“One dead person can save the lives of several others”: The impact of the number and identification of recipients on organ-donation decisions

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Abstract

We examined the combined effect of information about the number of recipients saved by the organs of one deceased person (one vs. four) and the identifiability of the donor and the recipient(s) in OD descriptions, on people’s willingness to donate (WTD) the organs of a deceased relative. Results suggest that reading about more people who were saved by the organs of a deceased donor does not increase WTD. Reading about a case of OD involving an identified deceased donor, deceased WTD (which was attenuated by the number of recipients). Importantly, the presentation that prompted the greatest WTD was the one that featured an unidentified donor and only one identified recipient. Finally, an explorative investigation into participants’ subconscious thoughts of death following the OD story revealed that identifying a deceased donor prompts more thoughts of death in the perceiver, regardless of the number of recipients, possibly decreasing WTD.

Keywords: Organ donation; Identifiable victim effect, Scope neglect

Track: Consumer behavior

1. Introduction

"One donor can save eight lives!" This phrase is often used in appeals to members of the public to sign a commitment to donate their organs after death, or to donate the organs of a deceased relative. Moreover, we often encounter reports of cases of organ donations with information about a deceased donor and about one or several recipients whose lives were saved by that donation. How might these ads and stories affect readers? In a recent study, Harel, Kogut, Pinchas, & Slovic, (2017), demonstrated that when participants read about organ donation (OD) cases that include identifying information (a name and a photo) about the recipient whose life was saved as a result, it increased their willingness to commit to OD themselves, and their willingness to donate the organs of a deceased relative. Conversely, identifying the deceased donor was found to induce thoughts of death rather than about saving lives—resulting in fewer participants willing to donate (WTD) organs.

In the present research, we take one step further in investigating the impact of the presentation of OD cases in the media on people's WTD organs, by examining the role played by the number of recipients saved by the organs of one deceased person, and whether learning about more recipients who were saved as a result reduces thoughts of death, thereby increasing support for OD. In addition, we examine the combined effect of the number of recipients saved by the organs of one deceased person and the identifiability of the donor and the recipient[s] in people's decisions about OD issues.

Research of altruistic behavior and charitable giving indicates that donation-giving is more likely to be triggered when recipients are identified by name, photograph, or story, than when they are anonymous or merely statistical individuals (Kogut & Ritov, 2005; Small & Loewenstein, 2003; Slovic, 2007). When the needs of an identifiable individual are presented, emotional responses (such as empathy and compassion) immediately come into play, which increase the incidence of helping. However, when needy individuals are perceived in a negative light—such as when they are perceived responsible for their plight (Kogut, 2011)—identifying information about them may actually increase feelings of anger and blame toward them within the prospective helpers, reducing their willingness to help.

Research on the identified victim effect suggests, however, that identifiability of the recipient increases donations mainly when it involves a single identified individual (Kogut & Ritov, 2005)—and less so when a group of several individuals is presented. As a result, a single

identified victim elicits more donations than a group of several victims (whether they are identified or not). This *singularity effect*—the preference to help a single identified victim over a group of victims is in line with research of recent decades that consistently shows that people are insensitive to the magnitude of the impact of their support of public causes and of moral decisions (e.g., Frederick & Fischhoff, 1998). Hsee and Rottenstreich's (2004) research, in particular, found that peoples subjective values are highly sensitive to the presence or absence of a stimulus, but they are largely insensitive to further variations in scope, especially when affect-rich stimuli (such as identified victims) are involved.

However, the presentation of a victim in need of help may be fundamentally different from the presentation of prospective donors and recipients of ODs. When people donate money to help an identified victim, they believe that their donation will directly help that specific individual—whereas, with ODs, the commitment to help is directed at an unknown future recipient, and in the unfortunate event of their own death (or that of a close family member). Thus, when a specific case of a prospective OD recipient is presented, it can only be by way of illustration, rather than as an actual request for help. Moreover, when people consider the issue of ODs, they are confronted with the disturbing thought of their own demise, or that of a relative. Although prosocial action may help to suppress anxiety-inducing thoughts of death (e.g. Greenberg, Solomon, & Pyszczynski, 1997), when an appeal for help makes the prospect of one's own death all the more salient, people may react by setting it aside, and avoiding appeals to help altogether (Hirschberger, Ein-Dor and Almakias (2008).

The research on scope insensitivity and on the singularity effect of identified victims, as reviewed above, raises the question of whether presenting more than one individual who has been saved by ODs would boost support for ODs among the public. This question is important from a theoretical perspective, since while stories about several individuals being saved by the donation of organs of a deceased person may boost ODs—by prompting thoughts about the lives being saved (Harel et al, 2017)—they may also reduce WTD due to the natural human tendency to scope insensitivity and the difficulty to adopt the perspective of several other individuals (as opposed to one individual—Slovic, 2007). In light of recent appeals for ODs that highlight the fact that one dead person can save the lives of nine people, it is also important to examine this strategy from a practical perspective. In the present research, we sought to examine the combined impact of the identifiability of the donor and the recipient, and their number (one vs. four

recipients) on organ-donation decisions. In light of the findings of Harel et al., (2017), we expected vivid identifying information about the donor (a deceased individual who has donated his or her organs) to reduce participants' WTD organs, since such details about deceased donors has been found to prompt thoughts of death (rather than saving lives), decreasing WTD. However, we expected that telling participants that four (rather than one) organ recipients were saved by the donation of organs of a deceased person would attenuate this effect, as it may prompt thoughts about saving lives. When the deceased donor is left unidentified, we expected identifying information about only one prospective recipient to prompt greater support for ODs, especially when only one such recipient is presented—in line with the research on the singularity effect, which states that people are more likely to sympathize with, and tend to take the perspective of, a single identified victim, than when a group of such victims with the same need are involved.

2. Experiment 1

Experiment 1 was conducted to examine the combined effect of information about the number of recipients saved by the organs of one deceased person (one vs. four) and the identifiability of the donor and the recipient(s) in OD descriptions, on people's WTD the organs of a deceased relative. We used the study design by Harel et al. (2017), whereby participants read about a recent case of a young man who had been killed in a car accident and whose organs saved the life of another young man, while varying the identifiability of the donor and of the recipient, and the number of recipients saved by the OD. After reading the story, participants were asked if they were WTD the organs of a deceased family member.

2.1 Method

Participants. Three hundred and four undergraduate university students (72% female, mean age = 24.39 y, SD = 3.30) completed a short survey online.

Procedure and measures. Participants were randomly assigned to one of eight experimental conditions, in a 2x2x2 design of Donor's Identification (identified vs. unidentified), Recipient's Identification (identified vs. unidentified), and the Number of Recipients (*1* vs. *4*), as explained below. Participants first read a story (adopted from Harel et al. 2017) about a young man who had been killed in a car accident the previous week. He was a registered organ donor,

so his parents decided to donate his organs. His kidney [heart, pancreas, two kidneys] was [were] transplanted into the body of another young man [4 young men], whose life was [lives were] saved as a result. In the Identified Donor condition, the name and picture of the deceased donor were presented; in the Identified Recipient[s] condition, the same name[s] and picture[s] were attributed to the organ recipient[s]. We used 5 different typical photos of young men in their twenties to identify the donor and the recipients, while randomly varying the photos in the Identified Donor and the Single Recipient conditions, such that each photo was equally used to identify a single deceased donor and a recipient. In the Four Recipients condition, participants were told that four different organs (from the same deceased donor) were donated to four different recipients: two kidneys, a heart and a pancreas. In the One Recipient condition, we varied the donated organ between-subjects accordingly, such that 1/4 of the participants read about a heart donation, 1/4 about a pancreas donation, and 2/4 about a kidney donation. To enhance involvement, subjects were also asked to indicate whether they had heard about this case (*Yes* / *No*).

Next, participants were asked to imagine that a close relative of theirs had just died, and that the hospital's medical staff were asking their family to consider donating his organs to save the life of someone waiting for transplantation. Participants were then asked to rate their WTD their deceased relative's organs on a seven-category scale ranging from *1 (Strongly disagree)* to *7 (Definitely agree)*. Finally, they were asked to provide demographic information about themselves, and to indicate whether they themselves were registered organ donors (*Yes / No*).

2.2 Results

One hundred and ninety-seven participants reported being registered donors, while 107 were not. Since the participant's own commitment to ODs was found to play a significant role in OD decisions, and may interact with the different presentations (Harel et al., 2017), we used the participant's consent status as a covariant in the analysis. A 2x2x2 ANOVA on the WTD the organs of a deceased relative was conducted, with Donor's Identification, Recipient's Identification, and Number of Recipients as predictors.

Results revealed a significant main effect for consent status—such that, as expected, registered donors expressed greater WTD the organs of a deceased relative (M=6.29, SD=1.05) than unregistered people (M=4.54, SD=1.62), $F(1, 295)=135.93$, $p<.001$, $\eta_p^2=.31$. No other

significant main effects were found. The interaction between Donor's Identification and Number of Recipients was significant $F(1, 295)=5.77$, $p=.017$, $\eta_p^2=.02$. Replicating the results of Harel et al. (2017), simple effect analysis shows that when only one recipient was presented, participants who were told about an identified deceased donor ($M=5.53$, $SD=1.67$) were less WTD the organs of a deceased relative than those whose account talked about an unidentified donor ($M=5.94$, $SD=1.44$); $F(1, 295)=6.09$, $p=.014$, $\eta_p^2=.02$. However, when four recipients were saved by the organs of the one deceased donor, identifiability of the donor had no significant effect on WTD—$F(1, 295)=.85$, $p=.36$, $\eta_p^2=.003$. This suggests that knowing about several people who were saved by the organs of a single dead donor attenuates the effect of Donor's Identification in reducing support for ODs. However, reading about four people who were saved by the OD did not have a significant effect in increasing WTD.

The interaction between Recipient's Identification and Number of Recipients was also significant F(1, 295)=5.99, p=.018, $\eta_p^2=.02$. In the Identified condition, one recipient encouraged greater WTD (M=5.86, SD=1.37) than four recipients (M=5.38, SD=1.67), F(1, 295)=5.93, p=.015, $\eta_p^2=.02$; while in the Unidentified condition no significant difference was found between one recipient and four recipients, F(1, 295)=.96, p=.33, $\eta_p^2=.003$. This result is in line with previous research on the singularity effect in charitable giving, which suggests that a single identified recipient prompts a greater WTD than a group of recipients.

Finally, the condition that appears to increase WTD (among all eight conditions) is the one in which the deceased donor is not identified, and only one identified recipient is presented. Results of a one-way ANOVA on WTD—with Condition as the independent variable (eight levels), while holding consent-status as a covariant—reveals a significant difference between the eight conditions (F(1, 295)=2.46, p=.018, $\eta_p^2=.055$). Post-hoc analysis suggests that participants who were told about an unidentified donor and one identified recipient were significantly more WTD than participants in most of the other conditions. No other significant differences in WTD were found between any other two conditions.

2.3 Discussion

One key finding of Study 1 is that being told about four recipients who were saved by the organs of a single deceased donor attenuates the effect of Donor's Identification in reducing the WTD. Since previous research (Harel et al 2017) suggests that the identifiability of the donor is more

likely to prompt thoughts of death in people's minds (as opposed to thoughts about saving lives), resulting in diminished WTD, in Study 2 we sought to explore the degree to which this occurred, and whether being told about more recipients who were saved by the organs of the deceased reduces this tendency.

3. Experiment 2

Experiment 2 was an exploratory attempt to examine the psychological mechanism that may explain the interaction between identification of the donor and the number of recipients, in terms of the participants' WTD, as found in Study 1. As noted, previous research suggests that the identifiability of the donor prompts thoughts of death, rather than about saving lives, resulting in diminished WTD. In Study 1, we found that donor identifiability reduced WTD when only one recipient was saved by the OD—but when participants were told that *four* recipients were saved by the organs of the deceased, this effect was attenuated, such that their WTD was not significantly different from that of participants who had been told about an unidentified donor. In Study 2, we examined the salience of death-related thoughts in people's minds after reading about a case of OD. To keep the design simple, the recipients (one or four) in all conditions were unidentified.

3.1 Method

Participants. Four hundred and forty undergraduate university students (from a computerized pool of subjects) took part in the study: 63% females, Mage =26.56, SD=13.32.
Procedure and Measures. Participants were randomly assigned to one of four groups in a 2X2 design manipulating the identifiability of the donor (identified vs. unidentified) and the number of organ recipients (one versus four). As in Study 1, participants first read about a young man who had been killed in a car accident, with or without identifying information. They next read that the organ[s] of this man saved the lives of one [four] young men who urgently required them. To examine participants' subconscious death thoughts, we used a word-completion task involving words that could be completed with either neutral or death-related words. The word-completion task included 13 word fragments which participants were instructed to complete with the first word that came to their mind by filling in one or two missing letters. Six of the 13 word

fragments could be completed with neutral or death-related words. The dependent measure was the number of death-related words with which a participant completed the fragments.

We examined accessibility to death-related words after reading about the case of OD without assessing WTD, building upon the relationship between thoughts of death and WTD after reading about an identified versus unidentified donor found in previous research (Harel et al., 2017), since several pilot studies (with small samples) revealed that being employed in one of the tasks (completing the connectedness words or making a decision regarding the donation of a deceased relative organs) may distance the participants form the identifiability manipulation, hence weakening its effect on the second task (i.e. only the task that follows the story manipulation is affected by it).

3.2 Results

The number of death-related words completed by the participants ranged between 0−5, $M = 1.37$, $SD = 1.07$. A two-way ANOVA on the number of death-related words by the two independent variables (identifiability and number of recipients) was conducted. Results reveal a significant main effect for Donor's Identification—$F(1, 436)=4.17$, $p=.04$, $\eta_p^2=.01$—such that reading about an identified deceased donor prompted more thoughts of death among participants ($M=1.50$, $SD=1.15$) than reading the same story with an unidentified donor ($M=1.25$, $SD=.95$). The Number of Recipients fell far short significance $F(1, 436)=0.40$, $p=.85$, $\eta_p^2<.001$. Although the interaction between identifiability and the Number of Recipients was not significant $F(1, 436)=0.82$, $p=.37$, $\eta_p^2=.002$, in light of the results of Study 1, we looked at the effect of Donor's Identification in each of the Recipient Number conditions separately. Simple-effect analysis revealed that Donor's Identification increased thoughts of death in the One Recipient condition only $F(1, 436)=4.32$, $p=.038$, $\eta_p^2=.01$, while in the Four Recipients condition Donor's Identification had no significant impact on thoughts of death, $F(1, 436)=0.65$, $p=.42$, $\eta_p^2=.001$.

3.3. Discussion

Our explorative investigation into participants' subconscious thoughts of death following the OD story replicated previous findings that identifying a deceased organ donor prompts more thoughts of death in the perceiver (Harel et al. 2017). While previous research examined explicit, self-reported thoughts of death, in the present research we used an implicit measure of

subconscious death thoughts, as elicited by a word-completion task. In keeping with the pattern found for WTD the organs of a deceased relative in Study 1, we found that identification of the donor significantly increased thoughts of death when only one recipient was saved by the donation, and less so when the participant was told that four people were saved by the donation. Thus, it appears that being told about more people being saved by the organs of a deceased donor actually somewhat weakens the impact of Donor's Identification on the tendency to think thoughts of death.

4. General Discussion

The results of our investigation of the effect of the presentation of OD cases on people's WTD the organs of a deceased relative, replicated those of previous research by showing that when the participants read about a case of OD involving an identified deceased donor, their WTD diminished. However, it also yielded innovative findings about the effect of the number of recipients saved by a single deceased donor on people's WTD the organs of a deceased relative. As with monetary donation decisions (e.g. Kogut & Ritov, 2005; Slovic, 2007), we found that in the context of OD decisions people are also insensitive to number of victims saved—insofar as reading about more people who were saved by the organs of a deceased donor does not increase WTD. Moreover, when the organ recipients were identified, reading about one person who was saved by OD prompted greater WTD than reading about four such individuals. This finding is in line with research that found that people are insensitive to the scope of the problem, especially when emotional triggers are involved (e.g. Hsee & Rottenstreich, 2004, Slovic, 2007).

Participants' subconscious thoughts of death following the OD story echoed the pattern found for WTD, such that identification of the donor significantly increased thoughts of death when only one recipient was saved by the donation, and less so when the participant was told that four people were saved by the donation, possibly mitigating the negative impact of Donor's Identification on WTD.

Besides its theoretical contributions, our research offers practical implications for efforts to promote ODs. Recruiting people whose lives have been saved by OD, identifying them by name, and telling their story may increase media coverage about such individuals, and spur members of the public to think about saving lives when reading about ODs, and generally to view ODs in a favorable light. Telling about more people who were saved by the organs of one

deceased donor does not seem to be the best strategy to increase support for ODs. The greatest positive impact on people's decisions regarding OD, according to the results of our research, appears to be when OD reports involve an unidentified deceased donor, and a single identified recipient.

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