



The donor is in the details

Cynthia E. Cryder^{a,*}, George Loewenstein^b, Richard Scheines^b

^a Washington University in St. Louis, One Brookings Dr., St. Louis, MO 63130, USA

^b Carnegie Mellon University, 5000 Forbes Ave., Pittsburgh, PA 15213, USA

ARTICLE INFO

Article history:

Received 1 March 2011

Accepted 12 August 2012

Accepted by Julie Irwin

Keywords:

Decision making
Generosity
Charitable giving
Emotions
Impact

ABSTRACT

Recent research finds that people respond more generously to individual victims described in detail than to equivalent statistical victims described in general terms. We propose that this “identified victim effect” is one manifestation of a more general phenomenon: a positive influence of tangible information on generosity. In three experiments, we find evidence for an “identified intervention effect”; providing tangible details about a charity’s interventions significantly increases donations to that charity. Although previous work described sympathy as the primary mediator between tangible information and giving, current mediational analyses show that the influence of tangible details can operate through donors’ perception that their contribution will have impact. Taken together with past work, the results suggest that tangible information of many types promotes generosity and can do so either via sympathy or via perceived impact. The ability of tangible information to increase impact points to new ways for charities to encourage generosity.

© 2012 Elsevier Inc. All rights reserved.

Introduction

Charities often emphasize the broad scope of a need. For example, fundraising materials for Oxfam International state that 72 million children in poor countries do not receive formal education (Oxfam International, 2009). However, research consistently finds that focusing on specific needy people and describing those people in detail raises funds more effectively than does focusing on a problem’s broad scope (Kogut & Ritov, 2005a, 2005b; Small, Loewenstein, & Slovic, 2007). In this paper, we show that the ability of sympathy-eliciting details about people to increase generosity towards victims is part of a broader phenomenon in which tangible information of many types prompts generous acts. In addition, we provide evidence that receiving details about a charity’s interventions increases donors’ perception that their contribution will have impact. When someone donates to a general cause, they feel like they are making a miniscule dent in a nebulous problem. In contrast, when someone donates to a detailed intervention, they feel like they are having a clear impact on a defined issue. The proposition that perceptions of impact can drive the connection between tangible information and generosity is novel in the academic literature; previous work has focused on emotion such as sympathy as the primary mediator.

The identified victim effect

In a 1968 book chapter about inconsistencies in the valuation of human life, the economist Thomas Schelling noted that in almost all cases, an individual life described in detail evokes more sympathy and aid than an equivalent life described as a statistic. Simply knowing details about an individual life at stake, such as the person’s age, gender, or hair color makes us value that life more than if the same endangered person is abstract, anonymous, or part of a group. This phenomenon clearly has consequences for how policy makers allocate money for saving citizens’ lives, which was Schelling’s main focus, but it also has important implications for the types of appeals that are more or less effective in eliciting individuals’ generosity.

The majority of research about how details influence generosity focuses on the “identified victim effect” whereby people are more generous towards individual and identified victims than towards their equally deserving, but statistically pooled counterparts. In one famous real-world example, people donated hundreds of thousands of dollars to Baby Jessica, a little girl who fell down a well in 1987 and whose plight was followed closely by the media until her rescue 2 days after the fall (Belkin, 1995). Although the outpouring of generosity to Baby Jessica was impressive, the largess toward one little girl occurred at the same time that millions of other less publicized children were (and are) estimated to die every year from causes that are inexpensive to treat (UNICEF, 2009).

In natural settings, there are two important differences between identified and statistical victims. First, the two types of victims are presented as different in number; statistical victims are presented

* Corresponding author. Fax: +1 314 935 6359.

E-mail addresses: cryder@wustl.edu (C.E. Cryder), gl20@andrew.cmu.edu (G. Loewenstein), scheines@andrew.cmu.edu (R. Scheines).

as a group in need whereas identified victims are presented as a single person in need. Second, more information, or details, are provided about individual victims compared to statistical victims. When many victims are highlighted, we know only general information about all group members, such as the region they are from or their common difficulty. In contrast, when just one victim is highlighted, we often know their name, what they look like, and their specific plight.

Empirical research has isolated these two differences between identified and statistical victims. In studies examining the “one versus many” effect, participants gave significantly more money when a single victim in need of medical help was described compared to when a group of victims was described (Kogut & Ritov, 2005a, 2005b). In related work, participants serving as advisors cared more about maximizing others’ outcomes when the “other” was an individual rather than a group (Sah & Loewenstein, 2012). A study about medical decision making showed that physicians recommended more caring and attentive treatment when they focused on patients as individuals rather than as part of a group (Redelmeier & Tversky, 1990). Finally, one very subtle manipulation of “one versus many” showed that participants donated significantly more money to a victim who already had been chosen from a list, compared to an equivalent victim who had not yet been, but was about to be, chosen from the same list (Small & Loewenstein, 2003). In the former case, potential donors could focus on the single individual who had been selected, while in the latter case, potential donors likely still considered the entire group.

In studies that varied only the level of detail, participants who were given information about a child in need of medical treatment were willing to donate more, around 60% more on average, when the child was identified by age, name, and picture, compared to when the child was described without these identifying features (Kogut & Ritov, 2005a, 2005b). In a laboratory experiment using the “dictator game” (Forsythe, Horowitz, Savin, & Sefton, 1994; Kahneman, Knetsch, & Thaler, 1986), college students who received \$10 and were given the opportunity to share any portion of that money with a fellow student, were more generous when they were informed of the would-be recipient’s name, hometown, major, and hobbies than when they were not given this personal information (Bohnet & Frey, 1999; see also Charness & Gneezy, 2008).

Vividness and emotion

Researchers often cite the heightened vividness of identifiable victims compared to statistical victims as the reason for increased generosity towards identified victims (Slovic, 2007). Vivid information can be defined as information which is (a) emotionally interesting (b) concrete and full of imagery or (c) psychologically proximate in terms of time, space, or sensory experience (Nisbett & Ross, 1980). Although there is limited evidence for general vividness effects compared to the strength of their intuitive appeal (Taylor & Thompson, 1982), vividness has been shown to matter at least in some circumstances, including when vivid stimuli command attention relative to other stimuli (Reyes, Thompson, & Bower, 1980) or when vividness increases the likelihood that people will share stories (Heath, Bell, & Sternberg, 2001).

Vividness is conceptualized to be important for generosity specifically because vivid information allows heightened emotional responses to those in need (Slovic, 2007). Both the one-versus-many and the details versions of the identified victim effect are theorized to operate via increased emotional responses to the victims (Slovic, 2007; Small & Loewenstein, 2003). There is evidence to support this perspective. In the case of the one-versus-many comparison, people report greater sympathy for a victim when that victim is pictured alone compared to when that victim is pictured in the presence of other victims (Dickert & Slovic, 2009). In the case

of the details effect, people report greater emotional distress when confronted with victims described in detail than when presented with victims described without detail, and this emotional distress correlates with increased contributions (Kogut & Ritov, 2005a). Priming people to be calculating instead of emotional before making donation decisions, for example by having participants solve algebra problems, eliminates increased generosity to individual victims who are described in detail (Small et al., 2007). It seems, therefore, that emotions such as sympathy play an important role in increasing generosity toward identified victims.

Impact

In addition to sympathy, another potentially important driver of generosity is the impact that a donor expects their contribution to make. Recent economic theorizing has identified a personal sense of impact as a central motivation for charitable acts (Duncan, 2004). A 2007 empirical field experiment showed that people are more likely to donate to a cause when their gift amount is matched by an outside source, potentially magnifying its perceived impact (Karlan & List, 2007). Other research finds a “denominator effect” such that people are more motivated to contribute to interventions that make a large proportionate impact compared to a small proportionate impact, even holding total impact constant (Baron, 1997; Fetherstonhaugh, Slovic, Johnson, & Friedrich, 1997; Friedrich et al., 1999; Jenni & Loewenstein, 1997). From a Benthamite perspective, all that should matter is the numerator—the total number of people who are helped. The denominator effect, like the donation matching results, finds ready interpretation in terms of perceived impact; helping a small fraction of a large in-need population feels insubstantial, like a proverbial drop-in-the-bucket.

In the current project we hypothesize that an “identified intervention effect” exists that is parallel¹ to the “identified victim effect” and that operates via perceived impact. Here, we focus specifically on using details about interventions to increase impact. Although the ultimate outcomes of a charitable contribution are often vague and unmotivating, detailed information gives donors tangible and compelling examples of the benefits (see Cryder & Loewenstein, 2010; Rick & Loewenstein, 2008, in the context of intertemporal decision making). We predict that detailed information about interventions increases donors’ perception of impact, which subsequently increases generosity.

Previous work about how details influence giving finds that pro-social emotions such as sympathy play a key role when the details focus on humans or other sympathy-eliciting creatures. Here, we hypothesize that to the extent that details enhance perceptions of impact, details of many types, even those that do not arouse sympathy, should increase generosity. We present three experiments that test whether there is a link between details and giving that does not rely on sympathy. Furthermore, we explicitly examine the role that sympathy, vividness, and impact play in linking detailed descriptions about interventions to heightened generosity.

Experiment overview

Three experiments tested the influence of detailed information about interventions on charitable donations. For all experiments, our first objective was to test whether detailed information about a charity’s interventions increases giving. Our second objective was to investigate the reason for the link between details and generosity.

¹ We thank an anonymous reviewer for suggesting this description of the paper’s effect.

Experiment 1

Participants

One-hundred and nineteen adults walking in a commercial area of a northeastern US city participated in a 5-min decision making study in exchange for \$2. Although we did not collect demographics, a separate sample of data collected from this location within 2 months of the study included 64% men and individuals with an average age of 25 years.²

Procedure

Participants were informed that the researchers conducting the study were interested in understanding donation decisions, and that in the current study, participants could make an actual charitable donation. Participants then read about a charity to which they could donate. Participants in the *detailed charity* condition read about Oxfam International, and read that one example of how Oxfam provides aid is to ensure that villagers in West Africa have access to clean water. Participants in the *general charity* condition also read about Oxfam International, but read a general description that Oxfam was a large international aid organization that provides a broad range of aid to people across the globe. All other information provided about Oxfam between the two conditions was identical (see Appendix A).

After reading about the charity, participants decided how much, if any, of their \$2 participation payment to donate to Oxfam International. Participants also could donate extra money from their pocket. Participants next answered several questions about what they had read about, including a question about vividness, “How easy is it for you to imagine how your donation will be used?” a question about sympathy, “How much sympathy do you feel for the charitable cause in this study?” and two questions about impact, “To what extent do you think that your donation would make a positive difference” and “How strongly do you believe that it is valuable to make a donation to the charity in this study?” Participants also answered a question about how familiar they were with Oxfam, “Before today, how familiar were you with the charity Oxfam?” All questions were answered on a 7-point scale. After participants finished the questionnaire, they placed it and any donation in a blank envelope, sealed it, and dropped the envelope in a box with other participants’ blank envelopes. All donations were, in fact, sent to Oxfam.

Main results

Participants in the *detailed charity* condition donated significantly more than did participants in the *general charity* condition, $M_{\text{Detailed}} = \$0.88$ ($SD = 1.27$), $M_{\text{General}} = \$0.48$ ($SD = 0.77$), $t(115) = 2.07$, $p < .05$, $d = 0.38$, a difference in donations of over 80%.³

There were also significant differences between the conditions in responses to several questions about participants’ donation decisions. Participants in the *detailed charity* condition reported that the use of their donation seemed more vivid, $M_{\text{Detailed}} = 3.88$ ($SD = 2.11$), $M_{\text{General}} = 2.68$ ($SD = 1.90$), $t(115) = 3.24$, $p < .01$, and reported feeling significantly more sympathy for the cause, $M_{\text{Detailed}} = 4.67$ ($SD = 1.74$), $M_{\text{General}} = 3.24$ ($SD = 1.91$), $t(114) = 4.22$, $p < .001$. Participants in the detailed condition also reported

that they believed more strongly that it was valuable to donate to Oxfam, $M_{\text{Detailed}} = 4.19$ ($SD = 1.93$), $M_{\text{General}} = 3.07$ ($SD = 1.82$), $t(115) = 3.23$, $p < .01$. In this study, however, there was no significant difference in participants’ reports that their donation would be more likely to make a positive difference, $M_{\text{Detailed}} = 3.17$ ($SD = 1.69$), $M_{\text{General}} = 2.81$ ($SD = 1.58$), $t(114) = 1.19$, $p = .23$. As anticipated, there was no significant difference between conditions in reported familiarity with Oxfam ($M_{\text{Detailed}} = 1.83$ ($SD = 1.73$), $M_{\text{General}} = 1.93$ ($SD = 1.76$), $t(115) = .33$, $p = .75$).

Multiple linear regression allowed us to see the unique influence of each variable. In simple linear regression models, the details condition, sympathy, vividness, and the valuable-to-donate impact variable each significantly predicted amount donated (Table 1, Models 1–4). When all of these variables were entered simultaneously into a regression model, vividness ($t(115) = 1.84$, $p = .07$) and impact ($t(115) = 1.94$, $p = .06$) were both marginally significant, whereas sympathy was not, $t(115) = .61$, $p = .70$; Table 1, Model 5.

Mediation results

We tested the role of sympathy, vividness, and impact (measured with the valuable-to-donate item) as mediators of the details effect. Using the Preacher and Hayes (2008) macro with 5000 bootstrapped samples, we observed that, when entered individually as mediators, sympathy, vividness, and impact each showed patterns of indirect-only mediation of the details effect (Zhao, Lynch, & Chen, 2010; indirect-only mediation is also known as “full mediation”; Baron & Kenny, 1986); $Z's > 2.1$, $p's < .05$. The bootstrapping analysis also allowed simultaneous examination of multiple mediators (Preacher & Hayes, 2004, 2008; Zhao et al., 2010). When we included sympathy, vividness, and impact in the same bootstrapped model simultaneously, we see that impact and vividness each are marginally significant mediators, impact $B = .16$, $Z = 1.68$, $p = .09$; vividness $B = .12$, $Z = 1.64$, $p = .10$. Sympathy, however, did not show a pattern of significance, sympathy $B = .06$, $Z = 0.61$, $p = .54$.

Discussion

In Experiment 1, a controlled manipulation of details, in which all participants read either detailed or general information about a single charity, led to a significant difference in charitable donations. Consistent with the hypothesis that detailed information about a charity’s interventions can increase generosity, participants who read a detailed description of Oxfam donated significantly more than did participants who read a general description of Oxfam. We also observed that impact and vividness best explained donations when controlling for the influence of all other variables.

A somewhat surprising finding is that the details manipulation directionally, but not significantly, influenced the second Impact item, “To what extent do you think that your donation would make a positive difference?” The two impact items were highly correlated ($r = .62$), yet only one was significantly affected by the manipulation. Experiments 2 and 3 further investigated measurement and the process behind the details effect.

Experiment 2

Experiment 2 was designed to further examine the impact of details observed in Experiment 1 using a naturalistic manipulation that compared the generosity evoked by two different charities with inherently different levels of specificity in their aid programs. It also provided an additional test of sympathy, vividness, and

² We did not collect demographic information in Experiments 1 and 2 because we promised participants such a brief participation time requirement (5 min).

³ Two statistical outliers (one large donation from each condition) were excluded from analyses. Throughout this paper, statistical outliers are excluded if the case has an externally studentized deleted residual value of ± 3.0 for the main dependent variable (Cohen, Cohen, West, & Aiken, 2003).

Table 1
Experiment 1 regression models predicting amount donated.

	Model 1	Model 2	Model 3	Model 4	Model 5
Details condition	.40* (.19)				.07 (.19)
Sympathy		.21*** (.05)			.04 (.07)
Vividness			.20*** (.04)		.10† (.05)
Impact				.24*** (.05)	.14† (.07)

Note: Standard errors are in brackets below unstandardized coefficients.

- † $p < .10$.
- * $p < .05$.
- ** $p < .01$.
- *** $p < .001$.

impact as potential mediators of the details effect. In Experiment 2, the first charity was Oxfam, the same general international aid organization in Experiment 1. The second charity was Nothing But Nets, a charity that provides a very specific type of aid: mosquito-protection bed nets for families living in malaria-prone environments.

Method

Participants

Ninety-four individuals walking in the same location as participants in Experiment 1 participated in a 5-min decision making study in exchange for \$2. Individuals who had already participated in Experiment 1 were given an alternate task so that no participant overlap existed between Experiments 1 and 2.

Procedure

Procedures in Experiment 2 were identical to those from Experiment 1, except that the descriptions of the charities in the *detailed charity* and *general charity* conditions were new: the descriptions were taken from an inherently specific and an inherently general non-profit organization. In the *detailed charity* condition, participants read two sentences about Nothing But Nets, a charity that provides “bed nets that protect against mosquito-borne malaria to families in Africa” (Appendix B). In the *general charity* condition, similar to Experiment 1, participants read two sentences about Oxfam America, a large international aid organization that provides “a broad range of aid to people across the globe.”

Participants then answered the follow-up questions from Experiment 1, including how easy it was to imagine how their donation would be used, how much sympathy they felt for the charitable cause, to what extent they believed their contribution would make a positive difference, and how valuable they believed it was to make a donation to this charity. After they finished answering questions, participants placed the questionnaire and any donation in a blank envelope, sealed the envelope, and then placed the envelope in a box with other participants' blank envelopes. After donation amounts were recorded, the donations were sent to their designated charity.

Main results

Participants in the *detailed charity* condition donated significantly more than did participants in the *general charity* condition, $M_{Detailed} = \$0.74$ ($SD = 0.88$), $M_{General} = \$0.40$ ($SD = 0.75$), $t(86) = 1.98$, $p = .05$, $d = 0.42$, a difference in donations of 85%.⁴

Similar to Experiment 1, participants in the *detailed* condition reported that the use of their donation seemed more vivid, $M_{Detailed} = 4.14$ ($SD = 1.91$), $M_{General} = 3.23$ ($SD = 1.78$), $t(92) = 2.47$, $p < .02$, that the cause evoked significantly greater sympathy

⁴ Six statistical outliers (four large donations in the *detailed* condition and two large donations in the *general* condition) were excluded.

$M_{Detailed} = 5.04$ ($SD = 1.58$), $M_{General} = 3.55$ ($SD = 1.80$), $t(92) = 4.17$, $p < .0005$, and that they perceived that their donation was more likely to make a positive difference, $M_{Detailed} = 3.88$ ($SD = 1.65$), $M_{General} = 2.73$ ($SD = 1.80$), $t(86) = 3.13$, $p < .01$. In Experiment 2, there was a directional, but non-significant difference between conditions in participants' response to how valuable they believed it would be to donate to the charity ($M_{Detailed} = 4.33$ ($SD = 1.82$), $M_{General} = 3.73$ ($SD = 1.84$), $t(86) = 1.52$, $p = .13$).

In simple linear regression models, the details condition, sympathy, vividness, and the positive-difference-impact variable each significantly predicted amount donated (Table 2, Models 1–4). When all of these variables were entered simultaneously into a regression model, only impact remained statistically significant, $t(83) = 2.41$, $p < .05$, Table 2, Model 5.

Mediation results

We tested the role of sympathy, vividness, and impact as mediators of the details effect, again using the Preacher and Hayes (2008) macro with 5000 bootstrapped samples. When entered individually, sympathy and impact each showed patterns of mediation of the details effect (Zhao et al., 2010), Z 's > 2.1 , p 's $< .05$, while vividness did not $Z = 1.4$, $p = .16$. When simultaneously testing these three constructs in a model of multiple mediators (Preacher & Hayes, 2004, 2008; Zhao et al., 2010) the impact mediator was statistically significant showing indirect-only mediation (Zhao et al., 2010), Impact $B = .16$, $Z = 1.95$; $p = .05$; whereas the vividness and sympathy mediators were not significant, Vividness $B = .003$, $Z = .06$; $p = .95$; Sympathy $B = .11$, $Z = 1.23$, $p = .22$.

Although we observe that impact is a statistically significant mediator of the details effect, a remaining question is whether a pattern of reverse mediation is also present. Our causal hypothesis is that details increase impact, which subsequently increases donations. However, it is also possible that details increase donations via other means, and post-choice justification leads to increases in impact, sympathy, and vividness ratings. The potential for reverse mediation is especially relevant in this case because (1) process variables were measured after the donation dependent variable and (2) all of the potential process constructs were affected by the experimental manipulation, leaving open the possibility of post-choice justification. We therefore tested reverse mediational models for all three potential process variables (impact, sympathy, and vividness).

Each test evaluated multiple mediators, similar to the simultaneous mediational model tested above. A mediation test with sympathy as the dependent variable and vividness, impact, and amount donated as mediators showed no significant mediational influence of amount donated, $B = .01$, $Z = .14$, $p = .89$. A test with vividness as the dependent variable and sympathy, impact, and amount donated as mediators also showed no significant mediational influence of amount donated, $B = -.03$, $Z = .40$, $p = .69$. Finally, a test with impact as the dependent variable and sympathy, vividness, and amount donated as mediators also showed no

Table 2
Experiment 2 regression models predicting amount donated.

	Model 1	Model 2	Model 3	Model 4	Model 5
Details condition	.34* (.17)				.07 (.18)
Sympathy		.16** (.05)			.07 (.06)
Vividness			.10* (.05)		.003 (.05)
Impact				.19*** (.05)	.14* (.06)

Note: Standard errors are in brackets below unstandardized coefficients.

- * $p < .05$.
- ** $p < .01$.
- *** $p < .001$.

significant mediational influence of amount donated, $B = .16$, $Z = 1.55$, $p = .12$.

Although amount donated was not a significant mediator of the relationship between details and impact $Z = 1.55$, $p = .12$, while impact was a significant mediator of the relationship between details and amount donated, $Z = 1.95$; $p = .05$, the strength of the two mediators was not statistically different from each other, $Z < 1$, ns. Another way to compare the two effects is to estimate the percent of the indirect effect as a percentage of the total effect. When amount donated serves as the mediator, the indirect effect represented approximately 16% of the total effect, whereas when impact serves as the mediator, the indirect effect represented approximately 60% of the total effect. Although not completely conclusive, the balance of evidence suggests that the appropriate causal sequence is Details → Impact → Donations.⁵

Discussion

Experiment 2 examined participants' charitable responses to information about an inherently tangible charity, Nothing But Nets, which provides a concrete product of bed nets to a specific location of Africa, versus an inherently more general charity, Oxfam, which provides a broad range of aid to people across the globe. Participants who could donate to Nothing But Nets donated significantly more to that charity than did participants could donate to Oxfam International. We also observed via mediational analyses, the importance of impact in linking highly detailed information to increased generosity. In a mediation model that simultaneously tested the influence of sympathy, vividness, and impact, impact was the only statistically significant mediator.

Although we observe in Experiment 2 that impact is the strongest explanatory factor between details and giving, we also observe, as in Experiment 1, that only one of the two impact items was significantly affected by the details manipulation (the two were again highly correlated $r = .62$). In both experiments, both impact items directionally increased in line with hypotheses, however one item remained non-significant in each case.

When both impact items are averaged into a joint-impact score for Experiments 1 and 2 (consistent with our a priori measurement intentions and also consistent with factor analysis results from Experiment 3), the impact variable generally remains as strong or becomes stronger in multiple regression and mediational analyses. In the first experiment, the joint-impact score was fully significant instead of marginally significant in the multiple regression analysis, $t(111) = 2.13$, $p < .05$, (compared to: $t(115) = 1.94$, $p = .06$). In the test of multiple mediators, the significance of impact weakened slightly from $Z = 1.68$, $p = .09$ to $Z = 1.60$, $p = .11$ when using the joint-impact score.

In the second experiment, significance of the joint-impact score in the multiple regression improved, $t(83) = 3.49$, $p = .001$ (compared to: $t(83) = 2.41$, $p < .05$). The significance of the Impact score in the test of multiple mediators also improved, $Z = 2.1$; $p < .05$ (compared to $Z = 1.95$; $p = .05$). Even though the details manipulation did not influence both impact items to the same degree in either experiment, when both items are included in analyses, the evidence for the explanatory role of impact remained similar.

⁵ We conducted similar analyses for Experiment 1, in which impact was a marginally significant mediator. Amount donated showed no significant mediational influence in multiple mediator tests with sympathy as the dependent variable $Z = .59$, $p = .55$; vividness as the dependent variable, $Z = 1.4$, $p = .16$; nor impact as the dependent variable $Z = 1.5$, $p = .15$. However, the strength of impact as a mediator in a Details → Impact → Donations model again was not significantly different from the strength of donations as a mediator in a Details → Donations → Impact model, so we estimated the percent of the indirect effect as a percentage of the total effect. When amount donated serves as the mediator, the indirect effect represented approximately 8% of the total effect, whereas when impact served as the mediator, the indirect effect represented approximately 47% of the total effect.

Experiment 3

We designed Experiment 3 to achieve three goals. First, we wished to further investigate the idea that impact is the driver of the details effect. If impact is truly the reason that details increase donations, then describing details that do not increase impact should not affect generosity. Second, we wished to more tightly control our details manipulation. In both Experiments 1 and 2, a consequence of our details manipulation was greater focus on people, even though our intention was to focus exclusively on charitable interventions. We believe that increased attention on individuals was a reason for increased reports of sympathy in the details condition, even though this sympathy did not drive or mediate increased donations. In Experiment 3, we attempted to more cleanly manipulate non-human details. Third, we wished to better measure the constructs of vividness, sympathy, and impact. In Experiments 1 and 2, we used two items that measured impact, but only one item each that measured sympathy and vividness. And, results between the two impact items were not completely consistent. In experiment 3, participants answered 12 follow-up questions about their responses to the charitable request. Four questions measured each construct of interest: vividness, sympathy, and impact. Therefore, in Experiment 3, each construct was measured more reliably and had more "equal" footing in simultaneous statistical analyses.

We also attempted to improve measurement specifically of the sympathy construct. In Experiments 1 and 2, our sympathy question asked participants how much sympathy they felt for the charitable cause that they had read about. Although it is unusual to ask about sympathy for a cause rather than sympathy for individuals, we asked this question because our descriptions focused on interventions instead of on people or victims. However, it is not clear whether responses about a cause are the same as responses about sympathy or emotional distress for people, who are the standard target of sympathetic feelings (e.g., Dickert & Slovic, 2009; Kogut & Ritov, 2005a, 2005b). In experiment 3, we modified the sympathy questions to clearly focus on people and therefore fit better with past work about the identified victim effect (Dickert & Slovic, 2009; Kogut & Ritov, 2005a, 2005b) and with the standard conceptualization of sympathy as an emotional awareness of other people's distress (e.g., Batson, 1987; Eisenberg et al., 1989; Wispé, 1986).

Participants

One-hundred and ninety-seven adults (64% female; $M_{Age} = 34$) recruited via the online service Mechanical Turk (Buhrmester, Kwang, & Gosling, 2011; Paolacci, Chandler, & Ipeirotis, 2010) completed the experiment on the internet in exchange for a small payment.⁶

Procedure

Experiment 3 presented participants with a hypothetical scenario about donating to Oxfam, asked them how much they would give, and then asked a series of follow-up questions designed to determine the underlying process behind the donation decision. There were three experimental conditions. In the *general charity* condition, participants read that Oxfam was one of the most effective aid organizations in the world, and they were asked how much

⁶ Nine participants were excluded from analyses for failing an "instructional manipulation check" (IMC; Oppenheimer, Meyvis, & Davidenko, 2009), designed to identify inattentive participants. We used an attention check in this experiment because inattention can be especially pronounced for online samples (Goodman, Cryder, & Cheema, in press). There were no statistical outliers.

they would donate (see Appendix C). Participants in the *detailed charity—high impact* condition received one additional detail: “One example of how Oxfam uses funds is by providing individuals with access to clean water.” Participants in the *detailed charity—low impact* condition read the same detail sentence except for one word change: The word “clean” was changed to “bottled” when describing the type of water that Oxfam provides. Pre-tests showed that “clean” water was perceived to create more impact than “bottled” water. This impact manipulation was inspired by similar treatments from Kahneman and Ritov (1994) that subtly varied features of the donation scenario to manipulate levels of sympathy (e.g., requesting help for endangered reptiles, but specifying the reptiles either as “turtles” (more sympathetic) or “lizards” (less sympathetic)).

After participants answered how much they were willing to donate, they responded to a series of 12 follow-up questions presented in a random order that were designed to measure the impact, vividness, and sympathy that participants experienced in response to the donation prompts. Specifically, participants answered to what extent they agreed with four statements about impact ($\alpha = .93$): “Donations to Oxfam will make a positive difference”, “Donations to Oxfam will make a meaningful difference”, “It is valuable to make a donation to Oxfam”, and “Donations to Oxfam will have impact”; four statements about vividness ($\alpha = .96$): “It is easy to imagine how a donation to Oxfam will be used”, “I have a vivid mental picture about how a donation to Oxfam will be used”, “It is easy to envision how a donation to Oxfam will be used”, and “I can visualize how a donation to Oxfam will be used”; and four questions about sympathy ($\alpha = .84$): “I feel sympathy for the people who will receive aid from Oxfam”, “I feel compassion for the people who will receive aid from Oxfam”, “I feel empathy for the people who will receive aid from Oxfam”, and “I feel distress for the people who will receive aid from Oxfam”. Factor analysis with varimax rotation confirmed that the 12 questions loaded onto three separate factors, each with eigenvalues greater than 1. One factor loaded all four vividness questions, the second factor loaded all four impact questions, and the third factor loaded all four sympathy questions.

Main results

Table 3 shows the results for amount donated, as well as for perceived impact, vividness, and sympathy. Participants in the *details—high impact* condition were willing to donate significantly more than were participants in the *general* condition, $M_{\text{Details-HighImpact}} = \10.25 ($SD = \$7.69$), $M_{\text{General}} = \$7.54$ ($SD = \$6.78$), $t(128) = 2.13$, $p < .05$, $d = 0.37$. However, participants in the *details—low impact* condition were not willing to donate significantly more than were participants in the *general* condition, $M_{\text{Details-LowImpact}} = \6.95 ($SD = \$7.47$), $M_{\text{General}} = \$7.54$ ($SD = \$6.78$), $t(121) = .46$, $p = .64$. The difference between the *details—high impact* and *details—low impact* conditions was also statistically significant, $t(121) = 2.41$, $p < .05$, $d = 0.44$ (see Table 3).

We averaged responses from the questions that were designed to measure impact, vividness, and sympathy to create an index for each construct. There were significant differences between conditions in responses to both the impact and vividness indices. Vividness was significantly higher in both the *details—high impact* condition compared to the *general* condition, $M_{\text{Details-HighImpact}} = 4.64$ ($SD = 1.49$), $M_{\text{General}} = 3.45$ ($SD = 1.43$), $t(129) = 4.67$, $p < .0005$, and the *details—low impact* condition compared to the *general* condition, $M_{\text{Details-LowImpact}} = 4.61$ ($SD = 1.62$), $M_{\text{General}} = 3.45$ ($SD = 1.43$), $t(121) = 4.18$, $p < .0005$. Impact was significantly higher in only the *details—high impact* condition compared to both the *general* condition, $M_{\text{Details-HighImpact}} = 5.58$ ($SD = .92$), $M_{\text{General}} = 4.97$ ($SD = 1.12$), $t(129) = 3.34$, $p < .05$, and the *details—low impact*

condition, $M_{\text{Details-HighImpact}} = 5.58$ ($SD = .92$), $M_{\text{Details-LowImpact}} = 5.07$ ($SD = 1.41$), $t(122) = 2.38$, $p < .05$. There were no significant differences among the three conditions in ratings of sympathy, t 's < 1.5 , ns (see Table 3).

Mediation results

We first tested mediation models comparing the *details—high impact* condition to the *general* condition. Using the Preacher and Hayes (2008) macro with 5000 bootstrapped samples, we observed that when entered individually, impact mediated the details effect, $Z = 2.71$, $p < .01$ and vividness showed a marginally significant pattern of mediation Z 's = 1.75, $p = .08$. Sympathy showed no mediation pattern, $Z = 1.1$, ns. When simultaneously testing these three constructs in a model of multiple mediators (Preacher & Hayes, 2004, 2008; Zhao et al., 2010) the impact mediator was statistically significant, showing indirect-only mediation (Zhao et al., 2010), Impact $B = 1.6$, $Z = 2.47$; $p < .05$; whereas the vividness and sympathy mediators were not significant, Vividness $B = -.26$, $Z = .45$, $p = .65$; Sympathy $B = .05$, $Z = .36$, $p = .71$.

We next tested mediation models that compared the *details—high impact* condition to the *details—low impact* condition. Again using 5000 bootstrapped samples, we observed that when entered individually, only impact showed mediation of the details effect, $Z = 2.2$, $p < .05$, while vividness and sympathy did not Z 's < 1 , ns. When simultaneously testing these three constructs in a model of multiple mediators (Preacher & Hayes, 2004, 2008; Zhao et al., 2010) the impact mediator was statistically significant, exhibiting indirect-only mediation (Zhao et al., 2010), Impact $B = 1.5$, $Z = 2.04$; $p < .05$, whereas the vividness and sympathy mediators were not significant, Vividness $B = -.004$, $Z = .11$, $p = .91$; Sympathy $B = .005$, $Z = .12$, $p = .90$.

Discussion

Experiment 3 examined participants' charitable responses to both high-impact and low-impact details compared to a general charity description. Consistent with the notion that impact drives the relationship between details and donations, a manipulation that used low-impact details did not increase donations. The results suggest that details about interventions only matter to the extent that they promote impact.

Vividness was rated high in both the *high-impact details* and *low-impact details* conditions. However, donations were only high when impact was also high. It seems, therefore, that vividness may be a necessary, but not sufficient, condition for the details effect to occur.

It is worth noting that an alternative explanation for our findings exists. It is possible that detailed charities are perceived as more representative of charitable organizations than their general counterparts, and as a result, are also viewed as more desirable. We collected additional data to investigate this idea.

We asked an online sample ($N = 108$) recruited via Mechanical Turk (Paolacci et al., 2010) to read one of three charity descrip-

Table 3
Experiment 3 results.

Condition	Amount donated	Sympathy	Vividness	Impact
General	\$7.54 ^a	5.04 ^a	3.5 ^a	5.0 ^a
Details—high impact	\$10.25 ^b	5.25 ^a	4.6 ^b	5.6 ^b
Details—low impact	\$6.95 ^a	5.38 ^a	4.6 ^b	5.1 ^a

Note: Amount donated, sympathy, vividness, and perceived impact by experimental condition. Letters denote statistical equivalence within the column using a $p < .05$ criterion.

tions: (1) the Oxfam general condition from Experiment 1, (2) The Oxfam detailed condition from Experiment 1, or (3) The Nothing But Nets detailed condition from Experiment 2. Next, we asked participants to judge “to what extent (Oxfam/Nothing But Nets) resembles a typical charity” (cf. Kahneman & Frederick, 2002) on a 1–7 scale.

Results showed that neither detailed condition was viewed as significantly more representative than the general condition, $M_{\text{OxfamGeneral}} = 4.93$ ($SD = 1.26$), $M_{\text{OxfamDetailed}} = 5.24$ ($SD = 1.36$), $t(79) = 1.07$, $p = .29$; $M_{\text{OxfamGeneral}} = 4.93$ ($SD = 1.26$), $M_{\text{NothingButNets}} = 4.45$ ($SD = 1.79$), $t(73) = 1.29$, $p = .20$. The findings suggest that participants do not consistently perceive the detailed conditions as more representative than the general conditions at an explicit level. It does remain possible, however, that an implicit association with representativeness exists and this could be explored in future work.

General discussion

Across three experiments, highlighting details about a charity’s interventions increased generosity. This effect occurred when participants donated to an inherently tangible charity, Nothing But Nets, versus a more general charity, Oxfam International. The effect also occurred when people donated to the same charity (Oxfam) described in a detailed versus a general way. Multiple regression and mediation analyses showed that the main driver of this effect was an increase in the impact that donors believed their contribution would make. The finding that impact can mediate the relationship between details and generosity demonstrates that sympathy, while likely sufficient, is not necessary for a connection between tangible information and increased giving.

Experiment 3 revealed that not all details are created equal for increasing generosity. Details about interventions only mattered to the extent that they promoted a sense of impact. We can imagine situations in which details could even decrease the sense of impact and thus decrease donations, such as if a charity highlighted details about overhead costs; although overhead costs are arguably just as urgent as direct need costs, donors do not perceive overhead costs to be as impactful, and they even sometimes perceive them as a waste (Rooney & Frederick, 2007).

Taken together with past work, the results from the present experiments show that tangible information of many types increases generosity. Previous work about the identified victim effect demonstrates that making victims tangible, either by providing details about victims or by focusing on a single victim, increases donations. Prosocial emotions such as sympathy play a key role in this effect (Dickert & Slovic, 2009; Kogut & Ritov, 2005a). The current work presents a parallel effect to the identified victim by showing that details about interventions also can increase generosity, but via a different process. Perceptions of impact appear to be the primary link between tangible information about interventions and giving. This paper has focused on using details to increase impact and giving, however, consistent with the notion that tangible information of many types increases generosity, we also would predict that a one-intervention-versus-many-intervention manipulation would increase impact and subsequent generosity, parallel to the one-versus-many identified victim effect.

Given the importance of perceived impact for the identified intervention effect, it seems possible that impact plays a role in the identified victim effect as well. To our knowledge, impact has not been measured in identified victim research, however, it may be that impact in addition to sympathy link individual victims to increased generosity. As suggested by prior research about the importance of proportional impact (e.g., Baron, 1997), this may be especially true in one-versus-many victim manipulations.

Understanding such diverse mediating factors is not just interesting theoretically; it also could have important implications for eliciting generosity over time. For example, a donation primarily driven by perceptions of high impact could beget more future donations by the same donor than a similar donation that was driven only by short-lived feelings of sympathy. Other causal pathways are possible as well, and these could have implications for long term relationships between donors and charities.

The effects of sympathy and impact, the first documented in prior research and the second documented in the current research also point to a possible answer to an important question—namely whether people can be induced to contribute to the important goal of prevention. Prevention is often an efficient use of charitable resources, not only because many problems, such as starvation and homelessness, can often be avoided at lower cost than they can be dealt with once they have materialized, but, more importantly, because doing so is likely to alleviate much more human suffering. Yet, efforts at prevention suffer from a dual handicap: First, given that the problem has not yet emerged, there are no existing victims toward whom potential donors can feel sympathy, and second, it is difficult to provide details that increase the feeling of impact since the outcome is not remediation of a problem, but is the non-occurrence of a problem that otherwise would have materialized. The Sherlock Holmesian problem of “the dog that didn’t bark” undermines both routes between tangible information and charity. This difficulty of raising funds for prevention illuminates a hitherto under-appreciated strength of large non-governmental organizations, such as Oxfam, that channel aid donations to specific causes. While such organizations can fundraise by drawing attention to people and programs that emphasize sympathy-evoking victims and impact-evoking interventions, they have relatively free hand in how they use their resources, including for prevention. One of the roles that NGOs may serve, therefore, is to channel funding to worthy preventative purposes that would be unlikely to be supported if people only donated funds directly to specific groups and causes, such as tsunamis and floods.

It is interesting to consider the identified intervention effect in terms of intuitive versus controlled processes. Similar to the Intuitive (System 1) and Controlled (System 2) categorization of human judgment processes (Kahneman, 2002; Slovic, 1996), Loewenstein and Small (2007) outlined a similar categorization of mental processes applying specifically to the domain of human generosity. They propose that one process, “sympathy,” is caring but irrational, leading people to feel compassion for compelling but sometimes unworthy victims. The other process, “deliberation,” is rational, encouraging people to optimize resource allocation, yet at the same time is uncaring, allowing people to avoid personal sacrifice for the sake of even the most deserving needy person. This sympathetic versus deliberative conceptualization focuses specifically on people’s reactions to creatures and human victims, and thus our current investigation focusing on non-human details does not fit cleanly within these buckets.

Nevertheless, we believe that the broader concept of intuitive versus deliberative processing does apply. Although we find no evidence that sympathy drives the details effect in our particular experiments, we still suspect that the identified intervention effect operates through an intuitive and associative path rather than through a controlled and deliberative path. It seems that the details effect relies on an intuitive association between a concrete example of impact and a perception of overall impact, and heightened deliberation might reveal this link to be tenuous. Small et al. (2007) showed that priming calculation wiped out the identifiable victim effect, and we would predict that priming deliberation could similarly quash the identified intervention effect documented in this paper, though for a slightly different reason.

Conclusion

In conclusion, the findings in this paper document a new process by which detailed information can influence generosity. Details not only have the capacity to increase how much we care about another person’s plight, but they also have the ability to influence how much we believe we can have impact in a given problem. This increase in perceived impact leads to increased generosity. The results from this paper, in combination with past work, suggest that there are multiple pathways through which tangible information can increase giving.

Being more confident that one’s contribution will have impact may not only heighten the likelihood of donating, but also may heighten the emotional satisfaction (Andreoni, 1990; Dunn, Aknin, & Norton, 2008; Moll et al., 2006) that donors receive from making the contribution. Promoting a sense of impact both before and after a donation has the potential to yield consistent and satisfying relationships over time between donors and the causes that they support.

Appendix A. Experiment 1 stimuli

“GENERAL” CONDITION	“TANGIBLE” CONDITION
Oxfam International is one of the most effective aid organizations in the world. Oxfam provides a broad range of aid to people across the globe. Any donation that you make will go directly towards one of Oxfam’s greatest needs	Oxfam International is one of the most effective aid organizations in the world. One example of how Oxfam provides aid is ensuring that villagers in West Africa have access to clean water. Any donation that you make will go directly towards one of Oxfam’s greatest needs

Appendix B. Experiment 2 stimuli

“GENERAL” CONDITION	“TANGIBLE” CONDITION
Oxfam International provides a broad range of aid to people across the globe. Any donation that you make will go directly towards Oxfam’s greatest needs	Nothing But Nets provides bed nets that protect against mosquito-borne malaria to families in Africa. One net can protect at least one child from infection. Any donation that you make will go directly towards a net

Appendix C. Experiment 3 stimuli

C.1. General charity condition

Oxfam International is one of the most effective aid organizations in the world. Oxfam provides a broad range of humanitarian aid to people across the globe.

If you were asked to donate to Oxfam, how much would you give?

C.2. Detailed charity condition—high impact

Oxfam International is one of the most effective aid organizations in the world. Oxfam provides a broad range of humanitarian

aid to people across the globe. **One example of how Oxfam uses funds is by providing individuals with access to clean water.**

If you were asked to donate to Oxfam, how much would you give?

C.3. Detailed charity condition—low impact

Oxfam International is one of the most effective aid organizations in the world. Oxfam provides a broad range of humanitarian aid to people across the globe. **One example of how Oxfam uses funds is by providing individuals with access to bottled water.**

If you were asked to donate to Oxfam, how much would you give?

References

Andreoni, J. (1990). Impure altruism and donations to public goods: A theory of warm-glow giving. *Economic Journal*, 100, 464–477.

Baron, J. (1997). Confusion of relative and absolute risk in valuation. *Journal of Risk and Uncertainty*, 14(3), 301–309.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182.

Batson, C. D. (1987). Prosocial motivation: Is it ever truly altruistic? In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 20, pp. 65–122). New York: Academic Press.

Belkin, L. (1995). Death on the CNN curve. *The New York Times*. <<http://www.nytimes.com/1995/07/23/magazine/death-on-the-cnn-curve.html>>.

Bohnet, I., & Frey, B. (1999). Social distance and other-regarding behavior in dictator games: Comment. *The American Economic Review*, 89(1), 335–339.

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon’s Mechanical Turk: A new source of cheap, yet high-quality, data? *Perspectives on Psychological Science*, 6, 3–5.

Charness, G., & Gneezy, U. (2008). What’s in a name? Reducing the social distance in dictator and ultimatum games. *Journal of Economic Behavior and Organization*, 68, 29–35.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Cryder, C. E., & Loewenstein, G. (2010). The critical link between tangibility and generosity. In D. M. Oppenheimer & C. Y. Olivola (Eds.), *The science of giving: Experimental approaches to the study of charity*. Taylor and Francis.

Dickert, S., & Slovic, P. (2009). Attentional mechanisms in the generation of sympathy. *Judgment and Decision Making*, 4, 297–306.

Duncan, B. (2004). A theory of impact philanthropy. *Journal of Public Economics*, 88, 2159–2180.

Dunn, E. W., Aknin, L. B., & Norton, M. I. (2008). Spending money on others promotes happiness. *Science*, 319(5870), 1687–1688.

Eisenberg, N., Fabes, R. A., Miller, P. A., Fultz, J., Shell, R., Mathy, R. M., et al. (1989). Relation of sympathy and personal distress to prosocial behavior: A multimethod study. *Journal of Personality and Social Psychology*, 57(1), 55–66.

Fetherstonhaugh, D., Slovic, P., Johnson, S. M., & Friedrich, J. (1997). Insensitivity to the value of human life: A study of psychophysical numbing. *Journal of Risk and Uncertainty*, 14(3), 283–300.

Forsythe, R., Horowitz, J., Savin, N., & Sefton, M. (1994). Fairness in simple bargaining experiments. *Games and Economic Behavior*, 6, 347–369.

Friedrich, J., Barnes, P., Chapin, K., Dawson, I., Garst, V., & Kerr, D. (1999). Psychophysical numbing: When lives are valued less as the lives at risk increase. *Journal of Consumer Psychology*, 8(3), 277–299.

Goodman, J. K., Cryder, C. E., & Cheema, A. (in press). Data collection in a flat world: Strengths and weaknesses of Mechanical Turk samples. *Journal of Behavioral Decision Making*.

Heath, C., Bell, C., & Sternberg, E. (2001). Emotional selection in memes: The case of urban legends. *Journal of Personality and Social Psychology*, 81(6), 1028–1041.

Jenni, K. E., & Loewenstein, G. (1997). Explaining the “identifiable victim effect”. *Journal of Risk and Uncertainty*, 14(3), 235–257.

Kahneman, D., & Frederick, S. (2002). Representativeness revisited: Attribute substitution in intuitive judgment. In T. Gilovich, D. Griffin, & D. Kahneman (Eds.), *Heuristics and biases: The psychology of intuitive judgment* (pp. 49–81). New York: Cambridge University Press.

Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1986). Fairness and the assumptions of economics. *The Journal of Business*, 59, S285–S300.

Kahneman, D., & Ritov, I. (1994). Determinants of stated willingness to pay for public goods. *The Journal of Risk and Uncertainty*, 9, 5–38.

Karlan, D., & List, J. A. (2007). Does price matter in charitable giving? Evidence from a large-scale natural field experiment. *American Economic Review*, 97(5), 1774–1793.

Kogut, T., & Ritov, I. (2005a). The “identified victim” effect: An individual group or just a single individual. *Journal of Behavioral Decision Making*, 18(3), 157–167.

- Kogut, T., & Ritov, I. (2005b). The singularity effect of identified victims in separate and joint evaluation. *Organizational Behavior and Human Decision Processes*, 97(2), 106–116.
- Loewenstein, G., & Small, D. A. (2007). The scarecrow and the tin man: The vicissitudes of human sympathy and caring. *Review of General Psychology*, 11(2), 112–126.
- Moll, J., Krueger, F., Zahn, R., Pardini, M., de Oliveira-Souza, R., & Grafman, J. (2006). Human fronto-mesolimbic networks guide decisions about charitable donations. *Proceedings of the National Academy of Sciences*, 103(42), 15623–15628.
- Nisbett, R. E., & Ross, L. (1980). *Human inference. Strategies and shortcomings of social judgment*. Englewood Cliffs, NJ: Prentice-Hall.
- Oppenheimer, D., Meyvis, T., & Davidenko, N. (2009). Instructional manipulation checks: Detecting satisficing to increase statistical power. *Journal of Experimental Social Psychology*, 45, 867–872.
- Oxfam International (2009). *Education*. <<http://www.oxfam.org/en/about/issues/education>> Retrieved 19.11.09.
- Paolacci, G., Chandler, J., & Ipeirotis, P. G. (2010). Running experiments using Amazon Mechanical Turk. *Judgment and Decision Making*, 5(5), 411–419.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, and Computers*, 36(4), 717–731.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891.
- Redelmeier, D. A., & Tversky, A. (1990). Discrepancy between medical decisions for individual patients and for groups. *The New England Journal of Medicine*, 322, 1162–1164.
- Reyes, R. M., Thompson, W. C., & Bower, G. H. (1980). Judgmental biases resulting from differing availabilities of arguments. *Journal of Personality and Social Psychology*, 39(1), 2–12.
- Rick, S., & Loewenstein, G. (2008). Intangibility in intertemporal choice. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 363(1511), 3813–3824.
- Rooney, P., & Frederick, H. K. (2007). *Paying for overhead: A study of the impact of foundations' overhead payment policies on educational and human service organizations*. Working paper. The Center on Philanthropy at Indiana University.
- Sah, S., & Loewenstein, G. (2012). More affected = more neglected: Amplification of advice in bias to the unidentified and many. *Social Psychology and Personality Science*, 3, 365–372.
- Schelling, T. C. (1968). The life you save may be your own. In S. B. Chase (Ed.), *Problems in public expenditure analysis* (pp. 127–162). Washington, DC: Brookings Institution.
- Slooman, S. A. (1996). The empirical case for two systems of reasoning. *Psychological Bulletin*, 119, 3–22.
- Slovic, P. (2007). If I look at the mass I will never act: Psychic numbing and genocide. *Judgment and Decision Making*, 2(2), 1–17.
- Small, D. A., & Loewenstein, G. (2003). Helping “A” victim or helping “THE” victim: Altruism and identifiability. *Journal of Risk and Uncertainty*, 26(1), 5–16.
- Small, D. A., Loewenstein, G., & Slovic, P. (2007). Sympathy and callousness: The impact of deliberative thought on donations to identifiable and statistical victims. *Organizational Behavior and Human Decision Processes*, 102(2), 143–153.
- Taylor, S. E., & Thompson, S. C. (1982). Stalking the elusive vividness effect. *Psychological Review*, 89(2), 155–181.
- UNICEF (2009). *Child development and survival*. <<http://www.unicef.org/childsurvival/index.html>> Retrieved 19.11.09.
- Wispé, L. (1986). The distinction between sympathy and empathy: To call forth a concept, a word is needed. *Journal of Personality and Social Psychology*, 50(2), 314–321.
- Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 37(2), 197–206.