bartels (2006).⁴ Each vignette described an emergency situation and a suggested rescue project. The rescue project could always save a fixed number of victims, but we manipulated the total number of victims in need and consequently the proportion of victims one could save by adopting the rescue

project. Each vignette was therefore written in one *high rescue proportion* (HRP) version where the reference group was small and one *low rescue proportion* (LRP) version where the reference group was large. For example, in the jobs vignette, you could save 56 out of 60 jobs in the HRP version and 56 out of 560 jobs in the LRP version.

The economic crisis has forced many companies to lay off people. Your department provides economic support to local companies, but limited resources force you to choose which companies to help. There is currently one industry that is in desperate need for a support program in order to survive. If you choose to support this industry, 56 of the 60 [560] employees will be able to keep their jobs.

Each package contained three vignettes written in the LRP version and three written in the HRP version. The order of vignettes and vignette-version combinations was perfectly balanced using a Latin-square design, but an HRP version always followed an LRP version and the other way around. After each vignette, helping motivation was measured by letting participants state their motivation to support the rescue project on a 7-point Likert scale ranging from 0 (*would not support at all*) to 6 (*would give strongest possible support*).

Results

Mean helping motivation for each vignette is presented in the left column of Table 1. For each participant, the responses from the three vignettes in the HRP versions were aggregated to form a score for HRP helping motivation, and the responses from the three vignettes in the LRP version were aggregated to form a score for LRP helping motivation. One participant was found to have an extremely low HRP score ($M = 0$; $z = -3.40$) but a normal LRP score ($M = 4.67$; $z = .56$). Her HRP score was adjusted to the second lowest HRP score ($M = 1.33$) before proceeding with the analysis.

Helping motivation was higher in the HRP version than in the LRP version, $t(47) = 2.45$, $p = .018$, $d = .35$. This is a successful replication of the PDE.⁵

1b: Testing only the mediators

Forty-eight (32 women and 16 men) Swedish students (mean age = 25.58 years, $SD = 6.76$) were recruited in connection to classes and filled out a paper-and-pen package. The vignettes and design were identical to those of Study 1a, but instead of stating their motivation to support the rescue project, participants read nine statements (Table 2) and rated their degree of agreement with each on a 5-point Likert scale ranging from 0 (*do not agree at all*) to 4 (*agree completely*). The nine statements were written to represent the suggested mediators: (i) sympathy toward the victims, (ii) perceived rights of the victims to receive help, and (iii) perceived utility of helping.

⁴Shortened versions of the, Birds, Jobs, Otters, Paper, Plants, and Tuna vignettes were used. The vignettes can be obtained from the corresponding author upon request.

⁵The difference was significant even without adjusting the outlier.

Table 1. Means (*SD*) and *p*-values for helping motivation (Study 1a; *n* = 48), and means (*SD*) and alpha values for the included mediators on the separate vignettes (Study 1b; *n* = 48)

	Helping motivation (Study 1a)			Sympathy (Study 1b)			Perceived rights (Study 1b)			Perceived utility (Study 1b)		
	HRP	LRP	<i>p</i>	HRP	LRP	α	HRP	LRP	α	HRP	LRP	α
Birds	4.38 (1.97)	3.58 (1.91)	.165	1.81 (1.06)	1.96 (1.17)	.88	2.60 (.99)	2.44 (1.14)	.87	3.28 (.69)	1.32 (.90)	.91
Jobs	4.29 (1.40)	3.38 (1.69)	.046	2.28 (1.00)	2.17 (1.01)	.86	2.30 (1.15)	2.19 (1.00)	.89	3.50 (.68)	1.29 (.93)	.94
Otters	4.42 (1.59)	4.79 (1.44)	.396	2.35 (.91)	2.56 (1.24)	.91	2.91 (.99)	3.01 (.81)	.76	3.64 (.45)	2.15 (.69)	.86
Paper	5.42 (.88)	4.29 (1.92)	.014	2.11 (1.19)	1.97 (1.01)	.88	2.86 (.85)	2.75 (.90)	.81	2.82 (.77)	1.92 (.99)	.89
Plants	3.00 (1.89)	3.50 (1.91)	.367	1.10 (1.09)	1.51 (1.16)	.87	1.81 (1.32)	1.94 (1.12)	.91	3.17 (.82)	1.96 (.75)	.80
Tuna	5.29 (.95)	4.42 (1.86)	.048	3.19 (.84)	2.69 (1.12)	.88	3.42 (.72)	2.85 (.97)	.75	3.07 (.75)	2.17 (.90)	.83
Total	4.49 (1.23)	3.99 (1.20)	.018	2.14 (.87)	2.14 (.95)		2.65 (.83)	2.53 (.83)		3.25 (.54)	1.80 (.62)	

Note: High rescue proportion (HRP) indicates a small reference group (e.g., 56 of 60 can be saved). Low rescue proportion (LRP) indicates a large reference group (e.g., 56 of 560 can be saved). The total HRP displays the mean after the outlier was adjusted in Study 1a.

Table 2. Items used to measure the mediating variables in Studies 1b and 1c

- (1) I get touched emotionally when I read about the victims. (*sympathy*)
- (2) The helping project does not seem to do much good. (*utility-r*)
- (3) The victims have a right to receive help in this situation. (*rights*)
- (4) I do not feel any strong emotions toward the victims in this situation. (*sympathy-r*)
- (5) The helping project seems promising when considering the expected results. (*utility*)
- (6) I do not think the victims have any absolute right to receive help in this case. (*rights-r*)
- (7) I feel strong sympathy when I read about the victims in the story. (*sympathy*)
- (8) To not help the victims would be to violate their rights. (*rights*)
- (9) The described project does not appear to lead to particularly positive results. (*utility-r*)

Relevant variables in parentheses. *r*, reversed.

Results

Internal reliability was good for all suggested mediators on all vignettes (Table 1). The statements were therefore aggregated to form one score for each mediator on each vignette.⁶ As in Study 1a, the responses from the three vignettes in the HRP versions and the responses from the three vignettes in the LRP version were aggregated to form one score for each mediator on both the HRP vignettes and LRP vignettes.

Perceived utility, but not sympathy for the victims or victims' rights, was higher when the reference group was small than when it was large. Sympathy for the victims, $t(47) = -.04$, $p = .967$, and perceived rights of the victims $t(47) = 1.01$, $p = .316$, did not differ between the HRP vignettes and the LRP vignettes; but perceived utility of helping was clearly higher in the HRP vignettes than in the LRP vignettes, $t(47) = 13.15$, $p < .001$, $d = 1.89$.

1c: The mediation analysis

Seventy-two (40 women, 31 men, and 1 who failed to report sex) Swedish students participated. The mean age was

23.67 years ($SD = 3.88$). The same vignettes and design were used, and the recruitment procedure was similar to the one used in Study 1b. In this study, both the mediators and helping motivation were measured. Because the psychological reactions are supposed to mediate the PDE, we made sure to measure the three mediators prior to the helping motivation.

The mediators were measured with the same nine statements and on the same 5-point scale as in Study 1b. To measure helping motivation, we asked participants four questions. (i) Would you support the rescue project? (ii) How motivated are you to support? (iii) How important do you think it is to support? (iv) How high priority does it have to support? These questions were measured on a 7-point Likert scale ranging from 0 to 6 where a higher score represented higher helping motivation.

Results

The reversed items for sympathy (item 4) and perceived rights (item 6) reduced the alpha on most vignettes. All subsequent tests were performed both with and without these two items, but as the results were very similar; and for the sake of consistency with Study 1b, we report the results obtained if including all nine items. The four questions used to assess helping motivation were strongly inter-correlated (all z s $> .88$) and therefore aggregated into a single helping motivation score. Data for the individual vignettes are presented in Table 3. As in Studies 1a and 1b, the responses from the three vignettes in the HRP versions and the responses from the three vignettes in the LRP version were aggregated to form one score for helping motivation and one score for each mediator on both the HRP vignettes and LRP vignettes.

Like in Study 1a, the size of the reference group affected the ratings. Helping motivation in the HRP vignettes was higher than in the LRP vignettes, $t(71) = 3.55$, $p = .001$, $d = .42$.

The results from Study 1b were also replicated. Sympathy for the victims did not differ between the HRP vignettes and LRP vignettes, $t(71) = 1.67$, $p = .100$. Victims' rights did not differ between the HRP vignettes and the LRP vignettes, $t(71) = 1.14$, $p = .257$. However, the perceived utility of helping was clearly higher in the HRP vignettes than in the LRP vignettes, $t(71) = 14.72$, $p < .001$, $d = 1.65$.

⁶Principal axis factor analysis with direct oblimin rotation was used to make sure that we were measuring three separate constructs. In Study 1b, all nine statements loaded on their expected factors in five of the six vignettes if extracting three factors. In Study 1c, all nine of the included statements loaded on their expected factors in four of the six vignettes if extracting three factors. This justifies treating the three mediators as separate variables.

Table 3. Means (*SD*) and *p*-values for helping motivation, and means (*SD*) and alpha values for the included mediators for the separate vignettes in Study 1c (*n* = 72)

	Helping motivation			Sympathy			Perceived rights			Perceived utility		
	HRP	LRP	<i>p</i>	HRP	LRP	α	HRP	LRP	α	HRP	LRP	α
Birds	3.04 (1.34)	2.43 (1.22)	.047	1.97 (1.03)	1.28 (.83)	.83	2.56 (1.01)	2.06 (.99)	.80	3.05 (.82)	1.10 (.93)	.90
Jobs	3.76 (1.33)	2.92 (1.09)	.004	2.32 (.95)	2.28 (.88)	.75	2.68 (.80)	2.56 (.91)	.73	3.29 (.68)	1.33 (.85)	.89
Otters	3.58 (1.44)	3.18 (1.32)	.229	2.33 (1.10)	2.31 (.87)	.83	2.58 (1.19)	2.66 (.78)	.79	3.36 (.81)	2.06 (.70)	.86
Paper	3.46 (1.52)	3.00 (1.34)	.180	1.67 (.81)	1.72 (1.00)	.67	2.30 (1.04)	2.42 (1.08)	.81	3.10 (.61)	2.06 (.70)	.78
Plants	2.46 (1.46)	2.47 (1.46)	.968	1.38 (1.01)	1.23 (.85)	.62	1.72 (1.16)	1.77 (.98)	.74	2.95 (.65)	1.78 (.87)	.68
Tuna	3.78 (1.58)	3.69 (1.18)	.800	2.72 (1.02)	2.62 (1.08)	.88	2.81 (.83)	2.61 (.95)	.71	3.09 (.85)	2.34 (.91)	.81
Total	3.35 (1.22)	2.95 (1.06)	.001	2.07 (.82)	1.91 (.81)		2.44 (.85)	2.35 (.77)		3.14 (.51)	1.78 (.68)	

Note: High rescue proportion (HRP) indicates a small reference group (e.g., 56 of 60 can be saved). Low rescue proportion (LRP) indicates a large reference group (e.g., 56 of 560 can be saved).

We tested for mediation of condition differences by using a within-subject method suggested by Judd, Kenny, and McClelland (2001). In order to do this analysis, there must first be a reliable manipulation effect for both the dependent variable (DV) and the mediator variable (MV). Among the three suggested mediators, only perceived utility fulfilled this criterion. Second, a single regression model should be estimated, where the difference in the two DV scores (helping motivation in the HRP vignettes minus helping motivation in the LRP vignettes) for each unit is regressed on two predictors. The two predictors should be the sum of each unit's MV scores (HRP plus LRP) and the difference of each unit's MV scores (HRP minus LRP). If the regression coefficient for the sum predictor is significant, this indicates that the DV (helping motivation) is *moderated* by the MV (perceived utility). If the regression coefficient for the difference predictor is significant, this indicates that differences in the DV are *mediated* by differences in the MV. If the sum predictor, but not difference predictor, is mean-centered (each participant's score subtracted from the mean score of the sample), complete mediation is indicated by a non-significant intercept (Judd et al., 2001).

The results showed that perceived utility mediated the relation between the independent variable (size of reference group) and helping motivation. The difference of each unit's two perceived utility scores from the two conditions (HRP minus LRP) accounted for a significant part of the difference in helping motivation of the two conditions, $B = .395$, $SE.B = .144$, $\beta = .326$, $p = .008$. The intercept became non-significant, $B = -.140$, $SE.B = .224$, $p = .535$, indicating a complete mediation.

Discussion

The results indicate that the PDE is mediated by perceived utility rather than by sympathy toward the victims or by perceived rights of the victims. As the study was performed in three separate steps, each link of the mediation model could be confirmed independently. In Study 1a, we replicated the PDE by showing that helping motivation is affected by the size of the reference group. In Study 1b, we investigated how the three included mediators were affected by the size of the reference group. Sympathy and victims' rights were not affected, but perceived utility was much higher when one could save 56 out of 60 rather than 56 out of 560 victims. In Study 1c, we tested the whole chain and replicated the

effects from Studies 1a and 1b. A within-subject mediation analysis showed that condition differences in perceived utility mediated condition differences in helping motivation. To our knowledge, this is the first time that the psychological underpinnings of the PDE in helping decisions are revealed.

In our second study, we put our mediational model to a more challenging test by manipulating the rescue proportion gradually and by using a joint, rather than a separate, evaluation mode (Hsee & Zhang, 2010). Participants read four easily comparable versions of one helping situation and rated their reactions and helping motivation to each version. The main aim was to closer examine the causal relation between rescue proportion and the suggested mediators.

As different types of emotional reactions sometimes predict help decision effects differently (Kogut & Ritov, 2005a, b), we separated distress (self-oriented emotional reaction) from sympathy (victim-oriented emotional reaction) in this study. Also, Study 2 measured perceived responsibility to help rather than perceived rights of the victims in order to test an alternative type of non-emotional reaction and included human victims rather than jobs or animals. Following the results from Study 1, helping motivation was expected to increase gradually when the size of the reference group became smaller (replicating the PDE), and that perceived utility (but not the other included mediators) would mediate this effect.

STUDY 2

Thirty-six (10 women, 25 men, and 1 with unmarked sex) Swedish students completed a paper-and-pen questionnaire. The mean age was 22.40 years ($SD = 3.25$). The stimulus package contained one vignette written in four different versions. The vignette described bacterial meningitis in western Africa, and participants were told that it would be possible to save lives by vaccinating children in these areas. The only difference between the four versions was the size of the reference group. In version 1, the estimates were that around 275 of the 8000 children that annually die from bacterial meningitis could be saved. In the following versions, the size of the reference group became smaller (2000 and 900 children for versions 2 and 3, respectively), and in version 4, around 275 of 300 children that annually die from the disease could be saved.

Participants first read all versions of the vignette (summarized on one page) and were encouraged to compare them, thus creating a true joint evaluation mode. On the following pages, participants rated their level of agreement toward 12 statements for each of the four versions (one version per page). This was performed by circling one number on a Likert scale ranging from 0 (*do not agree at all*) to 6 (*agree very much*) after each statement. The 12 statements (Table 4) were written to represent the four mediators (personal distress, sympathy toward the victims, perceived responsibility to help, and perceived utility of helping). Participants provided ratings of all statements for each of the four versions of the vignette. The three statements used to measure each mediator always appeared in the same order, but the order of the mediators was counterbalanced between subjects.

On the last page, participants estimated how motivated they would be to help if presented to each of the four versions. The scale ranged from 0 (*not motivated at all*) to 6 (*extremely motivated*). This represents their helping motivation toward each version.

Results and discussion

The internal reliability for the statements measuring each mediator was good for all versions of the vignette (all α s > .87), so these statements were aggregated into one variable for each of the mediators (distress, sympathy, responsibility, and utility) for each version.⁷ All mediators had a positive correlation with helping motivation in all versions (all r s > .38).

First, the main effect on helping motivation was investigated (Figure 1). A multivariate test (Pillai's trace) showed that helping motivation differed between the versions, $V=.36$, $F(3, 33)=6.27$, $p=.002$, $\eta_p^2=.36$, and within-subject contrasts confirmed that the linear trend was clearly significant $F(1, 35)=15.94$, $p<.001$, $\eta_p^2=.31$. Bonferroni-adjusted pairwise comparisons showed that the difference between versions 2 and 3 ($p=.004$) and between versions 3 and 4 ($p=.001$) was significant, but the difference between versions 1 and 2 was not. This shows that helping motivation increases within subjects as the size of the reference group becomes gradually smaller.

Second, the effect of reference-group size on the four suggested mediators was investigated. A 4×4 repeated measures ANOVA using vignette version and mediator type as the within-subject factors showed significant effects of vignette version, $V=.30$, $F(3, 33)=4.61$, $p=.008$, $\eta_p^2=.295$; mediator type, $V=.54$, $F(3, 33)=12.83$, $p<.001$, $\eta_p^2=.538$; and the vignette version \times mediator type interaction, $V=.762$, $F(9, 27)=9.58$, $p<.001$, $\eta_p^2=.762$. The linear trend on vignette versions was just significant, $F(1, 35)=4.35$, $p=.044$, $\eta_p^2=.110$, indicating that the general trend of the mediators was positive. Importantly, the linear polynomial contrast (vignette version \times mediator type interaction) was clearly

Table 4. Items used to measure the mediating variables in Study 2

Rate how you feel when reading this specific version
(1) I feel distressed
(2) I feel unhappy
(3) I feel emotionally uncomfortable
Rate your emotional reactions when reading this specific version
(4) I feel intense compassion
(5) I feel strong empathic feelings
(6) I feel emotionally touched
Rate your perceived personal responsibility to help in this specific version
(7) I have a moral obligation to help
(8) I believe I have a personal responsibility to help as best I can
(9) I think I have some kind of duty to try to help
Rate how you perceive the utility of helping in this specific version
(10) I believe it is possible to do much good
(11) It seems possible to make a difference
(12) I think the expected consequences are very positive

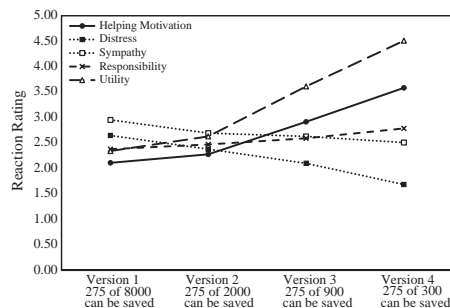


Figure 1. Self-reported helping motivation (dependent variable), personal distress, sympathy, perceived responsibility, and perceived utility (suggested mediators) in the four different versions in Study 2. The scales range from 0 (*very low*) to 6 (*very high*)

significant, $F(1, 35)=44.78$, $p<.001$, $\eta_p^2=.561$, indicating that the slopes of the four possible mediators differed significantly.

Linear simple contrasts showed that the slope of perceived utility was clearly different from distress, $F(1, 35)=86.61$, $p<.001$, $\eta_p^2=.71$; sympathy, $F(1, 35)=58.14$, $p<.001$, $\eta_p^2=.62$; and responsibility, $F(1, 35)=45.58$, $p<.001$, $\eta_p^2=.57$. As seen in Figure 1, perceived utility increased steeply as the reference group became smaller. Notably, the slopes of distress and sympathy were in the opposite direction.

We conducted the same mediation analysis as in Study 1c (Judd et al., 2001), and as the slope was linear for all variables, we focused on the difference between version 1 (LRP) and version 4 (HRP). First, Bonferroni-adjusted pairwise comparisons were used to confirm that helping motivation was significantly higher in version 4 than in version 1 ($p=.002$). The same was carried out in order to see which of the mediators that differed significantly between versions 1 and 4. The differences were not significant for sympathy ($p=.384$) or responsibility ($p=.233$), but perceived utility was higher in version 4 than in version 1 ($p<.001$), and distress was higher in version 1 than in version 4 ($p=.002$).

⁷Principal axis factor analyses with direct oblimin rotation and four factors extracted confirmed that all 12 statements loaded on their expected mediator in all versions.

As two of the suggested mediators had significant condition differences, the centered sum score and non-centered difference score of utility (HRP – LRP) and distress (LRP – HRP, as the condition difference was in the opposite direction) was entered as predictor variables, and the difference score of helping motivation (HRP – LRP) was entered as the DV. The difference of each unit's perceived utility scores explained a significant part of the difference in helping motivation, $B = .791$, $SE.B = .152$, $\beta = .639$, $p < .001$, but the difference of each unit's distress score did not, $B = -.233$, $SE.B = .191$, $\beta = -.149$, $p = .233$.⁸ The intercept became non-significant ($B = -.017$, $SE.B = .480$, $p = .972$), indicating a complete mediation.

If inserting only the variables of perceived utility, the difference predictor was significant ($B = .845$, $SE.B = .161$, $\beta = .683$, $p < .001$), and the intercept became non-significant ($B = -.360$, $SE.B = .445$, $p = .424$). If inserting only the variables of distress, the difference predictor was not significant, $B = -.383$, $SE.B = .245$, $\beta = -.244$, $p = .128$, and the intercept was still significant ($B = 1.841$, $SE.B = .416$, $p < .001$). This shows that condition differences in perceived utility but not condition differences in distress explain condition differences in helping motivation.

Study 2 replicated the results from Study 1c by using a design where different versions were evaluated in joint, rather than in separate evaluation. Helping motivation and perceived utility increased when the size of the reference group became gradually smaller, but the other mediators did not. Like in Study 1, perceived utility completely mediated the PDE.

GENERAL DISCUSSION

The PDE entails that people are more motivated to help a fixed number of victims if these victims are part of a small group than if they are part of a large group. The PDE is one of the more robust help decision effects, but in contrast to many other effects (e.g., identifiability, singularity, reference-dependence, and sad-face effects), it has not been empirically linked to emotional reactions. In two studies, we systematically investigated the psychological underpinnings of the PDE and found it to be mediated by perceived utility rather than by sympathy toward the victims, personal distress, or perceived rights and responsibilities.

Although this study is the first to show that the PDE in helping decisions is mediated by perceived utility, this finding is consistent with the previously shown link between cost-benefit priming and proportional reasoning (Friedrich et al., 1999; Friedrich & Dood, 2009). On the other hand, the absence of condition differences in sympathy or perceived rights and responsibilities is noteworthy. If potential helpers had an intuitive positive attitude toward helping in the HRP vignettes and a negative attitude toward helping in the LRP vignettes, not only perceived utility but also plausibly all kinds of reasons for helping would be rated higher (as in Friedrich et al., 2005). But this was not the case in the current study. Instead, only perceived utility and helping motivation were higher in the HRP than in the LRP vignettes, and in both studies, condition differences in perceived utility completely

mediated condition differences in helping motivation. This is the unique contribution of the current study.

As the link between reference group size and sympathy was non-significant in all studies, it seems that sympathy is not a defining characteristic of the PDE. In our interpretation, this means that the PDE is fundamentally different from other, more affective, help decision effects (e.g., the identifiability and singularity effects) that it is sometimes associated with.

On an alternative account, the often-suggested link between emotional reactions and help decision effects in general might not be so clear. For example, previous studies have found condition differences on sympathy and distress when manipulating the identifiability and singularity of the victims, but the support for a sympathy mediation of these effects is weak. One reason for this could be the non-clean measures often used when measuring emotional reactions (e.g., Small & Loewenstein, 2003). In the current study, we separated conceptually different kinds of reactions and tested them as mediators on a single help decision effect (the PDE). A suitable next step would be to test these mediators on other help decision effects (e.g., the identifiability effect) in order to investigate if different help decision effects are mediated by different or similar psychological processes.

Victims not possible to help

In all vignettes in this study, as well as in many real-life helping situations, there were some victims that could not be rescued. This is different from most studies on the identifiability and singularity effects, where all victims can be saved. On a related note, people tend to be less motivated to help identified victims as the number of victims they *cannot* help increases (pseudo-inefficacy; Dickert, Västfjäll, Kleber, & Slovic, 2012). Yet it is not always clear whether this pseudo-inefficacy effect is driven by the relative or the absolute number of victims. Saving two out of four victims and 50 out of 100 victims both represent a rescue proportion of 50%, but the absolute numbers of victims saved and not saved are clearly different. The PDE regards only proportions and should produce no differences related to absolute numbers. Pseudo-inefficacy, on the other hand, might be related to the absolute number of victims too. Accordingly, as the number of victims that cannot be saved is higher in the 50 out of 100 situation, helping motivation could possibly be lower there because of pseudo-inefficacy.

Although we argue that the PDE is driven by perceived utility, we cannot make any claims regarding the underpinnings of effects related to the absolute number of victims not possible to save. It is possible that the PDE and pseudo-inefficacy sometimes neutralize each other, such that the PDE affects helping motivation positively via perceived utility, whereas pseudo-inefficacy affects it negatively via emotional reactions. The results from Study 2 are consistent with such an account. Whereas helping motivation and perceived utility were higher when the reference group was small (version 4), distress, and to a lesser degree sympathy, was higher when the reference group was large (version 1) despite both distress and sympathy being positively correlated with helping motivation.

Limitations

Like previous studies (e.g., Bartels, 2006), we used abstract helping motivation as the outcome variable. Several other studies cited in this article have measured helping by asking for actual donations or hypothetical willingness to pay estimates. Related to this, Dickert, Sagara, and Slovic (2011) have found support for the notion that we make helping decisions in two steps. The first step is whether to help or not (yes/no). The second step is how much to help (willingness to pay). They also show that the decision whether to help or not is primarily influenced by mood management, whereas the willingness to pay is primarily influenced by sympathy and distress.

The outcome variable used in the current study was not a dichotomous yes/no response, but instead measured on a Likert scale where a high score represented high helping motivation or, in other words, a general positive attitude toward the helping project. Using actual donations or hypothetical willingness to pay estimates as outcome variables could possibly have increased the correlation between sympathy and helping motivation over conditions, but it seems unlikely that it would interact with the experimental manipulation. Hypothetical willingness to pay estimates and abstract measures have both been shown to mainly represent expressions of attitudes, and as abstract measures are psychometrically preferable to willingness to pay estimates (Kahneman, Ritov, Jacowitz, & Grant, 1993), we opted for this choice.

The joint evaluation used in Study 2 comes with some limitations. Joint evaluation has previously been shown to reduce the effect emotion has on judgments (Ritov & Baron, 2011), and this could possibly have made the relative influence of perceived utility and perceived responsibilities on helping motivation stronger in this study. Another concern could be that a higher rescue proportion becomes more pronounced when projects are comparable. This would, however, imply that the PDE is stronger in joint evaluation than in separate evaluation, but studies by Bartels (2006) and Fetherstonhaugh et al. (1997) actually suggest the opposite. As similar results were found in separate and joint evaluation, the perceived utility mediation of the PDE seems like a robust phenomenon.

Another concern is the third type of emotions presented in the introduction—anticipated emotions. We have not measured anticipated emotions in this study and can therefore not say anything about the influence that these might have on helping motivation. Without doubt, it could be argued that the PDE is driven by more anticipated positive self-related emotions if one helps (anticipated warm glow), less anticipated self-related negative emotions if one does not help (anticipated guilt), or both. It is conceivable that the anticipated emotional reward of helping is bigger when the reference group is small (or that the anticipated penalty for not helping is smaller when the reference group is big) and that emotions are related to the PDE in this secondary way. The current study addressed victim-directed emotional reactions (sympathy) and self-directed emotional reactions (distress) because these represent immediate reactions to the situation rather than secondary reactions people experience when considering personal opportunities to help or not to help. The role of anticipated emotions

in different help decision effects is undoubtedly an interesting topic for future research.

Theoretical implications

Although the included mediators in this study were labeled sympathy, distress, perceived rights and responsibilities, and perceived utility, they were chosen to some extent because they are assumed to represent three different psychological systems. Sympathy and distress are based on gut feelings and quick emotional reactions; acknowledging responsibilities and rights is based on a moral imperative; and perceived utility is based on a cost–benefit calculation. We believe that the included mediators are representative examples of these psychological systems and that the systems roughly represent different ways to think about helping and about morality in general. These psychological systems have an obvious connection to dual-process theories of thinking that put the experiential (affective) system against the analytic (rational) system (Epstein, Pacini, Denes-Raj, & Heier, 1996). Dual-process theories have been discussed in moral psychology (Greene, 2008) and in helping contexts (Loewenstein & Small, 2007).

Another question concerns the nature of utility ratings. What does it mean when people claim that the expected utility of one choice is higher than an alternative choice? Models such as the prospect theory (Tversky & Kahneman, 1992) and mental accounting theory (Thaler, 1999, 2008) do a good job in explaining how people reach utility estimates and in predicting people's subsequent choices. These models are relevant, but at the same time they focus on a different type of utility than the current study does.

It is important to recognize that there are at least two types of utility estimations: subjective utility and total utility (see Baron, 1994 for a similar discussion). Subjective utility refers to the gains and losses of the actor. Total utility refers to the gains and losses of all sentient beings. Whereas most research on expected utility concerns the subjective utility, the self-rated utility measure in the current study focused on total utility. Our participants did not answer how they believed the rescue projects would affect them personally (subjective utility), rather on how much they believed it would affect the potential victims or possibly even the world at large (total utility). People are often driven by selfish motives, but when it comes to the concept of utility, most people recognize that other people can benefit from actions that will be costly for them personally and that other people's benefits can override their personal costs (the benefit for you staying alive is higher than the cost for me ruining my shoes).

To separate and compare the subjective utility with the total utility, and use different types of currencies could turn into an interesting field of research. For example, Thaler (1999, 2008) has found that our perceived subjective utility is higher when we separate gains and aggregate costs, but will this pattern remain also when we are explicitly asked about perceived total utility? Moreover, will the subjective and total utility estimates show different patterns when the separated gains and aggregated costs are human lives rather than dollars saved? Total utility could also be integrated in models that so far have been used mainly for subjective

utility estimates, to better illustrate when and why people commit biases in their cost-benefit calculations about consequences of helping. This is especially important considering that biases when calculating total utility can harm more people than biases when calculating subjective utility.

Practical implications

The main contribution of the present research is that the psychological underpinnings of the PDE are systematically unfolded. But the results also suggest that it is possible to increase helping in other ways than raising sympathy toward the victims. Charity organizations often work hard to elicit sympathy (and personal distress) in potential donors by presenting vivid descriptions of individual victims, for example, innocent children in the midst of a hunger crisis. The feelings of sympathy are supposed to increase helping motivation, and in many cases they will. For example, priming people to deliberate rather than to feel emotions when confronted with charity requests reduces helping motivation (Small et al., 2007).

Nevertheless, in some helping situations, inducing a sense of utility may be a more viable way to go. Recall baby Minhaj who became the "face of famine" during the humanitarian disaster at the horn of Africa in 2011 (Jones-Mwangi, 2011). A picture of an extremely thin and malnourished Minhaj was shown in media to illustrate the severity of the famine. Most people had no hopes for him. However, what made Minhaj famous was the picture taken 2 months later. At that time, Minhaj was a chubby-cheeked and playful child in perfect health thanks to a few weeks at the hospital. We believe that the picture of starving Minhaj elicits sympathy, but that helping motivation remains low if his suffering is perceived as permanent. Showing two pictures of Minhaj, in a before-after fashion, could increase perceived utility without reducing sympathy and thereby increase the motivation to help. Sympathy and perceived utility may thus be separate processes that induce helping motivation independently of each other.

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Appendix for Article 1

Vignettes used in Study 1

Birds: An amusement park is nearing the final stages of planning before construction when it is found that the construction process will destroy some trees where an endangered species of songbird nests. There is a possibility to modify the building plans in order to save some of the trees where the birds nest, but it would create some additional costs. If choosing to modify the building plans 20 out of the 25 [400] songbirds would be able to remain.

Jobs: The economic crisis has forced many companies to lay off people. Your department provides economic support to local companies. But limited resources force you to choose which companies to help. There is currently one industry that is in desperate need for a support program in order to survive. If you choose to support this industry, 56 of the 60 [560] employees will be able to keep their jobs.

Otters: An oil leak threatens to pollute large portions of a bay. There are limited resources to save animals and environment. The oil threatens to kill an otter-population in the north part of the bay, but there is a possibility to rescue some of these otters if running a rescue program. If the rescue program is implemented, it will be possible to save 124 of the 150 [800] otters at risk.

Paper: You are at the board of a factory that produces paper. The factory uses water from a mid-sized river to cool the machines. After the cooling, the water goes back into the river. This water is slightly polluted and causes a number of fishes to die each year. It is possible to save some of the fishes by installing better and more expensive filters in the pumps. If the new filters are installed, 251 of the 350 [980] fishes that annually dies in the vicinity of the factory will be saved.

Plants: A rare type of plant only exists in remote places in New Guinea. Recent discoveries suggest that these plants are threatened by extinction by a newly introduced species of vine. There exists a costly program to remove the vines and save some of the rare plants. If you implement the project, 164 of the 200 [820] rare plants will survive.

Tuna: In many areas where tuna are fished, there also exist many dolphins. Sometimes the dolphins are accidentally trapped in the nets that are used by the tuna-fishers. Trapped dolphins die as they cannot reach the surface for air. To avoid this problem, a new type of net has been designed. These nets are equally effective for tuna-fishing but dolphins can sense the nets and therefore they are not trapped as often. If would be costly, but forcing the fishers to use the new nets in certain places would save 187 of the 240 [900] dolphins that annually die there.

Article II



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Emotional reactions, perceived impact and perceived responsibility mediate the identifiable victim effect, proportion dominance effect and in-group effect respectively[☆]

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ABSTRACT

This study investigated possible mediators of the identifiable victim effect (IVE), the proportion dominance effect (PDE), and the in-group effect (IGE) in helping situations. In Studies 1–3, participants rated their emotional reactions (distress and sympathy toward the victims), perceived impact of helping, perceived responsibility to help, and helping motivation toward four versions of a helping situation. Gradually increasing victim identifiability in the helping situations primarily affected emotional reactions and sympathy completely mediated the IVE. Gradually making the reference-group smaller primarily affected perceived impact, and impact completely mediated the PDE. Gradually increasing in-groupness primarily affected perceived responsibility, and responsibility completely mediated the IGE. Study 4 included real monetary allocations and largely replicated the results using a between-subject design. Together, the results shed light on how contextual factors trigger help motivation, and indicate that different helping effects are primarily mediated by different mechanisms.

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Introduction

Helping is an inherently social behavior that can be investigated from either a motivational perspective (why do we help?) or a situational perspective (when do we help?). This study integrates these perspectives by connecting Weber's (1998) theory of decision modes with research on situational differences influencing helping (i.e., helping effects; Loewenstein & Small, 2007). The question of interest is whether different helping effects are primarily mediated by different psychological processes. We expect that the identifiable victim effect (IVE) is primarily mediated by emotional reactions, that the proportion dominance effect (PDE) is primarily mediated by perceived impact, and that the in-group effect (IGE) is primarily mediated by perceived responsibility.

Three psychological mechanisms that promote helping

According to the taxonomy of decision modes suggested by Weber (1998; Weber & Lindemann, 2007) decisions are driven by affect-based, calculation-based, or recognition-based psychological mechanisms. These three decision modes can be applied to most kinds of decisions, but like Ames, Flynn, and Weber (2004) this article focuses on decisions in helping situations.

Affect-based help decisions can be referred to as “helping with the heart”, e.g., when intense emotional reactions elicited by the emergency situation motivates helping. Calculation-based help decisions can be referred to as “helping with the head”, e.g., when people estimate the utility by calculating the costs and benefits of a certain helping-project and become more motivated to help when the perceived impact of helping is high. Recognition-based help decisions can be referred to as “helping by the book”, e.g., when people recognize their moral obligation, duty or personal responsibility to help. In this study, Weber's decision modes are operationalized as three psychological mechanisms; emotional reactions, perceived impact and perceived responsibility, all of which have been shown to increase helping motivation.

[☆] The first author presented parts of the results during the 34th annual conference of the Society of Judgment and Decision Making in Toronto, October 15–18, 2013.

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Emotional reactions

Affect has been suggested to be fundamental for moral attitudes (Haidt, 2001), judgments and decisions (Slovic, Finucane, Peters, & MacGregor, 2002), and particularly decision making in helping situations (Batson, 2011; Slovic, 2007), where feeling more is assumed to be related to helping more. In this paper, we focus on two types of emotional reactions that often befall the helper – personal distress and sympathy toward the victims.

We use personal distress as an umbrella term for negative feelings directed inwards (e.g., sadness or uneasiness). Distress motivates helping to the extent that helping is seen as an efficient way to get rid of the distress. If it is easier to get rid of the distress by e.g., escaping the situation, or if one believes that helping will not reduce the distress, then helping is less likely to occur (Batson, 2011; Cialdini et al., 1987). Sympathy for the victims (also referred to as affective empathy, empathic concern and compassion) is also a negative feeling but directed outwards, towards the person in need (Batson, 2011). Sympathy motivates people to help even when they could easily escape the situation and when they have no way of informing themselves about the actual outcome.

Both distress (Cialdini et al., 1987) and sympathy (Loewenstein & Small, 2007) have been suggested to be the main underlying mechanisms of helping, but the properties of these emotional reactions are not always identical (Batson, 2011; Kogut & Ritov, 2005a). For example, it appears that mood management (self-focused emotions) predicts the choice of whether to help or not, whereas the degree of sympathy toward the victims (other-focused emotions) predicts the amount of helping (Dickert, Sagara, & Slovic, 2011). Also, helping out of sympathy is traditionally seen as an altruistic motivation whereas helping out of distress is seen as an egoistic motivation (Batson, 2011). For these reasons we include both distress and sympathy as two facets of the emotional reaction mechanism.

Perceived impact

Perceived impact (also referred to as perceived utility or perceived efficacy) is another mechanism that promotes helping. To illustrate, if a helping project generates a very limited amount of good (minor benefits) it will be perceived as having low impact. If another helping project demands an equal amount of resources but generates a much larger amount of good (major benefits) it will be perceived as having high impact. The higher impact people believe that their contribution will have, the more likely they are to help. For example, helping motivation decreases if the overhead costs are perceived as high (Sargeant & Woodliffe, 2007), but increases when campaigns approach their goals because donors believe that their contribution will make a larger impact than (Cryder, Loewenstein, & Seltman, 2013).

Perceived responsibility

The sense of responsibility, duty and obligation is part of moral decision making and the perceived responsibility to help is often affected by situational circumstances. A classic example is the bystander effect, where other potential helpers diffuse the personal responsibility (Darley & Latane, 1968). Being the only potential helper makes people help more and an increased perceived responsibility has been suggested as the main reason for this (Cryder & Loewenstein, 2012). Perceived responsibility is also related to causal attribution. If David accidentally hurt Robin, he will perceive himself having a responsibility to help. If someone else hurt Robin, he may not.

Perceived responsibility is role-dependent. Working as a police-officer is related to a stronger duty to prevent crimes and working as a doctor is related to a stronger duty to cure people (Jeske, 2008). Being higher up in the hierarchy is associated with more responsibility to prevent harm (Haidt & Baron, 1996).

Although emotional reactions, perceived impact and perceived responsibility will be interrelated to some degree, we assume that the three mechanisms can increase helping motivation independently. In addition, we believe that the three mechanisms primarily mediate three different helping effects.

Mediators of different helping effects

Although mediation is commonly examined in helping situations, our study is, to our knowledge, the first to systematically explore if different helping effects are primarily mediated by different psychological mechanisms. We focus on three of the most well-known helping effects: (1) the identified victim effect, (2) the proportion dominance effect, (3) the in-group effect.

The identifiable victim effect (IVE)

The IVE refers to the tendency to help identified victims more than statistical victims (Kogut & Ritov, 2005a; Slovic, 2007; Small, Loewenstein, & Slovic, 2007). Determined (but anonymous) victims usually elicit more helping motivation than undetermined victims (Small & Loewenstein, 2003) and victims who are presented with their age, name or picture elicit even more (Kogut & Ritov, 2005a; Sah & Loewenstein, 2012). An important boundary condition of the IVE is that it primarily works for a single identified victim versus a single statistical victim (the singularity effect; Dickert, Kleber, Peters, & Slovic, 2011; Kogut & Ritov, 2005a, 2005b, 2007). The traditional way to test the IVE is to frame the situation to imply that donated money is earmarked for a single identified victim (Kogut & Ritov, 2005a, 2005b, 2007). However, one can also demonstrate the IVE by showing a single identified victim but be clear that donated money will be given to a larger group and that the identified victim is only one among many beneficiaries (e.g. Oceja et al., 2014), or by showing a single identified iconic victim that personifies a specific cause but that personally cannot benefit from donations (e.g. Batson, Chang, Orr, & Rowland, 2002).

Several psychological mechanisms have been discussed in relation to the IVE. It has been suggested that an identified victim might elicit more perceived impact as the prospect of helping an identified victim seem more tangible and therefore more efficient than the prospect of helping statistical victims (Duncan, 2004). A recent study tested multiple mediators of the “identified intervention effect” (providing more information about a situation increases helping), and found that impact was a better mediator than emotional reactions for this effect (Cryder, Loewenstein, & Scheines, 2013). Perceived responsibility has also been linked to the IVE (Basil, Ridgway, & Basil, 2006). People donate more money when they believe they are the only possible helper of an identified child than when there is a shared responsibility to help all children (Cryder & Loewenstein, 2012).

Although other mechanisms have been suggested to underlie the IVE, feelings and affect (broadly defined) are the clearly most commonly discussed (Slovic, 2007). Emotional reactions have been suggested to underlie helping effects in general (Loewenstein & Small, 2007, and specifically the IVE. Both personal distress (Kogut & Ritov, 2005a, 2007) and sympathy (Kogut & Ritov, 2005b) is higher when the victim is identified, and both are positively correlated with helping intentions. Although there were no mediation analyses of the IVE per se in these studies, the

authors suggested that both the singularity effect and the IVE are driven by emotional reactions.

This idea is supported by several studies showing that making people feel less emotion reduces the IVE. People who are induced with a feeling-based thinking mode help an identified victim more than a statistical victim, but people who are induced with a calculative thinking mode or primed with moral principles do not (Oceja, 2008; Small et al., 2007). Also, when presenting vivid descriptions of victims (pictures), one victim is helped equally much as four victims, but when presenting statistical non-vivid descriptions of victims (dots representing victims) four victims are helped more than one victim (Hsee & Rottenstreich, 2004).

Because emotional reactions are so frequently linked to IVE-tendencies, we expect an especially strong link between the affective decision mode and the IVE. This implies that emotional reactions will be more affected than the other mechanisms when identifiability of a victim is increased (Hypothesis 1a), and that primarily emotional reactions will mediate the IVE (Hypothesis 1b).

The proportion dominance effect (PDE)

The PDE (also referred to as the reference-group effect, and the drop in the bucket effect) is the tendency to help victims more when the rescue proportion is high. To illustrate, helping motivation is higher when one can help victims from a small victim-group (e.g., 10 victims out of 13 in need) rather than a large victim-group (e.g., 10 victims out of 200 in need), despite the actual number of lives saved being equal (Baron, 1997; Bartels, 2006; Fetherstonhaugh, Slovic, Johnson, & Friedrich, 1997).

It has been proposed that emotional reactions underlie the PDE. For example, Loewenstein and Small (2007) suggested that the PDE is driven by increased sympathy towards the victims when one can help a large proportion of the victim reference-group. This idea receives some support from the finding that providing people with an economic schema (e.g., when calculating the proportion of victims one can help) dampens feelings of sympathy, which in turn decreases helping (Molinsky, Grant, & Margolis, 2012). In addition to sympathy, moral principles have also been mentioned in relation to the PDE. Perceived fairness partially mediates the effect created by either framing victims in frequency (200 will lose out) or in percentage (0.5% will lose out; Friedrich, Lucas, & Hodel, 2005).

Nevertheless, recent studies have identified an especially strong link between perceived impact and the PDE. Bartels and Burnett (2011) suggested, but did not empirically test, that whereas the IVE is driven by “hot” emotions, the PDE is driven by “cold” cognition. This hypothesis received support in a recent study where the PDE was mediated by perceived utility but not by sympathy or perceived rights (Erlandsson, Björklund, & Bäckström, 2014). Other studies have linked perceived impact to proportional thinking in different contexts (Friedrich et al., 1999), and in one of them, PDE-tendencies increased when cost–benefit thinking was primed (Friedrich & Dood, 2009). Moreover, highly numerical people (people who are good at inferring information from numbers) are slightly less susceptible to the IVE (Dickert et al., 2011), whereas they are more susceptible to the PDE (Kleber, Dickert, Peters, & Florack, 2013). This suggests that the IVE and the PDE could be primarily driven by different psychological mechanisms.

Because the link between cost–benefit calculations and the PDE seems robust, we expect an especially strong link between the calculative decision mode and the PDE. This implies that perceived impact will be most affected when the rescue proportion increases (i.e. when the victim reference-group becomes smaller; Hypothesis 2a) and that primarily perceived impact will mediate the PDE (Hypothesis 2b).

The in-group effect (IGE)

The IGE (or in-group bias) is the tendency to help in-group victims more than out-group victims (Dovidio et al., 1997; Levine, Cassidy, Brazier, & Reicher, 2002). For example, people are more likely to help those that they are genetically related to (Burnstein, Crandall, & Kitayama, 1994), those from the same nation (Levine & Thompson, 2004), those they share opinions with (Sole, Marton, & Hornstein, 1975) and those supporting the same sports-team (Levine, Prosser, Evans, & Reicher, 2005).

The literature points in different directions regarding the underlying mechanisms of the IGE. It has been suggested and occasionally shown that in-group victims evoke stronger emotional reactions than out-group victims, and this has in turn been suggested to make us help in-group victims more (Goetz, Keltner, & Simon-Thomas, 2010; Ritov & Kogut, 2011). Nevertheless, the IGE occurs when emotional arousal toward in-group and out-group victims are similar (Levine & Thompson, 2004; Levine et al., 2002), and although sympathy predicts helping towards one's in-group, sympathy is not higher toward in-group than toward out-group victims (Stürmer, Snyder, Kropp, & Siem, 2006). In addition to emotional reactions, perceived impact has also been discussed in relation to IGE (Bendapudi, Singh, & Bendapudi, 1996). Familiarity or spatial proximity with a charity organization or with a group of victims may increase the sense of efficacy and personal impact of helping, thereby possibly increasing helping motivation (Cryder, Loewenstein, & Scheines, 2013; Nagel & Waldmann, 2013).

Another possible factor behind the IGE is perceived responsibility, i.e., that people experience a stronger responsibility to help their in-group (Levine & Thompson, 2004; Nisan, 2005). In a study on bone-marrow donations on a US sample, 67.1% believed that people have a responsibility to help a cousin whereas only 28.6% believed that they have a responsibility to help strangers (Baron & Miller, 2000). Perceived responsibility can be seen as the acknowledgment of a social norm and it has been shown that if victims and bystanders are from one's in-group, increasing the number of bystanders makes norms salient which in turn increase helping motivation (Levine & Crowther, 2008). Also, some people believe that they have a duty to support nationalistic policies even when realizing that the consequences as a whole would be worse, and this sense of duty influences actual decision making (Baron, Ritov, & Greene, 2013).

Previous research does not point in any clear direction when it comes to potential mediators of the IGE, but as role-dependent responsibility is an important aspect of recognition-based decisions we expect an especially strong link between the recognition-based decision mode and the IGE. This implies that perceived responsibility will be most affected as the degree of in-groupness increases (Hypothesis 3a) and that primarily perceived responsibility will mediate the IGE (Hypothesis 3b).

Common methodology for Studies 1–3

In Study 1–3, we test the hypotheses using a within-subject design with joint evaluation where a helping effect is manipulated in several steps. Participants first read a background story about a certain helping situation. They then read four versions of the helping situation. The only aspect that changes between the versions is directly related to one of the three helping effects (IVE in Study 1, PDE in Study 2, and IGE in Study 3). Participants compare all the versions and, on the following pages, rate their emotional reactions (distress and sympathy), perceived impact, perceived responsibility, and subsequently their helping motivation to each version. The responses on the different versions are expected to

create a linear trend (slope) for each psychological mechanism. A flat trend means that the mechanism is not affected by the manipulation. A steep trend indicates that the mechanism is strongly affected by the manipulation. The design is borrowed from Erlandsson et al. (2014, Study 2) and it should be noted that Study 2 in the current article (about PDE) is a replication of that study.

We adopt a three-step approach to test the hypotheses. In the first step, we confirm that there is a main effect on helping motivation. For example, if people do not rate helping motivation higher in the identified victim version than in the statistical victim version, there is no IVE.

In the second step, we use a 4×4 repeated measure ANOVA and first test if the aggregated psychological mechanisms (suggested mediators) create a linear trend over the four versions.¹ We then test the omnibus situation-version \times mediator-type interaction effect. If that is significant, we follow up by looking at the planned simple linear contrasts. A significant situation-version \times mediator-type interaction indicates that the trends of the four mediators differ, but does not say anything about how they differ. A simple linear contrast compares the linear trend of one of the mediators against the linear trend of another mediator. If the contrast is significant, this indicates that the linear trend of the contrasted mediators differ in steepness. The hypotheses state that emotional reactions (distress and sympathy) will increase the steepest when identifiability is manipulated (H1a); that perceived impact will increase the steepest when the size of the reference-group is manipulated (H2a); and that perceived responsibility will increase the steepest when degree of ingroupness is manipulated (H3a).

In the third step, we test within-subject mediation using a method suggested by Judd, Kenny, and McClelland (2001). Four regression models are estimated (one for each mediator), and in each, the condition difference in helping motivation (e.g., helping motivation in the in-group condition minus helping motivation in the out-group condition for the IGE) is regressed on two predictors. The first predictor is the condition difference score of each unit's mediator-score (e.g., perceived responsibility in the in-group condition minus perceived responsibility in the out-group condition). The second predictor is the sum score of each unit's mediator-scores (e.g., perceived responsibility in the in-group condition plus perceived responsibility in the out-group condition). If the regression coefficient for the difference predictor is significant, this indicates that the suggested mediator mediates the helping effect (i.e., that condition differences in helping motivation can be explained by condition differences in the suggested mediator). If the regression coefficient of the sum predictor is significant, this indicates that the helping effect is moderated by the suggested mediator. If the sum score (but not difference score) of the mediator is centered (each unit's score is subtracted from the sample mean), a non-significant intercept indicates that condition differences in helping motivation are completely explained by condition differences in the mediator. Thus, complete mediation of a helping effect requires both a significant difference predictor and a non-significant intercept. The hypotheses in these studies are that only condition differences in emotional reactions (distress and sympathy) will completely explain condition differences in helping motivation when the IVE is manipulated (H1b), that only condition differences in perceived impact will completely explain condition differences in helping motivation when PDE is manipulated (H2b) and that only condition differences in perceived

responsibility will completely explain condition differences in helping motivation when IGE is manipulated (H3b).

Study 1 (IVE)

Method

Sixty (15 women, 45 men, $M_{age} = 21.90$, $SD = 2.06$) Swedish students completed a paper and pen questionnaire. Two male participants who had more than four missing values were excluded.² Participants read four easily comparable versions of a single helping situation (all versions of all helping situations can be found in the Supplementary material). In the baseline version 1 (statistical victims), participants were told that if they helped, donated money would go to a Children's village in Mozambique. In version 2 (determined victim), participants were told that they would sponsor a determined but unidentified child from the same village but it was clear to the participants that donated money would go to the village as a whole and not exclusively to the sponsored child. In version 3 (identified victim), they were told they would sponsor an identified child (name and age) but donated money would go to the village as a whole.³ In version 4 (vivid identified victim), they were told they would sponsor an identified child (name, age, picture and vivid information about the child) but donated money would go to the village as a whole.

Participants first read all versions summarized on one page and were encouraged to compare them. On the following pages, participants rated their personal distress, sympathy towards the victims, perceived impact to help and perceived responsibility to help in each of the versions by rating their level of agreement towards twelve statements (see Table 1).⁴ Rating was done on a Likert-scale ranging from 0 (*do not agree at all*) to 6 (*agree completely*). The three statements used to measure each mediator always appeared in the same order, but the order of the mediators was counterbalanced between subjects. On the last page, participants rated how motivated they would be to help in each of the four versions. The scale ranged from 0 (*not motivated at all*) to 6 (*extremely motivated*).

Results

First, a within-subject contrast test showed that there was a linear trend on helping motivation, $F(1,57) = 23.75$, $p < .001$, $\eta^2 = .294$. This implies that increased identifiability enhanced helping motivation (see Fig. 1).

Second, we investigated how increased identifiability affects the different mediators by means of a 4×4 repeated measures ANOVA with situation-version and mediator-type as within-subjects factors. The linear trend for the aggregated mediators over the four versions was significant $F(1,57) = 39.40$, $p < .001$, $\eta^2 = .41$.⁵ The situation-version \times mediator-type interaction was

² Studies 1–3 used the same exclusion criteria. The results did not change if including all participants.

³ Approximately half of the participants read about Jennifer (a girl) and the other half about Isaka (a boy) but as this manipulation did not have any major effects, we have collapsed these two conditions.

⁴ Principal component analyses on each helping effect and version with a four factor solution using direct oblimin rotation showed that the items loaded the highest on their expected mediator in 142 of the 144 cases.

⁵ The quadratic trend $F(1,57) = 43.59$, $p < .001$, $\eta^2 = .43$ and the cubic trend $F(1,57) = 6.11$, $p = .016$, $\eta^2 = .10$ were also significant. The main reason for the quadratic trend was Version 2 (determined but anonymous victim) that decreased rather than increased overall ratings compared to Version 1 (statistical victims). We suspect that this might be because we too strongly emphasized that the determined victim was totally anonymous and that this made participants experience a manipulative intent in that specific version. Excluding either only Version 1 or only Version 2 created trends that were cleanly linear, and the general pattern of results remained the same.

¹ It was expected that the trend of the aggregated psychological mechanisms over versions would be primarily linear (an equal increase in each version). It is noted that the quadratic and cubic trends were also significant in some of the analyses but we avoid discussing them at length here with regard to readability.

Table 1
Included items for the four suggested mediators in Studies 1–3. Numbers show the Cronbach's alpha for each mediator on each version.

	Study 1 (IVE) Version				Study 2 (PDE) Version				Study 3 (IGE) Version			
	1	2	3	4	1	2	3	4	1	2	3	4
Rate how you feel when reading this version (<i>personal distress</i>)	.91	.89	.97	.93	.96	.96	.96	.98	.67	.82	.85	.76
1. I feel downhearted												
2. I feel sad												
3. I feel emotionally uneasy												
Rate how you react emotionally when reading this version (<i>sympathy</i>)	.90	.92	.95	.96	.90	.97	.98	.98	.90	.96	.95	.98
4. I feel intense compassion												
5. I feel strong empathic feelings												
6. I feel emotionally touched												
Rate how you perceive that the utility of donating money is in this version (<i>perceived impact</i>)	.94	.95	.96	.94	.84	.89	.93	.92	.82	.93	.85	.91
7. I think one can do a lot of good												
8. I think it seems possible to make a big difference												
9. I believe the expected consequences are very positive												
Rate how you consider your personal responsibility in this version (<i>perceived responsibility</i>)	.88	.92	.94	.94	.92	.92	.91	.91	.82	.88	.91	.91
10. I have a moral obligation to help to the best of my ability												
11. I have a personal responsibility to help as much as I can												
12. I have a duty to try to help.												

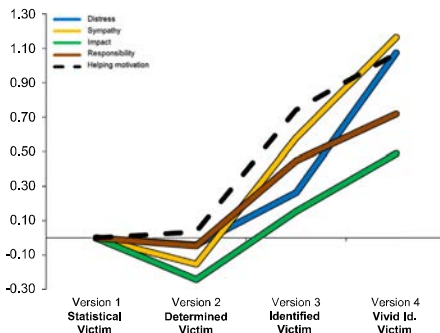


Fig. 1. The trends of helping motivation and the four psychological mechanisms when manipulating identifiability of the victim. Means are centered so the responses of Version 1 equals zero.

significant $F(5.33, 304.06) = 3.95$, $p = .001$, $\eta^2 = .07$ (Greenhouse-Geisser corrected), indicating that the trends of the mediators differed. Simple contrasts showed that the linear trend of sympathy was steeper than the linear trends of perceived impact $F(1, 57) = 17.10$, $p < .001$, $\eta^2 = .23$, and perceived responsibility $F(1, 57) = 8.87$, $p = .004$, $\eta^2 = .14$, but not steeper than the linear trend of distress $F(1, 57) = 0.93$, $p = .338$ (see Fig. 1). This shows that increased victim-identifiability affects emotional reactions more than it affects perceived impact and responsibility, which supports Hypothesis 1a.

Third, we investigated which of the possible mediators explained the IVE. Version 1 (statistical victims) was compared with version 4 (vivid identified victim). The difference score of helping motivation (version 4 minus version 1) was used as the dependent variable in four linear regression analyses. The difference score (version 4 minus version 1) and centered sum score of the same mediator were inserted as predictor variables in each of the four analyses.⁶ Condition differences in sympathy explained condition differences in helping motivation ($B = .77$, $SEB = .13$, $\beta = .62$, $p < .001$) and made the intercept non-significant ($B = .17$, $SEB = .24$, $p = .482$). As can be seen in the left column of Table 2,

condition differences in perceived impact and perceived responsibility did explain condition differences in helping motivation but did not make the intercepts non-significant. This implies that only sympathy completely mediated the IVE.⁷

Study 2 (PDE)

Method

Forty (17 women, 23 men, $M_{age} = 21.80$, $SD = 2.17$) Swedish students participated. One male participant who had more than four missing values was excluded. The design, layout and measured variables were identical to the one used in Study 1, but the helping situation closely resembled the one used in Erlandsson et al. (2014, Study 2) and involved African children suffering from bacterial meningitis and described a vaccine that could save many lives. In the baseline version 1, participants read that the new vaccine could save about 275 of the 8000 (rescue proportion 3%) children that annually die from meningitis. In version 2, the size of the victim reference-group was changed meaning that the vaccine could save 275 out of 2000 children (rescue proportion 14%); in version 3 it could save 275 out of 900 (rescue proportion 31%); and in version 4 it could save 275 out of 300 children (rescue proportion 92%).

Results

First, a within-subject contrast test showed that there was a linear trend on helping motivation, $F(1, 38) = 55.67$, $p < .001$, $\eta^2 = .594$. As predicted, helping motivation increased as the victim reference-group got smaller (see Fig. 2).

Second, we investigated how a smaller reference-group affected the different mediators. The linear trend for the aggregated mediators over the four versions was significant $F(1, 38) = 22.90$, $p < .001$, $\eta^2 = .38$. The situation-version \times mediator-type interaction was significant $F(5.01, 190.36) = 22.87$, $p = .001$, $\eta^2 = .38$ (Greenhouse-Geisser corrected), indicating that the trends of the mediators differed. Simple contrasts showed that the linear trend of perceived impact increased steeper than the linear trends of dis-

⁷ The reported study represents IVE where the identified victim is one among many. Two replication-studies using the same design but testing different conceptualizations of IVE were also conducted. The hypotheses were in large supported also when the identified victim was the only beneficiary (earmarked money IVE), and when the identified victim had already passed away (iconic victim IVE).

⁶ As the trends for the mediators were quadratic, we also tested mediation comparing version 2 with version 4. The general pattern of results was the same.

Table 2
Results from the mediation analyses in Studies 1–3.

	Study 1: Identified victim effect (IVE) <i>N</i> = 58			Study 2: Proportion dominance effect (PDE) <i>N</i> = 39			Study 3: In-group effect (IGE) <i>N</i> = 39		
	<i>B</i>	<i>SE.B</i>	<i>p</i>	<i>B</i>	<i>SE.B</i>	<i>p</i>	<i>B</i>	<i>SE.B</i>	<i>p</i>
<i>Distress</i>									
Intercept	0.991	.303	.002	2.439	.324	<.001	2.243	.604	.001
Difference	0.072	.169	.670	0.241	.181	.190	0.465	.314	.147
Cent. Sum	0.116	.111	.301	−0.067	.108	.539	0.200	.153	.201
<i>Sympathy</i>									
Intercept	0.170	.241	.482	2.235	.319	<.001	2.066	.493	<.001
Difference	0.772	.133	<.001	0.476	.213	.032	0.546	.232	.024
Cent. Sum	0.093	.089	.304	−0.162	.105	.130	0.363	.134	.010
<i>Impact</i>									
Intercept	0.640	.187	.001	0.750	.554	.184	2.543	.341	<.001
Difference	0.878	.122	<.001	0.672	.192	.001	0.910	.347	.013
Cent. Sum	0.009	.072	.906	−0.033	.137	.813	0.341	.215	.122
<i>Responsibility</i>									
Intercept	0.438	.203	.035	1.787	.377	<.001	0.762	.598	.211
Difference	0.879	.129	<.001	0.648	.236	.009	0.734	.175	<.001
Cent. Sum	0.059	.074	.430	−0.078	.100	.439	0.095	.156	.546

Note. A significant difference predictor plus a non-significant intercept indicate a complete mediation.

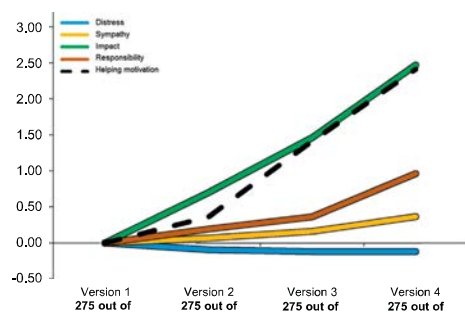


Fig. 2. The trends of helping motivation and the four psychological mechanisms when manipulating size of the reference-group. Means are centered so the responses of Version 1 equals zero.

distress $F(1,38) = 63.89$, $p < .001$, $\eta^2 = .63$, sympathy $F(1,38) = 65.67$, $p < .001$, $\eta^2 = .63$, and perceived responsibility $F(1,38) = 52.31$, $p < .001$, $\eta^2 = .58$ (see Fig. 2). This shows that the size of the victim reference-group affects perceived impact more than it affects emotional reactions and perceived responsibility, which supports Hypothesis 2a.

Third, we investigated which of the possible mediators that explain the PDE. Focus was on the difference between version 1 (vaccine could save 275 of 8000) and version 4 (vaccine could save 275 of 300). Condition differences in perceived impact explained condition differences in helping motivation ($B = .67$, $SE.B = .19$, $\beta = .50$, $p = .001$) and made the intercept non-significant ($B = .75$, $SE.B = .55$, $p = .184$). As can be seen in the middle column in Table 2, condition differences in sympathy and perceived responsibilities also explained condition differences in helping motivation, but did not make the intercept approach non-significance. In line with Hypothesis 2b, this implies that only perceived impact completely mediated the PDE.⁸

⁸ We conducted an additional PDE-study with seals as victims. The general pattern of results was the same.

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Study 3 (IGE)

Method

Forty (19 women, 21 men, $M_{age} = 23.48$, $SD = 2.83$) Swedish students participated. One female participant who had more than four missing values was excluded. The design, layout and measured variables were identical to the previous studies, but the helping situation concerned a girl in need of a kidney where the participant was a suitable donor. In baseline version 1, the girl was described as the daughter of a former male classmate of the participant (out-group). In version 2 she was described as the daughter of a male second cousin, in version 3 the daughter of a male first cousin and in version 4 she was described as the daughter of the brother of the participant (close in-group). To keep the degree of identifiability constant across versions, it was explicitly stated in each version that one had only sporadic contact with the girl's father.

Results

First, a within-subject contrast test showed that there was a linear trend on helping motivation, $F(1,38) = 105.58$, $p < .001$, $\eta^2 = .735$. As predicted, helping motivation increased as the victim became more part of one's in-group (see Fig. 3).

Second, we investigated how increased in-groupness affects the different mediators. The linear trend for the aggregated mediators over the four versions was significant $F(1,38) = 156.56$, $p < .001$, $\eta^2 = .81$.⁹ The situation-version \times mediator-type interaction was significant $F(5.68,215.64) = 25.87$, $p = .001$, $\eta^2 = .41$ (Greenhouse-Geisser corrected), indicating that the trends of the different mediators differed. Simple contrasts showed that the linear trend of perceived responsibility increased steeper than the linear trends of distress $F(1,38) = 36.58$, $p < .001$, $\eta^2 = .49$, sympathy $F(1,38) = 27.82$, $p < .001$, $\eta^2 = .42$, and perceived impact $F(1,38) = 133.40$, $p < .001$, $\eta^2 = .78$ (see Fig. 3). This shows that the degree of victim in-groupness affects perceived responsibility more than it affects emotional reactions and perceived impact, which supports Hypothesis 3a.

Third, we investigated which of the possible mediators that explained the IGE. Focus was on the difference between version 1 (former classmate's daughter = out-group) and version 4

⁹ The quadratic trend was also significant $F(1,38) = 17.35$, $p < .001$, $\eta^2 = .31$.

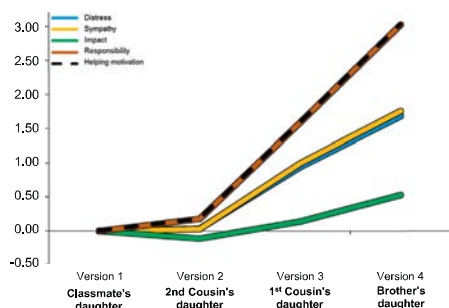


Fig. 3. The trends of helping motivation and the four psychological mechanisms when manipulating ingroupness of the victim. Means are centered so the responses of Version 1 equals zero.

(brother's daughter = close in-group). Condition differences in perceived responsibility explained condition differences in helping motivation ($B = .73$, $SE.B = .18$, $\beta = .60$, $p < .001$) and made the intercept non-significant ($B = .76$, $SE.B = .60$, $p = .211$). As can be seen in the right column of Table 2, condition differences in sympathy and perceived impact also explained condition differences in helping motivation, but did not make the intercept approach non-significance. In line with Hypothesis 3b, this implies that only perceived responsibility completely mediated the IGE.

Discussion

So far, three possible underlying mechanisms have been tested on three different helping effects. The results show that emotional reactions (distress and sympathy) are affected the most when identifiability of a victim increases; that perceived impact is affected the most when the size of the reference-group decreases; and that perceived responsibility is affected the most when ingroupness increases. The results also show that only sympathy completely mediated the IVE; that only perceived impact completely mediated the PDE; and that only perceived responsibility completely mediated the IGE. On the whole, this is in line with the hypotheses.¹⁰

A potential problem with Studies 1–3 is the within-subject design (all participants responded to all versions) and the joint evaluation mode (participants could easily compare the versions). The obvious advantage of a within-subject design is that the influence of individual differences is much smaller when all participants provide responses in all conditions, and that the comparative context can highlight differences. An equally obvious disadvantage is that within-subject designs are much more vulnerable to hypotheses-guessing and sensitive to demand-effects where participants respond in the way they believe the experimenter wants. To test if the results could be replicated with a different methodological approach less susceptible to these concerns, Study 4 tested the hypotheses with a between-subject design. It also used real monetary allocations as a measure of

helping motivation and tested the IGE with a different type of group manipulation.

Study 4

The aim in this study was to replicate the findings from Studies 1–3 by testing the helping effects with a between-group rather than with a within-subject design. This means that each participant only read one of the versions on each helping effect.

Materials

Swedish students participated by filling out a paper and pen questionnaire that ostensibly was a marketing survey. The questionnaire contained three charity advertisements (representing IVE, PDE and IGE). All participants read all three advertisements. Each advertisement was written in two versions where one of the versions illustrated the low end of each effect (statistical victim, large reference-group and out-group victims) and the other version represented the high end of each effect (identified victim, small reference-group and in-group victims). Each participant only read one of the two versions of each advertisement.

The IVE-ad was in part based on text from the homepage of a well-known charity organization focusing on child cancer (all advertisements can be found in the Supplementary material). The statistical victim version contained only statistical information about child cancer prevention and about the organization. The identified victim version contained a touching letter written by two parents to their late daughter who passed away one year ago. The daughter was identified with name and picture and the letter contained information about the personality of the daughter. The last paragraph where the organization asked for private donations was identical in the two versions.

The PDE-ad was in part based on text from the homepage of a well-known global charity organization focusing on poverty in developing countries. Participants read about Polio and were told that if receiving the expected amount of private donations, it would be possible to vaccinate children so the death rate would decrease by approximately 500 children per year. In the large reference-group version, participants read that 60,000 children in Africa annually die from Polio so the project had a potential rescue proportion of 0.83%. In the small reference-group version, participants read that around 500 children in Botswana annually die from Polio so the project had a potential rescue proportion of more than 99%.

The IGE-ad was in part based on text from the homepage of a well-known Swedish organization protecting the rights of children. The ad described how the organization worked to protect children from physical and psychological abuse and how private donations could benefit the children. The content of the ad was identical in the two versions but in the in-group version, the ad came from a famous Swedish organization focusing on the rights of Swedish children whereas in the out-group version, the ad ostensibly came from the Canadian sister-organization focusing on the rights of Canadian children and was partly written in English.

Each advertisement was followed by eight questions about participants' reactions towards the advertisement. The suggested mediators (distress, sympathy, perceived impact and perceived responsibility) were measured with two questions each (see Table 3). The two items measuring the same mediator always came after one another, but the order of the mediators was perfectly balanced between subjects. The two types of emotional reactions (distress and sympathy) correlated strongly with each other, and to avoid multicollinearity problems in the multiple mediation analysis, they were aggregated into a general emotional reaction

¹⁰ We conducted an additional, not yet published, study that included a fixed helping context (bone-marrow donation) where participants rated helping motivation and the four suggested mediators on nine easily comparable versions where two helping effects was varied in three phases each. This was done in order to test if the patterns from Studies 1–3 were robust enough to remain even when keeping the helping context constant and testing a second helping effect simultaneously. In large, the results were in line with the hypotheses.

Table 3

Included items for the three suggested mediators in Study 4 (distress and sympathy aggregated). Numbers show the Cronbach's alpha for each mediator on the identifiable victim effect advertisement (IVE), proportion dominance effect advertisement (PDE), and in-group effect advertisement (IGE).

	IVE-ad	PDE-ad	IGE-ad
Emotional reactions	.87	.89	.91
1. To what extent do you feel emotionally touched by the ad?			
2. To what extent do you feel emotionally uneasy when reading the ad?			
3. Do you feel strong empathic feelings toward the victims?			
4. To what extent do you feel compassion and sympathy toward the victims?			
Perceived impact	.91	.89	.89
5. How much good do you think you can do by donating money to this organization?			
6. How great a difference do you think you can do by donating money to this organization?			
Perceived Responsibility	.90	.85	.88
7. To what degree do you think you have a personal responsibility to donate money to this organization?			
8. To what degree do you perceive you have an obligation to support this organization?			

mechanism in this study.¹¹ After the eight questions, participants rated how motivated they were to help and how likely it was that they would help in this situation. All questions were answered on Likert-scales ranging from (0) *not at all* to (7) *very much*. Participants also wrote the amount of money they would donate in this situation if asked.

On the last page, after reading and responding to the three ads, participants were told that thanks to their participation, 10 Swedish Kronor (SEK) \approx \$1.50 would be donated to charity. The participants were asked to allocate the money between the three organizations by writing an amount (0–10) after each ad and the sum had to be 10 SEK. The money allocated by the participants was later donated by the authors to the organizations that inspired the included advertisements.

All participants read either one ad from the low end of the effects (statistical victim, large reference-group, out-group victims) plus two ads from the high end of the effects (identified victim, small reference-group, in-group victims) or two ads from the low end plus one ad from the high end. Twelve types of the questionnaire were created to perfectly balance the presentation order of the advertisements and the advertisement \times version combinations.

As the allocation measures were non-independent (e.g. a higher allocation to the IVE-ad automatically meant lower allocations to the PDE-ad and IGE-ad), we made sure that each questionnaire-combination was included equally many times (perfectly balanced design). Also, to make sure that e.g. the condition in the IVE-ad did not interact with the condition in the IGE-ad and PDE-ad when predicting allocation to the IVE-ad, we conducted six 2×2 ANOVAs. None of the possible interaction effects were significant (all p 's $> .170$).

Participants and procedure

In the initial data collection, 432 Swedish students participated. 60 of these had not followed instructions or missed a page so they were excluded and replaced to keep the design perfectly balanced.¹² The final sample included 244 women, 183 male and 5 unknown ($M_{age} = 23.50$, $SD = 4.96$). Participants were recruited individually or in connection to classes in two universities in southern Sweden.

¹¹ Principal component analyses with a three factor solution using direct oblimin rotation showed that all items loaded the highest on their expected mediator.

¹² The high percentage of excluded participants was a result of the strict inclusion criterion that was enforced in order to avoid missing values on any of the suggested mediators or dependent variables, as this would have destroyed the balanced design. For example, participants who did not write anything on the hypothetical donation question or participants who did not allocate money as instructed were excluded and replaced. All six hypotheses received support also when testing the original 432 participants.

Results

Like in Study 1–3, we used a three step approach when analyzing the data; (1) testing the helping effects, (2) testing if the different mechanisms are similarly or differently influenced by the different manipulations, (3) testing if the helping effects are primarily mediated by different mechanisms. These three steps will be reported separately for each helping effect.

Testing the helping effects

The helping effects were tested in three different ways: By comparing the self-rated helping intention (computed by aggregating the questions about motivation and likelihood of helping, $\alpha = .88 - .90$); by comparing the hypothetical donation amounts; and finally by comparing the real allocated money.

Identified victim effect

Participants who read the IVE-ad in the identifiable victim version did not have significantly higher helping intentions ($M = 4.01$, $SD = 1.69$) than participants who read the statistical victim version, $M = 3.92$, $SD = 1.60$; $t(430) = 0.60$, $p = .549$. Still, participants who read the identifiable victim version did write that they would donate more money if asked (Mean rank = 228.12) than participants who read the statistical victim version (Mean rank = 204.88; Mann-Whitney $U = 20,818$, $Z = -2.01$, $p = .044$).¹³ Also, participants who read the identifiable victim version allocated more money to the child cancer organization ($M = 5.04$ SEK, $SD = 3.13$) than participants who read the statistical victim scenario, $M = 4.16$ SEK, $SD = 2.54$; $t(412.37) = 3.22$, $p = .001$ (equal variances not assumed). Although not perfectly consistent between the different outcome variables, the results suggest that we replicated the IVE.

Proportion dominance effect

Participants who read the PDE-ad in the small reference-group version had higher helping intentions ($M = 3.77$, $SD = 1.64$) than participants who read the large reference-group version, $M = 3.46$, $SD = 1.57$; $t(430) = 2.01$, $p = .045$. However, participants who read the small reference-group version did not write that they would donate more money if asked (Mean rank = 213.68) than participants who read the large reference-group version (Mean rank = 218.31; Mann-Whitney $U = 22720.50$, $Z = -0.40$, $p = .686$). Despite this, participants who read the small reference-group version allocated more money to the organization distributing Polio-vaccines ($M = 4.30$ SEK, $SD = 2.85$) than the participants

¹³ Before doing this analysis, participants who added "per month" after their hypothetical donation amount got their amount multiplied by 2. Also, all hypothetical donations above 500 SEK were adjusted to 501. This was done for all three helping effects.

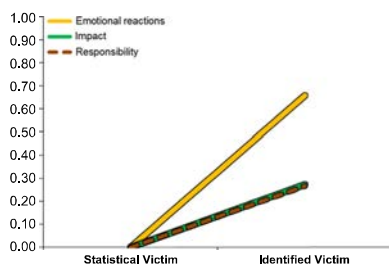


Fig. 4. The difference in the three psychological mechanisms between the participants reading the statistical version (centered to zero) and the participants reading the identified victim version.

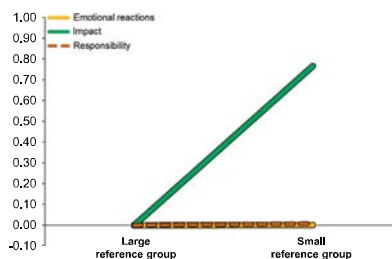


Fig. 5. The difference in the three psychological mechanisms between the participants reading the large reference-group version (centered to zero) and the participants reading the small reference-group version.

who read the large reference-group version, $M = 3.50$ SEK, $SD = 2.87$; $t(430) = 2.91$, $p = .004$. Although not perfectly consistent between the different outcome variables, the results suggest that we replicated the PDE.

In-group effect

Participants who read the IGE-ad in the in-group version had higher helping intentions ($M = 2.89$, $SD = 1.51$) than participants who read the out-group version, $M = 1.66$, $SD = 1.28$; $t(418.10) = 9.12$, $p < .001$. Also, participants who read the in-group version wrote that they would donate more money if asked (Mean rank = 244.65) than participants who read the out-group version (Mean rank = 188.35; Mann-Whitney $U = 17,248$, $Z = -4.85$, $p < .001$). In addition, participants who read the in-group version allocated more money to the organization protecting children's rights ($M = 2.09$ SEK, $SD = 2.15$) than the participants who read the out-group version, $M = 0.91$ SEK, $SD = 1.12$; $t(323.92) = 7.12$, $p < .001$ (equal variances not assumed).¹⁴ This suggests that we replicated the IGE.

Testing how the different mechanisms are influenced by the manipulations

For each helping effect, we conducted a 3×2 mixed ANOVAs where the three mechanisms (emotional reactions, perceived impact and perceived responsibility) were inserted as a within-subject factor and the advertisement version was inserted as a between-group factor. The main interest was the interaction effect, as this would show if the mechanisms were equally or differently influenced by the respective helping effect manipulations.

Identified victim effect

For the IVE-ad, the interaction effect was significant, $F(2,860) = 4.87$, $p = .008$, $\eta^2 = .011$, indicating that the mechanisms were differently influenced by the identifiability manipulation (see Fig. 4). Planned contrasts showed that emotional reactions were more influenced by the identifiability manipulation than perceived impact, $F(1,430) = 7.79$, $p = .005$, $\eta^2 = .018$, and perceived responsibility $F(1,430) = 7.54$, $p = .006$, $\eta^2 = .017$.

Proportion dominance effect

For the PDE-ad, the interaction effect was significant, $F(1.93,831.06) = 17.43$, $p < .001$, $\eta^2 = .039$ (Greenhouse-Geisser corrected), indicating that the mechanisms were differently

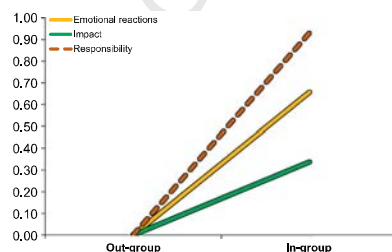


Fig. 6. The difference in the three psychological mechanisms between the participants reading the out-group version (centered to zero) and the participants reading the in-group version.

influenced by the reference-group manipulation (see Fig. 5). Planned contrasts showed that perceived impact was more influenced by the reference-group manipulation than emotional reactions, $F(1,430) = 24.42$, $p < .001$, $\eta^2 = .054$, and perceived responsibility $F(1,430) = 23.43$, $p < .001$, $\eta^2 = .052$.

In-group effect

For the IGE-ad, the interaction effect was significant, $F(2,860) = 10.12$, $p < .001$, $\eta^2 = .023$ indicating that the mechanisms were differently influenced by the in-group manipulation (see Fig. 6). Planned contrasts showed that perceived responsibility was more influenced by the in-group manipulation than emotional reactions, $F(1,430) = 4.56$, $p = .033$, $\eta^2 = .010$, and perceived impact $F(1,430) = 19.70$, $p < .001$, $\eta^2 = .044$.

These results are in line with the hypotheses and suggest that emotional reactions are most influenced when manipulating identifiability (Hypothesis 1a); that perceived impact is most influenced when manipulating the size of the reference-group (Hypothesis 2a); and that perceived responsibility is most influenced when manipulating the group-belonging of the victims (Hypothesis 3a).

Testing the three mechanisms as possible mediators of the three helping effects

To test mediation with multiple mediators, we used a SPSS Macro suggested by Preacher and Hayes (2008a). Using the bootstrapping technique, it is possible to determine if each of the suggested mechanisms uniquely mediates the helping effect (i.e. mediates the helping effect even if controlling for the influence

¹⁴ As this variable did not meet the normality assumptions, a non-parametric test were also conducted and the same result found.

of the other included mediators) and, if more than one mechanism uniquely mediates the effect, to use bootstrap contrasts to compare two mediators' unique ability to mediate the effect above and beyond the other included mediators (see Preacher & Hayes, 2008a). In order to cover a wide area of helping motivation, we aggregated the standardized self-rated helping intention, the standardized hypothetical donation and the standardized allocation amount into a general helping motivation variable and used this as the dependent variable in the mediation analyses.¹⁵

Identified victim effect

The identifiability manipulation significantly influenced emotional reactions, $B = -0.657$, $SE.B = 0.128$, $t(430) = -5.143$, $p < .001$, but not perceived impact, $B = -0.273$, $SE.B = 0.148$, $t(430) = -1.852$, $p = .065$, or perceived responsibility, $B = -0.266$, $SE.B = 0.170$, $t(430) = -1.565$, $p = .118$. In addition, emotional reactions predicted helping motivation even after controlling for the other mediators, $B = 0.068$, $SE.B = 0.028$, $p = .015$. Confidence intervals from the bootstrap analysis did not include zero for the emotional reaction mediator (CI95: low = $-.0936$; high = $-.0042$), but did so for the perceived impact mediator (CI95: low = $-.0615$; high = $.0019$) and for the perceived responsibility mediator (CI95: low = $-.0937$; high = $.0100$).¹⁶ This indicates that emotional reactions, but not perceived impact or perceived responsibility uniquely mediated the IVE.

Proportion dominance effect

The reference-group manipulation significantly influenced perceived impact, $B = -0.766$, $SE.B = 0.158$, $t(430) = -4.844$, $p < .001$, but not emotional reactions, $B = -0.001$, $SE.B = 0.149$, $t(430) = -0.008$, $p = .994$, or perceived responsibility, $B = -0.007$, $SE.B = 0.164$, $t(430) = -0.042$, $p = .966$. In addition, perceived impact predicted helping motivation even after controlling for the other mediators, $B = 0.118$, $SE.B = 0.020$, $p < .001$. Confidence intervals did not include zero for the perceived impact mediator (CI95: low = $-.1441$; high = $-.0469$) but did so for the emotional reaction mediator (CI95: low = $-.0191$; high = $.0195$) and for the perceived responsibility mediator (CI95: low = $-.0426$; high = $.0399$). This indicates that perceived impact, but not emotional reactions or perceived responsibility uniquely mediated the PDE.

In-group effect

The in-group manipulation significantly influenced perceived responsibility, $B = -0.931$, $SE.B = 0.139$, $t(430) = -6.705$, $p < .001$, but it also influenced emotional reactions, $B = -0.657$, $SE.B = 0.146$, $t(430) = -4.513$, $p < .001$, and perceived impact, $B = -0.338$, $SE.B = 0.137$, $t(430) = -2.462$, $p = .014$. Perceived responsibility predicted helping motivation even after controlling for the other mediators, $B = 0.186$, $SE.B = 0.023$, $p < .001$, but so did emotional reactions, $B = 0.078$, $SE.B = 0.023$, $p < .001$ and perceived impact, $B = 0.066$, $SE.B = 0.023$, $p = .004$. Confidence intervals did not include zero for neither the perceived responsibility mediator (CI95: low = $-.2464$; high = $-.1117$), the emotional reaction

mediator (CI95: low = $-.0946$; high = $-.0179$) or the perceived impact mediator (CI95: low = $-.0520$; high = $-.0024$). This means that all three of the included mechanisms uniquely mediated the IGE in this study. In order to test which of the included mediators that was the comparably better one, we used bootstrap contrasts to compare the three mediators in their unique ability to mediate over and beyond the other included mediators. These showed that perceived responsibility was a comparably better mediator than emotional reactions (CI95: low = $-.2027$; high = $-.0508$) and perceived impact (CI95: low = $-.2268$; high = $-.0860$).

Discussion

The results from Study 1–3 (where the helping effects were tested within-subjects), were in large replicated in Study 4 where the helping effects were tested between-subjects. In this study, emotional reactions were affected the most by the identifiability manipulation (Hypothesis 1a), and emotional reactions (but not perceived impact or perceived responsibility) uniquely mediated the IVE (Hypothesis 1b). Perceived impact was affected the most by the reference-group size manipulation (Hypothesis 2a), and perceived impact (but not emotional reactions or perceived responsibility) uniquely mediated the PDE (Hypothesis 2b). Perceived responsibility was affected the most by the in-group manipulation (Hypothesis 3a), and although all suggested mechanisms uniquely mediated the IGE, perceived responsibility was the comparably better mediator (Hypothesis 3b).

General discussion

This article contributes to the field by being the first to systematically test multiple mediators on different helping effects. The results suggest that different helping effects are primarily mediated by different psychological mechanisms. More specifically, primarily emotional reactions (sympathy) mediate the identifiable victim effect (IVE), primarily perceived impact mediates the proportion dominance effect (PDE), and primarily perceived responsibility mediates the in-group effect (IGE).

The results are largely congruent with previous studies suggesting emotional reactions as the main underlying mechanism of the IVE (Kogut & Ritov, 2005a, 2005b; Small et al., 2007). Compared to reading about statistical victims, a single identified victim primarily increases emotional reactions, and especially the increase in sympathy seems to account for the increase in helping motivation. This finding might appear to contradict the results from Cryder, Loewenstein, and Scheines (2013), where impact, but not sympathy, mediated the positive effect information had on helping. However, it is worth noting that this information-effect is not the same as the IVE because it was the information about the project itself, rather than information about the victims, that was manipulated.

The results are congruent with previous studies suggesting that perceived impact is the main underlying mechanism of the PDE (Erlandsson et al., 2014; Friedrich & Dood, 2009; Friedrich et al., 1999). The possibility to save 275 out of 300 victims make people perceive the impact of helping as much higher than the possibility to save 275 out of 10,000 victims which in turn explains the increased helping motivation.

The results are also in line with the idea that increased perceived responsibility is the main underlying mechanism of IGE (Levine & Thompson, 2004; Nisan, 2005). People believe they have a role-dependent responsibility to help victims from the in-group but not victims from the out-group and this explains the higher helping motivation toward one's in-group. Although emotional reactions and to a lesser extent perceived impact were also

¹⁵ When testing mediation on each measure of helping motivation separately, the reported mediation pattern was found for all helping measures on PDE and IGE. For IVE, the reported mediation pattern was clearly significant for the self-rated helping intention measure whereas it was in the expected direction but not significant for the hypothetical donation and real allocation measures.

¹⁶ We consistently report the more conservative percentile 95% confidence intervals from bootstrap analyses with 10,000 iterations. Percentile confidence intervals was preferred because bias corrected confidence intervals has a heightened risk of Type I errors especially in cases where the sample size is less than 500 and one of the paths (IV → MV or MV → DV) is close to zero and the other path is significant with a medium or strong effect size (as was often the case in the current study; see Fritz, Taylor, & MacKinnon, 2012 and Hayes & Scharkow, 2013).

affected, perceived responsibility increased steeper when in-groupness was manipulated, and responsibility was the comparably better mediator of the IGE.

Theoretical implications

This study investigated the interplay between two central questions in the helping literature namely “when do we help” and “why do we help” (Dovidio, Piliavin, Schroeder, & Penner, 2006). The when-question concerns how situational differences and framing effects increase or decrease helping motivation (i.e., helping effects). The why-question relates to what kind of thoughts and feelings that influence helping motivation (i.e., psychological mechanisms). One approach to investigate the interaction between helping effects and psychological mechanisms has been to compare correlations in different situational conditions. For example, Stürmer et al. (2006) showed that sympathy and helping motivation were strongly correlated for in-group victims but not for out-group victims. This is an interesting finding, but as neither sympathy nor helping motivation had any significant condition differences, a sympathy-mediation cannot be inferred. Several studies on helping effects have in fact tested for mediation, but they have sometimes contained only a single mediator measure (e.g., Small & Simonsohn, 2008), had mediators that tap into multiple conceptually different mechanisms (e.g., “feelings” in Small et al., 2007) or included a mediator either conceptually similar to the independent variable (making it effectively a manipulation-check) or conceptually similar to the dependent variable (see Zhao, Lynch, & Chen, 2010 and Lynch, 2011 for a discussion of this). Some studies have had multiple mediator-measures (e.g., Cryder, Loewenstein, & Scheies, 2013; Erlandsson et al., 2014; Friedrich & McGuire, 2010) but they have been restricted to a single helping effect.

The current article is, to our knowledge, the first where multiple mediators are tested systematically on multiple helping effects. However, we note that Dickert, Kleber, Västfjäll, and Slovic (submitted for publication) found that perceived impact and anticipated regret mediated the singularity effect whereas clearer mental images mediated the IVE and increased sympathy ratings. We also note that Lee, Winterich, and Ross (in press) found that the positive effect of moral identity on helping an innocent victim was mediated by empathy (but not perceived justice) whereas the negative effect of moral identity on helping a non-innocent victim was mediated by perceived justice (but not empathy). Taken together, these studies suggest that different psychological mechanisms mediate helping in different contexts.

We believe that this article contributes a piece to the puzzle of understanding human helping behavior, but we are humbly aware that our piece is only one among many. There exist several other helping effects not covered in this article. Also, the suggested mechanisms inspired by Weber's taxonomy of decision modes (1998) do not cover (and do not spell out) all kinds of reasons people have for helping others. Over and above the empirical contribution, we hope that our attempts to separate different helping effects, to tell different psychological mechanisms apart, and to systematically test both the existence and absence of mediation of helping effects, can encourage other researchers to do more of the same in the future.

Practical implications

One possible criticism of the current study is that the separation of the helping effects as well as the separation of the psychological mechanisms is artificial. Admittedly, the helping effects in these studies were more cleanly separated than they tend to be in real life, and the included psychological mechanisms were measured

in a way that highlighted rather than hid differences. This sacrifice in external validity (which is central for practical implications) was conscious and deemed necessary to improve internal validity (which is central for theoretical contributions).

Although the design was far from naturalistic, the findings from this study could still be relevant for charitable organizations. More specifically, the three psychological mechanisms map well on three different types of appeals that can be used by charity organizations. A “heart-appeal” aims to increase donations via the emotional reaction mechanism, a “head-appeal” aims to increase donations via the perceived impact mechanism, and a “by the book-appeal” aims to increase donations via the perceived responsibility mechanism. In this study, we have showed that increasing identifiability of a victim (e.g., you can sponsor this child) is one way to make a heart-appeal, that increasing the rescue proportion (by presenting a small reference-group) is one way to make a head-appeal, and that framing victims as part of one's social in-group is one way to make a by the book-appeal. There are obviously other ways to appeal to the heart, head and book. Underscoring that the victims are especially vulnerable (children, animals, disabled people) is probably a heart-appeal; emphasizing cost-effectiveness is probably a head-appeal; and reminding donors that they are lucky to live in the developed world and that they have a duty to help those worse off is probably a by the book-appeal.

A question for the future is whether one should concentrate on one type, or mix different types of charity-appeals. People who are approached by panhandlers or by charity requests and decline to help, often justify their decisions, not by pointing to the lack of feelings, but instead, by pointing either at a lack of impact of helping or by pointing to a lack of personal responsibility (Dickert et al., 2011; Schwartz & Howard, 1980). Although these justifications might sometimes be given post hoc to provide rational and socially acceptable reasons not to help, it is possible that the lack of perceived impact and responsibility does hamper actual helping. If so, charity-organizations should perhaps concentrate more on head- and book-appeals, at least if the situation is inherently affect-rich and thus already appeals to the heart. Systematic studies on this topic are warranted.

Methodological considerations and limitations

In a mediational analysis, it is important to distinguish different types of relations between the independent variable (here: the helping effect manipulation), the mediating variable (here: the psychological mechanisms) and the dependent variable (here: helping motivation). In this paper we investigated three psychological mechanisms as possible mediators of three helping effects. As noted, this is not the same as comparing the correlations between the mediating variables and the dependent variable in different contexts. A significant correlation between a mediating variable and the dependent variable is necessary but not sufficient to suggest mediation of a helping effect. To claim mediation, one must also establish a relation between the independent variable and the suggested mediating variable. In our studies, the “wrong” psychological mechanism was sometimes a better predictor of helping motivation than the expected one in the context of a certain helping effect. For example, both perceived impact and responsibility better predicted helping motivation than emotional reactions did in the IVE-context in Study 1 and 4. However, because impact and responsibility were very weakly influenced by the IVE-manipulation, they did not uniquely mediate the IVE. Also, as emotional reactions correlated significantly with helping even after controlling for perceived impact and responsibility in Study 4, it passed both necessary steps and hence mediated the IVE.

It is worth noting that the mediation hypotheses were tested with different approaches in the two studies. In Studies 1–3 (within-subjects design), we tested the suggested mediators' one at the time on each helping effect and investigated if condition differences in the different mediators could fully account for condition differences in helping motivation (Judd et al., 2001). This mediational technique origin from the causal steps approach popularized by Baron and Kenny (1986) and was chosen because it is specifically designed to test within-subject mediation. In Study 4 (between-subjects design), we tested mediation of multiple mediators simultaneously using a bootstrap technique suggested by Preacher and Hayes (2008a). This mediational technique origins from the contemporary approach of mediation, and focuses primarily on the indirect effects (manipulation → mediator → helping) and less on the strength of the direct effect after controlling for the mediator (Preacher & Hayes, 2008b). We believe that the fact that the hypotheses were supported in two studies using different methodological and statistical approaches strengthens our conclusions.

As previously noted, a methodological problem with Studies 1–3 is that the within-subject design is subject to demand characteristics. Most obviously, participants could easily guess that helping motivation was supposed to increase in each version and answer in order to please the experimenter. A demand-effect might also have affected the responses toward the mechanisms. It is possible that the participants rather than responding to how they actually felt towards each version, instead rated how they anticipated they might react (or should react) in each version, and that the joint evaluation mode made it possible for participants to link each helping effect to the "correct" mechanism. With this interpretation, the results from Study 1–3 would show that peoples naïve theories about underlying mechanisms are in line with the hypotheses but not necessarily that the different mechanisms mediate the different helping effects. We therefore conducted Study 4 and largely replicated the results from Studies 1–3 with a between-group design, which is clearly less susceptible to demand characteristics than a within-subject design. Although it is still theoretically possible that the participants responded as how they anticipated they might feel or how they believed they ought to feel, rather than how they actually felt, this is a problem shared by most research using self-rated emotional reactions. Possible ways to control for this even better in future studies could be to adopt a between-subject approach both to the psychological mechanisms (i.e. each participant only responds to one of the mediators) and to the helping effects (i.e. each participant only respond to a single condition of a single helping effect) or to take active measures to reduce the demand characteristics (e.g. Friedrich & McGuire, 2010).

On a related note, it is important to notice that the emotional reaction-mechanism in the current study was limited to distress and sympathy. What we argue for in this article is that sympathy is the primary mediator of the IVE but not the primary mediator of the PDE or the IGE. We do not, however, claim that emotions or affective states have nothing to do with these helping effects. For example, Slovic (2007) suggest that the broadly defined "feelings" is related to the PDE by proposing that the number of lives saved carries little affective meaning while the proportion of lives saved carries great affective meaning. This is not necessarily in conflict with the findings of this study. For example, it is possible that expected guilt (an anticipated negative emotion if one does not help) is higher if the victims are from one's in-group than if the victims are from one's out-group. Likewise, it is possible that expected warm glow (an anticipated positive emotion if one does help) is higher if one can help 275 of 300 victims than if one can

save 275 out of 6000 victims (see Cryder, Loewenstein, & Seltman, 2013). These anticipatory emotions can motivate helping, but we emphasize the distinction between emotional reactions when facing a situation (e.g. distress and sympathy) and anticipatory emotional reactions in case one chooses to help (e.g. anticipated warm glow, pride), or chooses not to help (e.g. anticipated guilt; see Mellers, Schwartz, & Ritov, 1999). Whereas distress and sympathy typically arise the very moment one hears about the situation, anticipatory emotional reactions typically arise when one is faced with the decision to help or not to help. Future studies should investigate when different anticipatory emotional reactions motivate helping.

It is worth mentioning that we tested several types of the IVE in this article. The traditional IVE in the research literature usually implies that it is possible to help an identified victim (e.g. your money is earmarked for Harry). However, the IVE most commonly used by organizations to increase private donations is to show a picture of an identified child and then ask for donations that will benefit this child as well as other children (e.g. Harry is one among many children in this child village, please support the child village). Yet another way to use the IVE to increase donations is to present an iconic victim that cannot personally benefit from ones help but that still personifies and illustrates a broader problem (e.g. Harry died from leukemia, please support other children with leukemia; Loewenstein, Small, & Strnad, 2006). Study 1 used the one among many-type of IVE, but we have results indicating that the patterns are similar if testing the earmarked money type of IVE or the iconic victim type of IVE (mentioned in the footnote, and reports of these studies can be obtained by the first author upon request). Study 4 tested only the iconic victim-type of IVE, meaning that the between-group results might not generalize to other types of IVE. Although we tentatively believe that emotional reactions primarily mediate the IVE in most cases, it is quite possible that different types of emotional reactions as well as other mechanisms play a smaller or larger role depending on what type of IVE that is being studied.

Conclusions

This article combined the "when" and "why" of helping by investigating if different helping effects are mediated by different psychological mechanisms. The results suggest that the IVE is primarily mediated by emotional reactions (sympathy), that the PDE is primarily mediated by perceived impact and that the IGE is primarily mediated by perceived responsibility. The article emphasizes the separation of different helping effects; the importance of testing different types of psychological mechanisms underlying helping decisions; and especially the value of understanding how helping effects and psychological mechanisms interact.

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Appendix A. Supplementary material

Supplementary data associated with this article can be found, in the online version, at <http://dx.doi.org/10.1016/j.obhdp.2014.11.003>.

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Appendix for Article 2

Study 1

The helping situation and the four versions used in Study 1 (translated from Swedish)

For over 60 years, our organization has helped children in need. Today we run children's villages in 133 countries where orphan or abandoned children can get a new home. In everything we do, cost effectiveness is highly important as we want your money to go to the ones who need it the most – the children. In 2011, 85.4 % of our received money went to the villages. Our administration and marketing costs were only 14.6 %.

Version 1: If you choose to support us today, you will be the sponsor of a children's village in Mozambique. Your money will go exclusively to food, clothes and education for all children living in the village that you sponsor

Version 2: If you choose to support us today, you will be the sponsor of a specific child in one of our children's villages in Mozambique. The child you sponsor is anonymous so you will not know its identity. Your money will go exclusively to food, clothes and education for all children living in the village where your sponsored child lives.

Version 3: If you choose to support us today, you will sponsor Isaka who lives in one of our children's villages in Mozambique. Isaka is a five year old boy and lives in Tete in western Mozambique. Your money will go exclusively to food, clothes and education for all children living in the village where Isaka lives.

Version 4: [same as version 3 but had an additional color picture*, birthday, and background story about Isaka]

The background story described that his mother died when he was 1 year old and that he lived with his grandmother until she could not take care of him anymore. After coming to the children's village, he is no longer malnourished and does well in pre-school, but still has occasional nightmares.



Isaka Charles Dominick

- Födelsedag: 9 juni, 2007
- Kön: Pojke
- Isakas mamma dog när han var ett år gammal. Därefter fick han bo med sin mormor. Efter några år kunde hans mormor inte längre ta hand om Isaka. Då flyttade han till barndyn i Tete. Nu går han i en förskoleklass och blir väl omhändertagen av sin barndymamma. Isaka är fortfarande lite orolig och drömer ofta mardrömmar, men han är inte längre undernärmd och är duktig i förskolan.

**Pictures of identified children are blurred.*

Study 2

The helping situation and the four versions used in Study 2 (translated from Swedish)

Bacterial meningitis is a big health problem in parts of Western Africa and certain types of the disease are often deadly. There exists an efficient vaccine called MenAfricaVac that effectively prevents the disease, but most countries in the area cannot afford to buy the vaccine to its people. Our organization works to make the rich countries in the world contribute financially to secure a large enough supply to cover the existing needs.

Version 1: If you choose to support this project today, we will be able to buy and distribute more MenAfricaVac. If the campaign goes as planned, it will be possible to save around 275 of the 8000 children (3%) that annually die from bacterial meningitis.

Version 2: [Same as Version 1] ...it will be possible to save around 275 of the 2000 children (14%) that annually die from bacterial meningitis.

Version 3: [Same as Version 1] ...it will be possible to save around 275 of the 900 children (31%) that annually die from bacterial meningitis.

Version 4: [Same as Version 1] ...it will be possible to save around 275 of the 300 children (92%) that annually die from bacterial meningitis.

Study 3

The helping situation and the four versions used in Study 3 (translated from Swedish)

Each day, many parents are informed that their child suffers from renal failure. A child with renal failure needs dialysis frequently and in most cases their physical and cognitive development is impaired by this. Ideally, a child with renal failure should have a kidney transplantation from a living donor who is 20-30 years old. In over 95% of the cases, the new kidney functions well, meaning that the child can return to an almost normal life. Donating a kidney usually doesn't come with any major health problems for young healthy people, even if one usually has to spend a week in hospital in connection with the surgery. To donate a kidney, the donor and the receiver must share the same blood-type.

Version 1: You read a blog about a young girl in Stockholm suffering from renal failure. The girl is in great need of a kidney. From the text, you understand that the sick girl's father is an old classmate that you have sporadic contact with. You read that you share the same rare blood-type and that you would be a suitable donor. If you file an application to donate, you will likely donate one of your kidneys to the girl.

Version 2: [Same as Version 1]. From the text, you understand that the sick girl's father is your second cousin that you have sporadic contact with. [Same as Version 1].

Version 3: [Same as Version 1]. From the text, you understand that the sick girl's father is your first cousin that you have sporadic contact with. [Same as Version 1].

Version 4: [Same as Version 1]. From the text, you understand that the sick girl's father is your brother that you have sporadic contact with. [Same as Version 1]

Study 4

The IVE-ad in the identified victim version used in Study 4 (translated from Swedish)



Good night Mommy
Good night Daddy
The words we could hear every night after the bedtime story ended.
The words we will never hear you say again.

Amanda, our wonderful girl, almost three years old who loved life and everything it had to offer.
You loved to sing, dance, swim and play. You loved to ride merry-go-rounds and have fun at the kindergarten – and you told everyone about it. Every time we passed the amusement part you said: “Look there it is, and it IS open”. The warmth and joy you spread to us when riding the carousels was irresistible. The hope never left us, but like sand that falls between fingers; your life fell away from us. It is one year ago they told us that the prospects were bad. One year ago the illness that took your body in February, with brutal force extinguished your spark and glow of life

One day in heaven – a thousand years on earth.
We will see you soon again
We love you – now, then and forever.
/ Mommy and Daddy

We want to give a heartily THANK YOU to everyone contributing to us so that we can
continue our fight and research against child cancer.

Together we are stronger; together we can make a difference.

**The IVE-ad in the statistical victim version used in Study 4
(translated from Swedish)**

Our organization is contributing as a financier in 90% of all research on childhood cancer in Sweden - with no support from the government, county or municipality. Through hundreds of research projects each year we try to find new and better methods that can alleviate and cure childhood cancer. Our hope is to be able to solve the riddle of childhood cancer.

We exist to mitigate uncertainty and grief of the families who suffer here and now. We also advocate cancer-ill children's issues in the community and visit schools and other forums to talk about childhood cancer and what we are doing to combat it.

Childhood cancer is the main cause of death in children between 1 and 14 years. And every year, around 300 families are the victim of the unthinkable; a child receives a diagnosis of cancer. But there is hope.

Our greatest wish is that all children affected by cancer become healthy again. But the path is lined with numerous challenges.

For this desire to come true, research must continue to be pushed further. Therefore, we need help from even more people who want to support us in the fight against childhood cancer.

We want to give a heartily THANK YOU to everyone contributing to us so that we can continue our fight and research against child cancer.

Together we are stronger; together we can make a difference.

**The PDE-ad in the small reference group version used in Study 4 [large reference group version in brackets]
(translated from Swedish)**

Polio vaccine

Approximately 500 [60,000] children in Botswana [Africa] die annually of Polio. We are cooperating with the authorities there to vaccinate as many children as possible. The only way to stop the disease is to ensure that children get vaccinated. The vaccine is usually given to the child orally, by swallowing a few drops of vaccine. For a child to receive the full protection, three doses are required.

If we manage to collect the expected amount of private donations (250.000 SEK) it would be possible to vaccinate nearly all children in Botswana [more children in Africa]. This would, according to estimates, imply that we can save almost all of the 500 children who die of Polio in Botswana each year. [...approximately 500 of the 60,000 children who die of Polio in Africa each year]

This means a save percentage of more than 99%. [This means a save percentage of 0.83%]

**The IGE-ad in the in-group version used in Study 4 [out-group version in brackets]
(translated from Swedish)**

Swedish [Canadian] children's rights

We see children and adolescents in Sweden [Canada] as our clients and we base our work on their needs. The knowledge we get through phone calls, emails and post on forums is an important base in the work to make Swedish [Canadian] children and young people's needs more visible to adults. This applies both to the public and to the policy makers.

We are focused both on the prevention and stopping of physical child abuse as well as other forms of abuse against children, but we also focus our attention on other important areas in the society where children's situations are compromised and where children need support and advice from knowledgeable and empathetic adults.

(This part was written in Swedish in the in-group condition and in English in the out-group condition. Swedish university students have very good skills in English and no participants expressed any difficulties understanding the English text)

[This organization is Canada's equivalent to a famous Swedish organization]. Our [Their] long experience of contact with children and young people has resulted in a high level of expertise in terms of assessing what measures are necessary over and above the Government activities in defense of Swedish [Canadian] children and youth rights. Give a gift that helps this organization keep all their contact channels open more often!

(This part was written in Swedish for both conditions)

Article III

Allocation decisions and choice-justifications when comparing charity appeals

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Abstract

How do donors reason and justify their choices when faced with dilemmas in a charitable context? 197 Swedish students were confronted with three different helping dilemmas (based on the identifiable victim effect, the proportion dominance effect and the in-group effect) where they read about two comparable charity projects and had to allocate real money unevenly between them. They were then asked to provide justifications of their choices by ranking the relative importance of different types of reasons. Participants generally did not favor projects including an identified victim over projects providing only statistical information, but those who did emphasized emotional reasons (e.g. "I had more empathic feelings") more than those preferring statistical projects. Participants generally favored projects framed as high rescue proportion appeals (e.g. you can save 375 out of 400) over projects framed as low rescue proportion appeals (e.g. you can save 375 out of 6000), and those who did emphasized efficacy reasons (e.g. "My money can make a greater difference") more than those favoring low rescue proportion projects. Finally, participants generally favored projects with in-group victims over projects with out-group victims, and those who did emphasized responsibility reasons (e.g. "I have a greater obligation") more than those favoring out-group projects. The results indicate that different motivational factors might underlie different helping effects.

Keywords: charitable giving; decision modes; identifiable victim effect; in-group effect; proportion dominance effect.

Although charity organizations differ from most other businesses in that they do not exclusively try to maximize profits, a steady flow of money is necessary to keep them up and running. In order to collect money, organizations make charity appeals to potential donors. One could argue that a charity appeal has to convince a potential donor in three steps: First, to make the donor decide to help at all (increase likelihood of helping); second, to make the donor donate more rather than less money (increase magnitude of helping) and third, to make the donor allocate the money to your organization rather than to another charity organization (Bendapudi, Singh & Bendapudi, 1996; Sargeant, Ford & West, 2006).

There is ample evidence to show that donors' willingness to give can indeed be manipulated. When using appeal scales, setting the leftmost anchor low increases the likelihood of helping, and steep (rather than flat) augmentation in scale steps increases the magnitude of helping (De Bruyn & Prokopec, 2013). Also, an emotional appeal (e.g. including sad victim-information) increases the likelihood but decreases the magnitude of impulsive online donations (Bennett, 2009), but the opposite pattern is found when asking for donations by mail (Smith & Berger, 1996).

The current study examined charitable marketing with a slightly different focus. First, it investigated the third step – how people choose when they are faced with two charitable projects and must allocate resources between them (a helping dilemma; Baron & Szymanska, 2011, see also Bennet, 2003). Second, it investigated what kind of reasons (emotion-based, efficacy-based or responsibility-based reasons) people claim to have for choosing one project over another.

Allocating resources – when helping A implies not helping B

The need for help in the world is enormous. Many kinds of needs are addressed by charity organizations. Some organizations focus on disaster relief, others on promoting research for a medicine that might cure a specific disease and yet others aim to prevent schoolyard bullying. No matter how altruistic, willing and affluent a potential donor is, she cannot address all types of needs which means that she explicitly or implicitly has to make a choice about how to allocate resources when helping (Baron & Szymanska, 2011). Even if rarely spelled out, different organizations often compete for the money that people are willing to spend on charity. Although the decision to donate and the decision of whom to donate to often occur at the same time, it seems possible that people sometimes first make the decision to help, and at a later stage decide about whom to help. Potential donors who have decided to give, but not yet decided to whom, are naturally very attractive customers for charitable organizations (Bennett, 2003). Consequently, charitable organizations must work hard to create appeals that motivate people to donate money to them, rather than to another organization (Bendapudi et al., 1996).

The most common way to investigate how charity appeals influence helping is to randomly divide participants into groups and let the groups read one charity appeal each. The groups are then compared either on the percentage of people choosing to donate or the actual donated amount. However, as most people come into contact with several charity appeals every day, this type of separate evaluation might not always truthfully reflect how people actually make choices (Bennet, 2003). The main decision may not be whether to give or not, but to whom. Alternatively, as an important additional way of modeling how actual charity decisions are made, one could let each participant read several appeals and have the possibility to donate any amount to any of the projects the appeals refer to (i.e. joint evaluation free donation; Soyer & Hogarth, 2011) or to force them to prefer one project over the other (i.e. joint evaluation, forced choice). It has been established that people's preferences can change depending on how charity appeals are presented (Bazerman, Moore, Tenbrunsel, Wade-Benzoni & Blount, 1999; Hsee & Zhang, 2010) and to fully understand potential donors' behavior in helping situations it seems suitable to complement studies using separate evaluation, with studies using joint evaluation of charity appeals.

The current study investigates how people choose to allocate money when they have to prefer one charity-project over the other (joint evaluation, forced choice). Importantly, it also investigates what kind of reasons people claim to have for making these choices. Below, three popular techniques for framing a charity appeal in order to increase donations are presented. These framing-techniques

correspond nicely with three helping effects that have been discussed frequently in the decision-making literature (Small, 2011; Slovic, 2007). Then, three types of reasons that may underlie helping choices will be presented, and it will be suggested that each of the three reasons is the main explanation for one of the three helping effects respectively.

Helping effects: Framing the appeal in order to increase donations

The identifiable victim effect

One of the most popular ways to increase donations is to include an identified victim in the charity appeal. Research on the identified victim effect seems to support the notion that including a victim's name, picture and background information increases donations (Small & Loewenstein, 2003; Small, Loewenstein & Slovic, 2007; Friedrich & McGuire, 2010; Bohnet & Frey, 1999; Charness & Gneezy, 2008). However, adding identifying information is only effective when there is a single victim (Kogut & Ritov, 2005a, 2005b, 2007). As charity organizations rarely have projects directed to a single victim, a more common practice is to present an iconic victim in order to illustrate a broader problem. For example, a charity organization aiming to raise funds for building a school in a poor village could either present just general information about the cost of building the school and the number of children who can benefit (statistical appeal), or add information and a picture about one of the children who currently suffers but would benefit if the school was built (identified victim appeal).

Although the identified victim effect implies that people will prefer to donate their money to the project with an identified victim, this effect might exist primarily when one reads the appeals separately. In a study by Kogut & Ritov (2005b, Study 2), people gave more money to a helping project with one identified victim than to a helping project with eight victims when evaluation was separate. However, when evaluated jointly with free choice, the projects received equally much, and when evaluated jointly with forced choice the project with eight victims received more money.

In the current study, participants read an identified victim appeal next to a statistical appeal, and were asked to allocate money between the two projects. The identified victim effect seems to imply that people will allocate more money to the identified victim appeal than to the statistical appeal. However, we issue a caveat about this specific hypothesis as the design resembles the joint evaluation with forced choice-condition in the aforementioned study.

H1a: People will allocate more money to a project framed as an identified appeal than to a project framed as a statistical appeal.

The proportion dominance effect

Another way to increase donors' motivation to help is to frame the appeal to sound as a large proportion of the victims can be helped. People are more motivated to try to help a fixed number of victims if these are part of a small reference-group (e.g. 17 out of 20 can be helped) than if they are part of a large-reference group (e.g. 17 out of 8000 can be helped; Jenni & Loewenstein, 1997; Baron, 1997; Bartels, 2006; Fetherstonhaugh, Slovic, Johnson & Friedrich, 1997; Friedrich et al. 1999; Kleber, Dickert, Peters & Florack, 2013). To illustrate, if a charity organization wishes to raise funds for distributing a vaccine that can prevent deaths in developing countries, they can either frame it as a large-scale problem/low rescue proportion appeal (40000 children are dying annually in Africa, we can save 50 of them) or as a small-scale problem/high rescue proportion appeal (60 children are dying annually in this African region, we can save 50 of them).

In the current study, participants read a charity project description with a high rescue proportion appeal, next to another charity project description with a low rescue proportion appeal, and were asked to allocate money between the projects. As the proportion dominance effect has been found in joint evaluation studies (Bartels, 2006; Jenni & Loewenstein, 1997), it is expected that people will allocate more money to the project framed as a high rescue proportion appeal.

H1b: People will allocate more money to a project framed as a high rescue proportion appeal than to a project framed as a low rescue proportion appeal.

The in-group effect

Yet another way to increase donors' motivation to help is to emphasize that the victims belong to the same group as the donor (Duclos & Barasch, 2014). Beneficiaries who come from the donor's in-group generally get more help than beneficiaries from the donor's out-group (Dovidio et al., 1997; Levine & Thompson, 2004). Previous studies have shown that people are more willing to donate money to a charity that focuses on a type of plight the donors have personal experience with (Small & Simonsohn, 2008) and donations to a foreign country in need is higher if the donor has visited that country before (Zagefka, Noor & Brown., 2013). To illustrate, an organization focusing on cancer-research could frame their charity appeal either to emphasize the plight for sick children living in distant countries (an out-group appeal), or to emphasize the plight for sick children living in the same city as the donor (an in-group appeal).

In the current study, Swedish participants read a description of a project that included in-group victims (Swedes) next to a description of a project that included out-group victims (Canadians) and were asked to allocate money between the projects. As in-group loyalty can be seen as a cultural norm (Baron, Ritov & Greene, 2013), it is expected that people will allocate more money to the project framed as an in-group appeal even when the projects are presented jointly.

H1c: People will allocate more money to a project framed as an in-group appeal than to a project framed as an out-group appeal.

Reasons for choosing

The main aim of this study is not to replicate the three helping effects, but to understand the underlying reasons (or processing determinants; Sargeant, 1999) for why people prefer one helping project over another. Whereas previous studies have often investigated motivational factors for donating to charity in general (e.g. Mathur, 1996) or for regularly donating to a specific charity organization (e.g. Sargeant & Lee, 2004), the current study is primarily focused on the motives for choosing one charitable project over another. People make decisions for different reasons, and it can be a great advantage for charitable organizations to understand not only how their donors choose, but why they choose one helping project over another (Bekkers & Wiepking, 2011a; Bendapundi et al., 1996).

This paper adopts a taxonomy of decision modes suggested by Weber (1998; Weber & Lindemann, 2007) which suggest that people make decisions either with the heart, with the head or by the book. In a help allocation context, deciding with the heart would mean that the donor compares helping projects and chooses the one that made her the most emotionally touched or where she felt more compassion (emotional reasons; Slovic, 2007). Deciding with the head would mean that the donor tries to estimate the cost and benefits of the different helping projects and chooses the one that has higher impact (efficacy reasons; Cryder, Loewenstein & Scheines, 2013; Baron & Szymanska, 2011). Deciding by the book would mean that the donor asks herself to what extent she has an obligation or personal responsibility to support each project, and chooses the project where she has a higher (relative) responsibility to help (responsibility-based reasons; Winterich & Zhang, 2014; Basil, Ridgeway & Basil, 2006).

This study is inspired by a recent study that suggested and found different underlying mechanisms for different helping effects, tested both in joint evaluation with free allocation and in separate evaluation (Erlandsson Björklund & Bäckström., submitted manuscript). Unlike that study, the current study focuses on the retrospective justifications for choosing one charity project over another. The justifications are measured by asking participants to rank the relative importance of eight possible reasons for choosing as they did. To our knowledge, the current study is the first to systematically investigate if donors' choice-justifications in helping dilemmas vary as a function of

how they actually allocated money. Based on previous research, it is expected that people will provide different justifications for their choices in different allocation tasks, and that each of the three kinds of justifying reasons (emotional, efficacy and responsibility) can be linked to one of the three helping effects respectively.

First, it is hypothesized that people who prefer to support a project framed as an identified victim appeal will emphasize emotional reasons (not efficacy or responsibility reasons) more than people preferring to support the project framed as a statistical appeal and that donors choosing the identifiable victim project will rank emotional reasons as the most important more often than donors choosing the statistical project. The rationale for this is that the identifiable victim effect has been closely linked to more intense emotional reactions towards identifiable victims (Kogut & Ritov, 2011; Small, 2011; Sah & Loewenstein, 2012). These emotional reasons can be either self-oriented distress (I feel worse when reading an identified victim appeal, Kogut & Ritov, 2005a) or other-oriented sympathy (I feel more compassion toward the victims when reading the identified victim appeal, Kogut & Ritov 2005b).

H2a: People who prefer to support the project framed as an identified victim appeal will rate emotional reasons as more important than people preferring to support the project framed as a statistical appeal.

It is further hypothesized that people who prefer to support a project with a high rescue proportion over a project with a low rescue proportion will emphasize efficacy reasons (but not emotional or responsibility reasons) more than people preferring the low rescue proportion project and that donors choosing the high rescue proportion project will rank efficacy reasons as the most important more often than those choosing the low rescue proportion project. Although affective underpinnings have been suggested for the proportion dominance effect (Loewenstein & Small, 2007), recent studies that better separate the proportion dominance effect from the identifiable victim effect have suggested a strong link between cost-benefit calculations, perceived efficacy and the tendency to help more when one can help a large proportion of the victims (Bartels & Burnett, 2010; Friedrich & Dood, 2009; Erlandsson, Björklund & Bäckström, 2014).

H2b: People who prefer to support the project framed as a high rescue proportion appeal will rate efficacy reasons as more important than people preferring to support the project framed as a low rescue proportion appeal.

It is finally hypothesized that people who prefer to support a project framed as an in-group appeal over a project framed as an out-group appeal will emphasize responsibility reasons (but not emotional or efficacy reasons) more than people preferring the out-group project and that donors choosing the in-group project will rank responsibility reasons as the most important more often than those choosing the out-group projects. Although other reasons have been suggested as reasons for the in-group effect (Goetz, Keltner & Simon-Thomas., 2010; Duclos & Barasch, 2014), it appears that perceived responsibility, rather than emotions or perceived efficacy, is the stronger mediator of the in-group effect (Levine & Thompson, 2004, Erlandsson et al., submitted manuscript).

H2c: People who prefer to support the project framed as an in-group appeal will rate responsibility reasons as more important than people preferring to support the project framed as an out-group appeal.

Method

One hundred and ninety-seven Swedish students (75 female, 115 male, 7 unknown; mean age = 22.52 years, $SD = 2.31$), recruited individually after completing an university exam, participated by filling out a paper and pen questionnaire that took approximately 5-8 minutes to complete. They were told beforehand that by participating, 15 SEK (\approx \$2.25) would be donated to charity on their behalf (2955 SEK was later donated to the organizations that inspired the included charity appeals). Participants

read three helping dilemmas (the order of dilemmas was balanced between participants). Each dilemma consisted of two helping projects and participants had to allocate an uneven amount of money between the projects. After the allocation, participants ranked the perceived relative importance of possible reasons for their choice. The three dilemmas represented three helping effects: The identified victim effect (Study 1a), the proportion dominance effect (Study 1b) and the in-group effect (Study 1c).

Materials

Study 1a: In the identified victim effect-dilemma, a charity organization focusing on illnesses in developing countries proposed two helping projects. The first project aimed to increase production and distribution of HIV-inhibitors for children whereas the second project aimed to increase production and distribution of TBC-medicine for children. For half the participants, the HIV-project was written in an identified victim version and the TBC-project was written in a statistical version. For the other half, the HIV-project was written in a statistical version and the TBC-project in an identified victim version. The identified and statistical versions were similar except for the middle part and the concluding sentence. Where the identified victim version used a picture and a short story about two-year old Wilma (same picture and name were used for the HIV and TBC-projects), the statistical version instead contained abstract information about the problem and a silhouette of the African continent (see Appendix for full versions of all charity appeals).

Study 1b: In the proportion dominance effect-dilemma, a charity organization focusing on wildlife protection proposed two helping projects. The first project aimed to save eagles whereas the second project aimed to save seals. For half of the participants, the eagle-project was written in a high rescue proportion version (375 out of 400 eagles that annually die can be saved) whereas the seal-project was written in a low rescue proportion version (190 out of 1500 seals that annually die can be saved). For the other half, the eagle-project was written in a low rescue proportion version (375 of 6000 eagles) and the seal-project in a high rescue proportion version (190 of 200 seals). Thus, the high and low rescue proportion versions were identical except for the number of animals annually dying.

Study 1c: In the in-group effect-dilemma, a charity organization focusing on welfare proposed two helping projects. The first project aimed to help underprivileged children whereas the second project aimed to help physically healthy but very lonely senior citizens. For half the participants, the children-project was written in the in-group version (Swedish children) and the seniors-project was written in the out-group version (Canadian seniors). For the other half, the children-project was written in the out-group version (Canadian children) and the seniors-project was written in the in-group version (Swedish seniors). The two versions of the projects contained the same information but where the in-group versions were written in Swedish and explicitly said that money would go to Swedish children/seniors, the out-group versions were written in English and explicitly said that money would go Canadian children/seniors.

After each helping dilemma, participants were asked to allocate 5 SEK between the two projects they just read. Importantly, they could not split the money evenly, so they were forced to give more money to one of the projects on each dilemma (i.e. they were forced to prefer one project over the other). Immediately following the allocation task, participants were asked to read eight possible reasons for why they allocated as they did, and to rank the eight reasons from 1 (*the most important reason*), to 8 (*the least important reason*). Two of the reasons were emotional reasons, two were efficacy reasons and two were responsibility reasons. Two reasons were included as filler reasons (see Table 1 for all reasons). To simplify interpretation, the ranking scores were transformed into relative importance scores by subtracting the mean ranking from the number 8, such that a higher score represents a higher relative importance. The two emotional reasons, the two efficacy reasons and the two responsibility reasons were aggregated into three variables.¹

¹ Although the bivariate Spearman-correlations were negative for most item-pairs due to the ranking methodology, the two emotional reasons correlated significantly positively with each other as did the two efficacy reasons. The two responsibility reasons did not correlate with each other, but they were aggregated on theoretical grounds. See Table 1 for all items.

Results

Although all participants responded to all three helping dilemmas, separate analyses were made for each of the dilemmas representing the three helping effects.

Study 1a: The identifiable victim effect

Sixteen participants were excluded either because they did not properly respond to the allocation dilemma (did not mark anything or split the sum evenly) or because they seriously misunderstood the ranking task (e.g. wrote the number “1” after all reasons)². Of the remaining 181 participants, 75 preferred (i.e. gave more money to) the HIV-project whereas 106 preferred the TBC-project, $\chi^2(1, N = 181) = 5.31, p = .021$. The identified victim appeal and the statistical appeal produced almost identical donations ($M = 2.50$ SEK, $SD = 1.08$ for both appeals). 82 participants preferred the project with an identifiable victim whereas 99 preferred the project with statistical information but this difference was not significant $\chi^2(1, N = 181) = 1.60, p = .206$.³ This means that the identified victim effect was not replicated in this study, hence not supporting Hypothesis 1a.

Next participants who preferred the identifiable victim project were compared with the participants who preferred the statistical project on the perceived relative importance of the different types of reasons on their choice. As expected, participants who preferred the identified victim project rated emotional reasons as relatively more important than participants who preferred the statistical project, $t(179) = -2.11, p = .036$, Cohen's $d = 0.31$. There were no significant differences in efficacy reasons; responsibility reasons or any of the filler reasons (see Table 1). This supports Hypothesis 2a.

It was also tested if the most important reason (i.e. the reason ranked as number 1) differed as a function of which project that was chosen. Participants who ranked any of the emotional reasons as the most important were compared against participants who ranked any other reason as the most important. A Chi-square test indicated that emotional reasons were ranked as the most important comparably more often by people choosing the identifiable victim project (23 %) than by people choosing the statistical victim project, 12 %; $\chi^2(1, N = 181) = 3.86, p = .050$; see Table 2. This is also in line with Hypothesis 2a.

Study 1b: The proportion dominance effect

Nineteen participants were excluded for not properly responding to the allocation dilemma or for not understanding the ranking task. Of the remaining 178 participants, 109 preferred the eagle-project whereas 69 participants preferred the seal-project $\chi^2(1, N = 178) = 8.99, p = .003$. The project where one could save a high proportion of the animals received higher donations ($M = 2.78$ SEK, $SD = 1.12$) than the project where one could save a low proportion of the animals, $M = 2.22$ SEK, $SD = 1.12$; $t(177) = 3.34, p = .001$. The high rescue proportion project was preferred by 105 participants whereas 73 preferred the low rescue proportion project $\chi^2(1, N = 178) = 5.75, p = .016$.⁴ This means that the proportion dominance effect was replicated in this study, hence supporting Hypothesis 1b.

Participants who preferred the high rescue proportion project were compared with the participants who preferred the low rescue proportion project on the perceived relative importance of the different types of reasons on their choice. As expected, participants who preferred the high rescue proportion project rated efficacy reasons as relatively more important than participants who preferred the low rescue proportion project, $t(176) = -2.29, p = .023$, Cohen's $d = 0.35$. There was no significant difference in emotional reasons or any of the filler reasons, but possibly as a logical consequence of

² Minor mistakes (such as writing the number “2” twice and not writing the number “3” at all) was fairly common and did not render exclusion.

³ Context (HIV/TBC) did not interact with preferred version (identified victim appeal/statistical appeal); $\chi^2(1, N = 181) < .001, p = .995$.

⁴ Context (eagles/seals) did not interact with preferred version (high rescue proportion/low rescue proportion); $\chi^2(1, N = 178) = .165, p = .685$.

the expected results, responsibility reasons were rated as relatively more important by participants who preferred the low rescue proportion project than by participants who preferred the high rescue proportion project, $t(176) = 2.58, p = .011$, Cohen's $d = 0.39$ (see Table 1). This supports Hypothesis 2b.

It was also tested if the most important reason differed as a function of which project that was chosen. Participants who ranked any of the efficacy reasons were compared against participants who ranked any other reason as the most important. Efficacy reasons were ranked as the most important comparably more often by people choosing the high rescue proportion project (63%) than by people choosing the low rescue proportion project, 38%; $\chi^2(1, N = 177) = 9.85, p = .002$; see Table 2. This is also in line with Hypothesis 2b.

Study 1c: The in-group effect

Seventeen participants were excluded for not properly responding to the allocation dilemma or for not understanding the ranking task. Of the remaining 180 participants, 117 preferred the children-project whereas 63 participants preferred the seniors-project $\chi^2(1, N = 180) = 16.20, p < .001$. The project that focused on in-group victims ($M = 2.96$ SEK, $SD = 1.43$) received higher donations than the project focusing on out-group victims, $M = 2.04$ SEK, $SD = 1.43$; $t(179) = 4.32, p < .001$. The in-group project was preferred by 116 participants whereas 64 preferred the out-group project, $\chi^2(1, N = 180) = 15.02, p < .001$.⁵ This means that the in-group effect was replicated in this study, hence supporting Hypothesis 1c.

It was also tested if the most important reason differed as a function of which project that was chosen. Participants who ranked any of the responsibility reasons as the most important were compared against participants who ranked any other reason as the most important. Responsibility reasons were ranked as the most important comparably more often by people choosing the in-group project (41 %) than by people choosing the out-group project, 14%; $\chi^2(1, N = 180) = 13.47, p < .001$; see Table 2. This is also in line with Hypothesis 2c.

Discussion

This study contributes to the understanding of how potential donors react to charity appeals in two ways. First, rather than testing likelihood or magnitude of helping, it investigated how people choose to allocate resources when they read about two projects and has to prefer one of the projects. Second, the study investigated not only the “when” but also the “why” of helping, by asking participants to provide post-hoc justifications for their choice.

Allocation choices

As expected, when participants read a high rescue proportion appeal next to a low rescue proportion appeal, they preferred to give more money to the project with a high rescue proportion appeal. Although this is in line with previous studies on the proportion dominance effect (e.g. Bartels, 2006; Fetherstonhaugh et al., 1997), it is noteworthy that many charitable organizations still tend to frame their appeals as large-scale disasters where the number of victims in need is overwhelming (Miller, 1977; Sargeant & Woodliffe, 2007). One reason organizations prefer large-scale appeals, might be that these better convey a serious need, which could increase helping motivation. Although this might be true for some people (see Kleber et al., 2013), it seems like small-scale projects where one can do proportionally more good are generally preferred over large-scale projects where one's contribution is merely a drop in the bucket (Bartels & Burnett, 2010).

⁵ Context (children/seniors) did not interact with preferred version (in-group/out-group appeal); $\chi^2(1, N = 180) = 2.06, p = .151$.

Table 1

Relative importance rating of different reasons as a function of which project that was preferred.

	Identifiable victim effect			Proportion dominance effect			In-group effect		
	Prefer statistical victim project (n = 99)	Prefer identified victim project (n = 82)	p	Prefer low rescue proportion project (n = 73)	Prefer high rescue proportion project (n = 105)	p	Prefer out-group project (n = 64)	Prefer in-group project (n = 116)	p
I get more emotionally touched when reading about the victims in one of the projects than the other [3].	2.92 (1.95)	3.43 (2.22)	.108	3.30 (2.19)	3.49 (2.02)	.544	4.52 (2.14)	4.21 (2.02)	.337
I have more empathic feelings for the victims in one of the projects than the other[5].	3.12 (2.00)	3.70 (2.04)	.058	3.93 (2.09)	3.21 (1.93)	.019	4.66 (1.85)	4.44 (1.92)	.465
Total emotional reasons	3.02 (1.63)	3.56 (1.81)	.036	3.62 (1.74)	3.35 (1.66)	.306	4.59 (1.75)	4.32 (1.56)	.303
My money will do more good in one of the projects than the other [1].	4.87 (2.31)	4.44 (2.52)	.234	3.84 (2.36)	4.91 (2.47)	.004	3.98 (2.19)	3.38 (2.05)	.065
I believe that my money can make a greater difference in one of the projects than the other [7].	5.12 (1.88)	4.72 (1.98)	.164	4.40 (2.28)	4.72 (2.19)	.338	3.81 (2.17)	3.36 (1.97)	.159
Total efficacy reasons	4.99 (1.80)	4.58 (1.99)	.142	4.12 (1.97)	4.82 (2.04)	.022	3.90 (1.82)	3.37 (1.70)	.053
I believe that I have a greater personal responsibility to help in one of the projects than the other [2].	3.33 (1.73)	3.13 (1.95)	.468	3.79 (1.86)	3.45 (1.88)	.239	4.03 (1.89)	5.05 (1.77)	.000
I believe that I have a greater obligation to help in one of the projects than the other [6].	3.70 (1.71)	3.69 (1.76)	.957	4.14 (1.93)	3.46 (1.66)	.013	3.80 (1.71)	4.48 (1.79)	.013
Total responsibility reasons	3.52 (1.24)	3.41 (1.33)	.579	3.97 (1.38)	3.46 (1.24)	.011	3.91 (1.17)	4.77 (1.38)	.000
<i>Filler-reasons</i>									
One project feels more interesting than the other [4].	3.48 (2.15)	3.17 (2.03)	.317	3.46 (2.06)	3.72 (1.85)	.383	2.91 (1.83)	2.61 (1.76)	.292
I did not make any conscious choice but just randomly allocated the money [8].	1.51 (2.50)	1.78 (2.59)	.466	1.23 (2.18)	1.10 (2.07)	.670	0.44 (1.41)	0.52 (1.52)	.731

Note: A higher score indicates a greater relative importance. Standard deviations are shown in parentheses. Numbers in brackets illustrate the order of presentation in the questionnaire.

Table 2

Number of participants who chose the different projects as a function of the type of the reason that was ranked as the most important

	Identified victim effect		Proportion dominance effect		In-group effect	
	Preferred statistical project	Preferred identified victim project	Preferred low rescue proportion project	Preferred high rescue proportion project	Preferred out-group project	Preferred in-group project
Emotional reason most important	12	19	15	17	28	39
Efficacy reason most important	60	35	28	66	23	22
Responsibility reason most important	6	12	16	11	9	47
Filler reason most important	21	16	13	11	4	8

Also as expected, when people were confronted with a charity appeal with in-group victims next to a charity appeal with out-group victims, they generally preferred the project framed as an in-group appeal. This implies that charity organizations should try to emphasize the common group membership between the donors and the victims (Sargeant, 1999). When there are no obvious in-group victims (e.g. kin, friends, fellow countrymen), the charity organization can instead try to emphasize a larger group (e.g. all humanity) in order to increase donations (Dovidio, Piliavin, Schroeder & Penner, 2006, chapter 8).

When participants read an identified victim appeal next to a statistical appeal, they did not prefer the identified victim appeal. This might seem to be in conflict with previous studies finding the effect, but as noted earlier, preference for a single identified victim is greatest in separate evaluation and lowest when one has to choose between two projects (Kogut & Ritov, 2005b). One explanation for this might be that joint evaluation reduces the effect emotions have on choices (Ritov & Baron, 2011). Even if people get more emotionally touched when they read an identified victim appeal, having another (statistical) charity appeal next by might reduce the relative influence of these emotions and other reasons (e.g. efficacy-based or responsibility-based) gets relatively more important (Small, et al., 2007). Before deciding to include an identified victim in one's charity appeal, it might be useful for organizations to learn if the appeal will likely be shown in isolation or next to other appeals. If it is the latter, a statistical appeal might be preferable.

Reasons for the choices

Participants in this study were asked to rate the relative importance of eight possible reasons for choosing as they did. It should be noted that efficacy reasons were rated as the most important overall in the identifiable victim dilemma and the proportion dominance dilemma indicating that efficacy reasons might be more socially desirable than emotion-based and responsibility-based reasons (Louie & Obermiller, 2000). However, in this study the focus was rather whether the different reasons were used more or less often to justify different choices in three dilemmas each representing one helping effect.

In a recent, related study testing helping effects in non-allocation situations (joint and separate evaluation), Erlandsson, et al. (submitted manuscript), found that the general tendency to give more to identified victims than to statistical victims was mediated by more sympathy; that the tendency to give more to a high rescue proportion project than to a low rescue proportion project was mediated by a higher perceived utility; and that the tendency to give more the in-group victims than to out-group victims was mediated by a higher perceived responsibility. The results from the current study are consistent with, but extend the findings from Erlandsson et al. First, unlike that study, this study tested help dilemmas where allocating more money to one project meant allocating less money to the other project. Second, whereas Erlandsson et al.'s study measured the underlying mechanisms (sympathy, perceived utility and perceived responsibility) prior to helping motivation, and tested them as

mediators of the helping effects, this study first asked for people's preferences (their allocation choices) and then asked for their retrospective justifications for their choice and tested if participants' conscious justification for their choice varied as a function of which project they preferred in a helping dilemma. To the authors' knowledge, this is the first study to empirically test choice-justifications in this type of helping dilemmas. The results indicate that the suggested link between the three helping effects and the three psychological mechanisms exist not only on the implicit level, but also on a more conscious level.

Testing not only what kind of decisions potential donors make, but also why they make these choices could be a very fruitful path for future research in consumer psychology (Sargeant, 1999). Speculatively, charitable organizations might traditionally have overemphasized the relative importance of emotional reasons on donation decisions (i.e. people will donate more to the project that makes them more emotionally touched) and hence undervalued other reasons. According to reactance-theory (Berkowitz, 1973, Isen & Noonberg, 1979), including identified victims (or in other ways emphasizing emotional aspects) might actually backfire and lead to less donations. This is so because some people get a negative attitude toward emotional appeals as they perceive them as cunning strategies by the organizations to make potential donors help more by inducing distress and guilt (cf. maladaptive responses in Basil, Ridgway & Basil, 2008). For example, it has been shown that people who are skeptical toward advertising in general, and believe that there is a manipulative intent, experience less guilt when faced with a charity appeal (Hibbert, Smith, Davies & Ireland, 2007). Reactance might be augmented by the presence of other charity appeals. In those situations, reactance-prone donors may display their displeasure of being manipulated, by allocating less money to the project with identifiable victim (as a form of punishment) and possibly more money to the project with statistical information (as a form of reward). A general advice for charity organizations might therefore be to downplay emotional aspects and to emphasize efficacy-aspects or responsibility-aspects when presenting their project – at least if it is to be presented next to other projects.

Limitations and suggestions for future studies

Naturally, only including a single study implies several limitations, but hopefully inspires further studies about allocation-choices in helping situations and its underlying reasons. First, the unusual method to make participants rank eight possible reasons obviously makes the included variables related to each other. For example, a higher relative importance score on efficacy reasons automatically decrease the relative importance of emotional and responsibility reasons. Importantly, the aim of this study was not to compare e.g. if the relative importance of efficacy reasons was higher than the relative importance of emotional reasons in different contexts (these variables would be dependent of each other), but rather to compare the relative importance of different reasons for participants who preferred Project A against those who preferred Project B (these variables are independent of each other). A replication could possibly replace the ranking task with Likert-scales after each reason where 0 (*did not affect my choice at all*) and 6 (*did affect my choice a lot*). It would also be possible to let the participants explain their underlying reasons after each allocation choice in their own words, and have hypothesis-blind raters code the reasons. On a related note, it is important to recognize that the nature of the post-decision justifications is not obvious. The justifications might either be interpreted as the true reasons people have for choosing one project over another due to correct introspection, or alternatively be interpreted as post-hoc explanations that donors come up with in order to rationalize their gut-feeling choice (Haidt, 2001).

Second, in this study each helping dilemma only included two projects, and both projects came from the same organization. Having more choices and including helping-projects from more than one organization might render different results. Soyer & Hogarth (2011) tested how the number of choices influenced donation amounts when the alternatives were either different organizations or different projects within an organization. They found that the total donated amount increased when there were more choices, but only when one could allocate money freely (not when forced to choose only one). Less well-known organizations received more money when they were one of three possible alternatives than when they were one of 13 alternatives, but the opposite pattern was found for the

most well-known organization (UNICEF) that actually got more money when more alternatives were included.

Third, one possible boundary condition of the proportion dominance effect dilemma is that different types of victims are differently easy to perceive as one group. In one study, seeing 50 victims as one group (manipulated by having 50 figures moving jointly) rendered more proportional thinking compared to seeing 50 victims as separate individuals (having the 50 figures moving around independently; Bartels & Burnett, 2011). As suggested by the authors, and shown by Bartels (2006), it might be easier to perceive animals (and possibly out-group members) as a group whereas we generally perceive humans as separate individuals. This implies that the proportion dominance effect in joint evaluation might be stronger when the victims are animals (as in this study) than when they are humans.

To summarize, the current study has integrated the “when”-question (under what circumstances do people donate) with the “why”-question (what are the psychological mechanisms that motivate donations). In addition to these questions, one can investigate the “who”-question (i.e. which individual characteristics predict charitable donations; see Bekkers & Wiepking, 2011b, and Wiepking & Bekkers, 2012). Naturally, these three questions (and the interactions between them) are important to take into account to get a fuller understanding of donors’ behavior when confronted with charity appeals.

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Appendix

All included charity projects for a) The identifiable victim effect dilemma, b) the proportion dominance effect dilemma, and c) the in-group effect dilemma.

All participants read the black text. Half of the participants read the purple text whereas the other half read the brown text.

All projects were translated to English by the first author. Pictures are blurred in the appendix.

a) The identifiable victim effect dilemma

Antiretroviral drugs against HIV



Each year many children are infected with the HIV virus. Approximately 90 percent of these children get the virus from their mother during pregnancy, childbirth or breastfeeding. Of the children who are infected by their mother and do not receive treatment, 50 percent die before their second birthday. There are now well developed antiretroviral drugs to prevent HIV-infected children develop AIDS. Pharmaceutical companies have developed child-friendly medicines, but since these are more expensive than medications for adults, governments have failed to invest in them.

Wilma from Tanzania is two years old and HIV positive. During her first year, antiretroviral drugs were paid for Wilma by the authorities in Tanzania, but these benefits have recently been withdrawn. Wilma is now dependent on external help to get her anti-retroviral drugs. Without antiretroviral drugs, it is unlikely that Wilma survive childhood.

[For several years HIV-infected children in several African countries had their antiretroviral drugs paid for by the authorities, but these benefits have recently been withdrawn. Children in Africa are now more dependent on external help to get their anti-retroviral drugs.]

We are actively working to purchase and distribute antiretroviral drugs to Wilma and other HIV-infected children in Africa. [HIV-infected children in Africa.]

A new drug against Tuberculosis



Tuberculosis is a bacterial infectious disease which is difficult and takes a long time to cure. Without any treatment, a third of the children who developed an active infection die within two years and the remaining two-thirds die within five years. Tuberculosis is spread through the air and usually infects the lung tissue. Those who become infected develop a persistent, sometimes bloody, cough and fever, chest pain and breathing problems.

Many African children have multi-resistant Tuberculosis. Because the public health system in many African countries are unable to offer any effective medicine becomes infected children are often seriously ill.

[Wilma from Tanzania is two years old and suffering from multi-resistant Tuberculosis As the public health system in Tanzania are unable to offer any effective medicine to Wilma, she becomes sicker every month and will likely die before his tenth birthday.]

One bright spot is that recently, a very effective and safe drug for the treatment of multi-resistant Tuberculosis started has been introduced. The new drug is called Sirtuo and eradicates the Tuberculosis bacteria by blocking an enzyme that is necessary for its propagation. The goal of this project is to significantly increase the production of Sirtuo and to be able to treat more ill children. [... Wilma and other children with Tuberculosis.]

b) The proportion dominance effect dilemma

Save the Sea Eagle



In the 70's the sea eagle was close to extinction because of the effect of contaminants. It was especially their reproduction system that was affected by the high concentrations of pollutants. Usually none, or only one, of the eggs hatched. This led to a sharp decline of the sea eagle population in Sweden during the 1970s. The problem is not just in Sweden, the sea eagle is now globally threatened with extinction. In Sweden, every year, about 400 [6000] eggs from the sea eagle contains stillborn chick-eagles. Research on how environmental pollutants affect the sea eagle eggs is an important part of the tribe's survival. Further contributions are a necessity to reduce the disturbances due to the impact of environmental toxins.

We are conducting a campaign to save more eggs of the sea eagle. In case we can collect enough money, we can perform inventories of eggs, remediation of toxic emissions, initiations of habitat protection and restoration and building of nests. According to objective estimates, this campaign would be able to save about 375 of the 400 [6000] (94% [6%]) stillborn chick-eagles each year are born in Sweden.

Save the Harbor Seals



The number of harbor seals reduced greatly worldwide during the 1900s, first through hunting and later because of the pollutant's effects on the seal's immune system and fertility. The harbor seal resides mainly on the Swedish west coast.

These days, the biggest threats to the seals are environmental pollutants, such as PCBs (polychlorinated biphenyls). The toxins contribute to a reduced immune system and impaired reproductive ability of the harbor seals. These days, around 1500 [200] harbor seals around the West Coast die every year because of environmental toxins.

We now lead a campaign to improve the situation of harbor seals. The project involves the financing of breeding places and to look at the relationship between brominated flame retardants, and the presence of ulceration in seals. The campaign is estimated to be able to save the lives of 190 of the 1500 [200] harbor seals (i.e. 12% [95%]) of the seals dying each year on the Swedish west coast.

c) The in-group effect dilemma

Many children in Sweden [Canada] live in poor families



There are 100,000 children in Sweden [Canada] that come from families living below the poverty line. Many families cannot afford even elementary things. Things like an apartment, jackets, shoes, diapers, food and bus tickets are by no means obvious.

In Sweden [Canada] today, there are many children that live in families where the lack of money is a constant concern. All parents want to be able to give a birthday present to their child or to contribute to a school field trip, but unfortunately not everyone can afford it. With your help, we will be able to help more children living in poor families in Sweden [Canada].

Seniors in Canada [Sweden] are clinically lonely



Hundreds of thousands of physically healthy Canadian [Swedish] senior men and women suffer from severe loneliness. In some cases their family lives far away, limiting the number of visits. Others have no family members or friends still alive. Loneliness is the most significant reason for depression among Canadian [Swedish] senior citizens. There are people from all ages that are volunteering for these senior citizens. This means meeting for a couple of hours once every week, seeing a movie, talking a walk in the park, or just chatting over a cup of coffee. This is extremely popular both among the seniors and among the volunteers. With your help, we will be able to recruit more volunteers and to provide social visits to more seniors all over Canada [Sweden].

