

Reactions to Narrative and Statistical Written Messages Promoting Organ Donation

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Students (N = 412) attending a large eastern university evaluated two of three message vignettes (narrative, statistical, actual) on organ donation after reporting their attitudes on the topic. The narrative and statistical vignettes were replicated from a study published in 1998 by Kopfman, Smith, Ah Yun, and Hodges. The study design replicated the Kopfman et al. experiment while also correcting for two methodological artifacts (order effects and analysis procedure) that may have accounted, in part, for the reported findings. Results failed to replicate the findings of Kopfman et al., and in one factor findings were in the opposite direction previously hypothesized. Number of total thoughts and number of positive thoughts were greater for the first message compared to the second message regardless of message condition. Narrative messages were evaluated more positively, seen as more causally relevant, and rated as more credible when compared to the actual messages.

Keywords: Evaluation; Narrative; Organ Donation; Statistical; Tissue Donation

Public communication campaigns designed to promote awareness of the critical shortage of donors and to increase individuals' intentions to become a posthumous donor have met with modest success (cf. Cosse & Weinberger, 2000; Morgan, Miller,

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& Arastanam, 2002). Evaluating why the mediated campaigns were or were not successful is of paramount importance when designing future campaigns with similar goals (i.e., promotion of organ, tissue, blood or marrow donation). The current study examines the relative merits of the message content or, more specifically, the persuasive evidence that public communication campaigns promoting organ and tissue donation (OTD) may feature in their pamphlets, billboards, or Web sites.

Narrative vs. Statistical Evidence

Perhaps the oldest research question examined in the field of communication asks, "What is more persuasive, an emotional or rational appeal?" A common form of evidence in using rational appeals is the use of statistical or population-level data. Statistical evidence provides summary information across a large number of cases or data from many, perhaps tens of thousands of, respondents. In the case of organ and tissue donation, an example of a written statistical evidence message might read, "most Americans (85%) support the general concept of organ donation" (Saub, Shapiro, & Radecki, 1997, p. 408). The theory is that statistical evidence provides more representative and typical information on a topic; sources may also reference sample groups that are more similar in demographics and attitudes to a target audience for heightened effects (Cialdini, 1991).

Narrative messages vary considerably from statistical evidence messages in that they rely on anecdotal reports or an *N* of 1 case. Narrative evidence relies on the emotional impact or vividness of the case report to achieve its desired effect (Allen & Preiss, 1997; Taylor & Thompson, 1982). Narrative cases may be easier to relate to and more memorable to a reader which may influence subsequent recall and affect toward the topic (Kopfman et al., 1998).

The jury is hung on whether statistical evidence is more or less persuasive than narrative evidence. A recent meta-analysis by Allen and Preiss (1997) found a small but significant ($r = .10$) overall advantage for statistical evidence. However the 15 studies are dated with questionable power as 9 of the studies have fewer than 100 participants. Moreover, Allen and Preiss (1997) fail to report the topic of the study (e.g., prosocial vs. nonprosocial appeal) or the dependent variable (e.g., attitudes/intentions vs. behaviors). Both the topic of the appeal and the persuasive outcome have been shown to moderate effect sizes in social influence messages strategies (Fazio & Zanna, 1981; O'Keefe & Hale, 1998).

The Kopfman et al. (1998) Study

Kopfman et al. (1998) directly tested the relationship between narrative and statistical messages regarding OTD on students' affective and cognitive reactions. The authors hypothesized that reading statistical evidence messages when compared to reading narrative messages would produce more cognitive reactions in the form of number of thoughts (both positive and negative thoughts) in undergraduate students. Statistical evidence messages were also predicted to yield higher message ratings of

credibility and effectiveness than narratives. In short, statistical messages were expected to produce more favorable cognitive reactions than narrative messages.

Kopfman et al. (1998) also predicted that narrative messages would produce more favorable reactions in the receiver in the form of anxiety, causal relevance, and reported emotions (both positive and negative emotions). Causal relevance is related to one's self-efficacy and closeness to a story. The reader who reports more causal relevance finds the story more personal and feels more empowered to do something about the problem or vignette depicted. Kopfman et al. predicted that one's prior thought and intent (PTI) on the topic of OTD would independently affect receiver cognitions and emotions such that those high in PTI would report more favorable thoughts, emotions, credibility, and causal relevance than those low in PTI. The hypotheses and findings from Kopfman et al. are reported in Table 1.

The findings from the Kopfman et al. (1998) study advantage statistical messages over narrative evidence messages at least in terms of message reactions. The authors frame their results in terms of Chaiken's (1987) and Petty and Cacioppo's (1986)

Table 1 Hypotheses and Findings from Kopfman et al. (1998)

Hypothesis	Dependent variable	Predicted relation	Results	Effect size
H1	Total thoughts	$N < S$	$N < S^*$	$r = .04$
	Positive thoughts	$N < S$	ns	
	Negative thoughts	$N < S$	ns	
H2	Effectiveness	$N < S$	$N < S^*$	$r = .05$
H3	Causal relevance	$N > S$	$N < S^{**a}$	$r = .21$
H4	Total emotions	$N > S$	ns	
	Positive emotions	$N > S$	ns	
	Negative emotions	$N > S$	ns	
H5	Anxiety	$N > S$	$N > S^*$	$r = .05$
H6	Negative thoughts	$LPTI > HPTI$	$LPTI > HPTI^*$	$r = .06$
	Negative emotions	$LPTI > HPTI$	$LPTI > HPTI^{**}$	$r = .14$
	Positive thoughts	$LPTI < HPTI$	ns	
	Positive emotions	$LPTI < HPTI$	ns	
	Effectiveness	$LPTI < HPTI$	$LPTI < HPTI^{**}$	$r = .08$
	Causal relevance	$LPTI < HPTI$	$LPTI < HPTI^{**b}$	$r = .27$
	Anxiety	$LPTI > HPTI$	$LPTI < HPTI^{**}$	$r = .37$

Note: Effectiveness = credibility and effectiveness; N = narrative evidence; S = statistical evidence; ns = non-significant relationship at .05 alpha; Effect size is reported in r statistic computed from F value using formula by Rosenthal (1994). $LPTI$ = Low score on prior thought and intent; $HPTI$ = high score on prior thought and intent.

^aFinding was for one dimension of causal relevance (similarity) but not 2nd dimension (problem solving) and finding was in opposite direction than predicted.

^bSignificance for both dimensions of causal relevance—the findings for similarity are reported in terms of effect size.

* $p < .05$. ** $p < .01$.

information processing models and conclude, “the patterns of reactions found here would lend credence to the superiority of statistical evidence messages as persuasive tools because statistical evidence messages showed higher systematic and heuristic processing” (p. 295). The data in Kopfman et al.’s study would certainly point to this conclusion but it is our experience that narrative evidence messages are far more persuasive, or at least impactful, to students than are statistical evidence messages related to organ donation.

The Current Study

The current study sought to replicate the study design employed by Kopfman et al. (1998). On both theoretical and methodological grounds we found it important to reconsider the findings of Kopfman and her colleagues. Our experience suggests that students would evaluate narrative messages as more relevant than statistical messages; narratives and stories “hit closer to home” with student respondents and there is research evidence in social psychology to support this observation in Taylor and Thompson’s (1982) landmark review on the vividness effect. In fact, Kopfman et al. predicted narrative messages would be evaluated as more causally relevant than statistical messages. To further pull this thread of reasoning, we found it unexpected that receivers would report more thoughts (both favorable and unfavorable) when responding to statistical messages. It would seem narrative messages in organ donation have a greater propensity to affect an audience, especially when one considers how little students and adults know about the organ donation process (Feeley & Servoss, 2005; Horton & Horton, 1991).

Upon closer examination of the Kopfman et al. (1998) study, a potentially critical methodological concern is brought to bear on the pattern of findings. After reporting initial attitudes toward organ donation, students in the Kopfman et al. study first read the statistical vignette then report their reactions to this first vignette. Next students proceed to read a second vignette featuring a narrative evidence appeal. The authors failed to counterbalance the order of messages such that one-half of students read the narrative vignette first, and the statistical vignette second. Mean values on several dependent variables may have been the result of time order or reading the statistical message first then reading the narrative message second and not necessarily reactions to the message vignettes per se. Furthermore, the reactions to the first vignette (statistical) may have influenced or “bled into” the reactions to the second vignette (narrative). Consider the thought-listing procedure employed in the Kopfman et al. study (see Shapiro 1994); students were asked to report any thoughts they have during or after reading each vignette. It may be the case that students felt they have already written down their salient thoughts on the topic of organ donation during the first vignette and simply have less to say about the topic during the second vignette; as a result total thoughts or total positive thoughts may be a function of time order and not message evidence type.

The current study will correct for time order while at the same time providing a direct replication of the Kopfman et al. study (1998). Replication of communication

research studies is unfortunately not common practice in research journals and at conference panel presentations (see Allen & Preiss, 1993; Neulip & Crandall, 1993 for excellent discussion). While it is understood that developing new knowledge is and must be the goal of social science, it is imperative to have confidence in what is known.

An important third experimental message condition will be employed in the current study, which was not found in Kopfman et al. (1998), using a real news story related to organ and tissue donation. The story includes both narrative and statistical information and reports a news story printed in *The New York Times* (Strom, 2003). This story can be considered a typical or representative news story on the topic of organ donation, according to a recent content analysis of over 700 articles published in major newspapers in 2002 and 2003 (Feeley, in press). That is, the story is generally positive toward donation and presents an actual story of a successful transplant. Thus, the story combines both narrative and statistical information—an important methodological innovation, according to Allen and Preiss (1997), “the unanswered issue is whether a combination of proof would be more effective than a single proof” (p. 129). The senior author may be contacted for a copy of the vignettes used.

Method

Participants and Procedure

Students attending a large eastern research university were recruited to participate and all students were recruited from three introductory communication courses. The introductory course serves as the department “research participant pool” and all students were offered research credit in exchange for their participation. Students are required to complete 2 hours of research credit in the introductory course. The Institutional Review Board approved both the use of the participant pool and the current research protocol. Four hundred twelve ($N = 412$) students participated and all degrees of freedom are reported for each statistical test—list-wise deletion was used to eliminate participants due to incomplete responses.

The study was advertised as a “survey on student attitudes toward organ and tissue donation” and students completed surveys in large class groups and were given ample time to complete the survey instrument (approximately 20 minutes were required). Students read and were instructed orally about the purpose of the research and provided written informed consent about the research procedure. Students first completed a four-item scale of attitudes and intentions toward organ donation, hereafter this scale will be referred to as the attitudes measure. Kopfman et al. (1998) used a six-item scale and labeled their scale prior thoughts and intentions. After completing the attitude scale, students were asked to read one of three message vignettes: statistical, narrative, or actual. Students were asked to report any thoughts or emotions they may have while they read the message vignette or after they finished reading the message. Several lines were provided at the bottom of the vignette to allow students to report thoughts (Shapiro, 1994). After reading the first vignette students were asked to report their reactions to the vignette along three dimensions: (1) causal

relevance (five items), (2) message ratings (three items), and (3) anxiety (two items). These items are all scored on 5-point Likert scales with higher scores indicating a greater amount of any given factor.

Students were then asked to read a second vignette that was different in message proof from the first vignette (statistical, narrative, or actual). Thus, message proof was counterbalanced entirely and students were randomly chosen to be in one of six experimental conditions (statistical/narrative, statistical/actual, narrative/statistical, narrative/actual, actual/statistical, actual/narrative) based upon time order and message vignette. All measures completed after reading message vignette 1 were completed again after reading vignette 2. Students were then debriefed and thanked for their participation.

All reliability coefficients and 95% confidence intervals for each estimate (Fan & Thompson, 2001) are provided in Table 2. Cohen's kappa (Cohen, 1960) was used to verify intercoder agreement for student thoughts toward organ donation for each of the two vignettes. Each thought was coded for valence and negative thoughts toward donation were given a code of -1 , neutral thoughts were coded as 0 and positive thoughts were coded as $+1$. Intercoder agreement was found to be acceptable and kappa scores are reported in Table 2.

To investigate the effect of time order on students' reported reactions to organ and tissue donation messages a paired *t*-test was performed. Multivariate analysis of variance (MANOVA) was used to analyze the effect of message vignette (i.e., experimental condition) on dependent variables. Students' attitudes were used as a covariate in all MANOVAs (i.e., MANCOVAs were run). At time 1, message condition served as the independent measure with total thoughts, total positive thoughts, causal relevance, message ratings, and anxiety serving as the dependent measures

Table 2 Descriptive Statistics and Reliability Coefficients for Dependent Factors

Dependent factor	Reliability	<i>N</i>	Range	Mean	<i>SD</i>
Attitudes	.76 (.72, .80)	379	1.00–4.00	3.37	0.54
Causal relevance (T1)	.79 (.75, .82)	405	1.00–5.00	3.83	0.64
Causal relevance (T2)	.80 (.77, .83)	402	1.40–5.00	3.85	0.65
Message rating (T1)	.87 (.84, .89)	410	1.00–5.00	3.99	0.66
Message rating (T2)	.77 (.73, .81)	405	1.00–5.00	4.05	0.78
Total thoughts (T1)	.91	412	0.00–5.00	2.11	0.97
Total thoughts (T2)	.93	412	0.00–5.00	1.87	1.02
Total positive thoughts (T1)	.79	412	–3.00–3.00	0.72	1.18
Total positive thoughts (T2)	.85	412	–3.00–4.00	0.45	1.04
Anxiety (T1)	.67 (.60, .73)	402	1.00–5.00	2.33	0.91
Anxiety (T2)	.70 (.63, .75)	408	1.00–5.00	2.36	0.98

Note. Reliability on total thoughts and total positive thoughts computed using Cohen's kappa on sample of 96 cases with second and third authors serving as independent coders; reliability on all other factors is Cronbach's alpha (95% confidence interval).

while controlling for attitudes toward OTD. At time 2, an identical MANCOVA was performed with message condition in time 1 serving as a second independent factor. This was done to examine if messages in time 1 influenced student reactions during time 2.

Results

Descriptive Statistics

Table 2 provides all descriptive statistics for dependent measures and the covariate of attitudes. As expected from previous research (e.g., Feeley & Servoss, 2005; Morgan & Miller, 2002), student attitudes toward OTD were quite positive ($M = 3.37$ on 4-point scale, $SD = 0.54$). Students reported generally favorable ratings toward messages, rated messages as somewhat causally relevant, and reported little anxiety about OTD. Students reported approximately two thoughts about OTD after reading each message vignette and these thoughts were generally positive. Zero-order correlations for all study factors are reported in Table 3.

The Effects of Time Order and Message Condition

Students reading message vignette 1 reported more total thoughts ($t [411] = 4.41$, $p < .001$, $SE = .05$) and total positive thoughts ($t [411] = 3.80$, $p < .001$, $SE = .07$) compared to students reading message vignette 2, regardless of experimental condition. The effect of time order was not significant for anxiety, causal relevance, or message ratings. The current findings indicate students reported both more thoughts and more favorable thoughts toward OTD when reading the first message vignette and this finding provides an alternative explanation for the Kopfman et al. (1998) finding for total thoughts and the message proof condition (see Table 1).

The MANCOVA for time 1 was statistically significant for both attitude (Wilks' $\Lambda [5, 362] = 18.25$, $p < .001$, $\eta^2 = .20$) and message condition (Wilks' $\Lambda [10,$

Table 3 Zero-Order Correlation Matrix for Dependent Factors

Factor	ATTS	THTS	TPOS	CREL	ANX	MRAT
Attitudes (ATTS)	—	.03	.05	.39**	-.20**	.35**
Total thoughts (THTS)	-.03	—	.17**	.12*	.05	.10*
Total positive thoughts (TPOS)	.09	.25**	—	.23**	-.11*	.17**
Causal relevance (CREL)	.37**	.01	.22**	—	-.10*	.53**
Anxiety (ANX)	-.15**	.11*	-.05	-.07	—	-.18**
Message Ratings (MRAT)	.30**	.01	.21**	.59**	-.14**	—

Note. $N = 412$. Coefficients to right of diagonal are for time condition 1 and coefficients to left of diagonal are for time condition 2. All correlations are not attenuated for measurement error.

* $p < .05$. ** $p < .01$.

724] = 6.74, $p < .001$, $\eta^2 = .09$). Thus, both student attitudes and message condition significantly influenced reactions to messages. The univariate analyses reveal a significant pattern of results with respect to attitude and message condition (see Table 4). With respect to attitudes, students with higher attitudes toward organ and tissue donation reported more total thoughts, more positive thoughts, and less anxiety toward messages. Also for time 1, students reading a narrative message reported more positive thoughts, greater causal relevance, and higher message ratings compared to students reading the actual message, based upon Scheffé posthoc analysis of means. Students in the narrative message condition also reported more positive thoughts than students in the statistical message condition.

The pattern of results found in time 2 is almost identical to the pattern of results in time 1 with respect to attitudes and message condition. MANCOVA results were significant for attitudes (Wilks' Λ [5, 358] = 13.59, $p < .001$, $\eta^2 = .16$) and message proof condition (Wilks' Λ [10, 716] = 4.05, $p < .01$, $\eta^2 = .05$). Upon analysis of univariate effects, attitudes are significantly related to causal relevance, anxiety, and message ratings. Students reading narrative messages rated OTD messages as more positive, more relevant, and more effective (see Table 4). The message condition at time 1 did not have any univariate influence on message reactions during time 2, according to the MANCOVA results. Univariate F values and effect sizes for message condition are reported in Table 4. The covariate of student attitudes toward organ

Table 4 Univariate Effects of Message Condition on Student Reactions

Factor	Condition	Time 1			Time 2		
		M (SE)	F	η^2	M (SE)	F	η^2
Total thoughts	Narrative	2.17 (.09)	2.58	.02	1.84 (.09)	1.18	.01
	Statistical	2.20 (.09)			2.01 (.10)		
	Actual	1.94 (.09)			1.82 (.09)		
Positive thoughts	Narrative	1.31 ^a (.10)	24.8**	.12	0.58 ^a (.09)	5.1**	.03
	Statistical	0.48 ^b (.10)			0.60 (.09)		
	Actual	0.45 ^b (.10)			0.23 ^b (.10)		
Causal relevance	Narrative	3.91 ^a (.05)	2.16*	.04	4.00 ^a (.05)	13.9**	.07
	Statistical	3.86 (.05)			3.91 ^b (.06)		
	Actual	3.65 ^b (.05)			3.62 ^c (.05)		
Anxiety	Narrative	2.27 (.08)	0.58	.00	2.39 (.08)	0.94	.01
	Statistical	2.40 (.08)			2.27 (.08)		
	Actual	2.37 (.08)			2.44 (.08)		
Message ratings	Narrative	4.13 ^a (.05)	9.08**	.05	4.22 ^a (.07)	5.66**	.03
	Statistical	4.00 ^a (.05)			4.01 (.07)		
	Actual	3.80 ^b (.06)			3.91 ^b (.06)		

Note. Different row superscripts indicate significant (.05 alpha, Scheffé posthoc differences of means) differences between conditions; all analyses control for student preattitudes in MANCOVA.

* $p < .05$. ** $p < .01$.

donation had a significant effect on causal relevance (time 1, $F = 67.63$, $p < .01$, $\eta^2 = .16$; time 2, $F = 57.48$, $p < .01$, $\eta^2 = .14$) anxiety (time 1, $F = 16.47$, $p < .01$, $\eta^2 = .04$; time 2, $F = 9.66$, $p < .01$, $\eta^2 = .03$) and message ratings (time 1, $F = 19.32$, $p < .01$, $\eta^2 = .13$; time 2, $F = 33.78$, $p < .01$, $\eta^2 = .09$) at both points in time. Clearly, student preattitudes about OTD, despite their high values (i.e., ceiling effect) and small variance, are strong predictors of message reactions, particularly in the case of causal relevance and message ratings.

Discussion

The current study sought to replicate and extend the results of an experiment published in 1998 by Kopfman et al. by correcting a potentially confounding methodological artifact and also adding a third experimental condition that provides both narrative and statistical proofs. The results of the current study failed to replicate the previous study results, and also provide a plausible explanation for the Kopfman et al. findings with respect to reported thoughts and total positive thoughts about organ donation. Specifically, students reported more thoughts during/after reading the first message vignette than during/after reading a second vignette. It stands to follow that students' reported fewer positive thoughts at time 2 as number of positive thoughts is linearly related to total thoughts. *Thus, time order can be considered as an alternative explanation for the Kopfman et al. results that report more total thoughts toward OTD for students reading statistical messages versus students reading narrative messages.*

The current results failed to replicate the significant findings reported by Kopfman et al. (1998) that advantage statistical messages over narrative messages for message ratings and anxiety. It should be noted that time order did not independently influence these factors. *The current data failed to find a significant difference between narrative and statistical messages with respect to causal relevance, message ratings, and anxiety.* Although we did not propose a formal relation between narrative and statistical messages, our hunch was that narrative messages were more effective in eliciting reactions from students. Despite the present data and the observation that Kopfman et al. found evidence to the contrary, we are still unconvinced that narrative messages are not more effective than statistical messages in prompting more positive reactions in the form of message credibility and causal relevance. Obviously further empirical evidence on the matter is needed to lend more confidence to eliminate doubts.

Two factors, involvement and vividness, may need to be considered in future research on the forms of evidence appeals in organ donation research. It is unclear how involving and vivid it was to read pallid organ donation statistical and narrative messages to undergraduates in a research room or classroom. As most students report reliance on mass mediated channels such as television or the Internet to learn about organ donation or other health-related topics (cf. Feeley & Servoss, 2005; Rubens, 1996), it may be more realistic to use audio or audiovisual messages using narrative, statistical or perhaps combined forms of evidence in an experiment.

The most prominent results in the current study had to do with comparing narrative message appeals to actual message appeals. Students overwhelmingly rated

the actual message as less positive (in terms of thoughts), less relevant, and less effective when compared to the narrative message—and these findings were entirely robust across both the first and second message time conditions. The current study does not provide a direct comparison of combined narrative and statistical messages compared to control; the actual or control message employed in the current study used different information in the message vignette. One suggestion for the current differences between narrative and actual messages is the specific information in the actual vignette was somewhat controversial to students. That is, anecdotal evidence from student comments indicates they were concerned about the donor, Harold S. Mintz, indicating his kidney could only be donated to a “low-income African-American” (Strom, 2003, p. D3).

The vignette depicted in the actual condition was taken directly from a news article published in *The New York Times* in 2003 (Strom). This article is somewhat representative of news articles on the topic as a whole that typically print posthumous donor stories combining both anecdotal and statistical information. Many of the stories also chronicle living kidney and liver donation stories as well. The news stories, it should be noted, are not published necessarily to persuade readers to become donors or to change their attitudes toward donation; instead these stories tell human-interest stories of tragedy for the donor and/or compassion on the part of the individual charged with the consent decision.

A shortcoming of the current study is its failure to measure the persuasive or potentially persuasive impact of the short message vignettes on students' attitudes, intentions, or plans to become an organ donor. While it is recognized that these types of studies are often best done in longitudinal fashion (e.g., “Did s/he eventually talk to next-of-kin about donation?”), it might have been useful to measure attitudes toward donation after reading the vignettes. Our decision not to measure attitudes at time 2 was twofold: first, students completed attitude measures some 10–15 minutes earlier and demand effects (Campbell & Stanley, 1963) may have been present, and second, earlier research indicates a ceiling effect with student attitudes toward donation and clearly our data ($M = 3.37/4.00$, $SD = 0.55$) corroborated this contention. Future research in evidence forms could teach us much about the role of persuasive evidence forms in shaping attitudes and behavior regarding organ donation. Research in social psychology (Fazio & Zanna, 1981) indicates that the attitude-behavior relationship is strengthened when the individual finds the topic to be personally involving (dubbed hedonistic relevance) or, using Kopfman et al.'s (1998) terminology, causally relevant. Thus, finding persuasive message forms that pique individuals' interest or personal involvement in the topic would be a promising line of inquiry. The current study did not indicate that the narrative vignette is more effective than the statistical vignette in raising causal relevance—Kopfman et al. did find narrative messages to be rated as less causally relevant and the effect size, despite low power, was not unsubstantial ($r = .21$).

A final note is warranted about the value of replication research in the communication field. It is our contention that multiple-study articles, especially when experimental or quasi-experimental designs are used, should be the norm in communication

not the exception. When you consider the possibility of experiment-wise error and complex, multivariate designs, it is imperative to see evidence of an effect in multiple studies under similar or, perhaps importantly, dissimilar contexts. Replication should be considered a form of flattery, not a criticism of one's research. Moreover, replication is long-heralded as a necessary component of social science (Woelfel, 1992) and the field could benefit from more replication and extension studies.

References

- Allen, M., & Preiss, R. (1993). Replication and meta-analysis: A necessary condition. In J. W. Neuliep (Ed.), Replication research in the social sciences [Special Issue]. *Journal of Social Behavior and Personality*, 8(6), 9–20.
- Allen, M., & Preiss, R. W. (1997). Comparing the persuasiveness of narrative and statistical evidence using meta-analysis. *Communication Research Reports*, 14, 125–131.
- Campbell, D. T., & Stanley, J. C. (1963). *Experimental and quasi-experimental designs for research*. Dallas, TX: Houghton Mifflin Co.
- Chaiken, S. (1987). The heuristic model of persuasion. In M. P. Zanna, J. M. Olson, & C. P. Herman (Eds.), *Social influence: The ontario symposium* (pp. 3–39). Hillsdale, NJ: Erlbaum.
- Cialdini, R. B. (1991). *Influence*. New York: Quill.
- Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement*, 10(1), 37–46.
- Cosse, T., & Weinberger, T. (2000). Words versus actions about organ donation: A four-year tracking study of attitudes and self-reported behaviors. *Journal of Business Research*, 50, 297–303.
- Fan, X., & Thompson, B. (2001). Confidence intervals about score reliability coefficients, please: An EPM guidelines editorial. *Educational and Psychological Measurement*, 61, 517–531.
- Fazio, R. H., & Zanna, M. P. (1981). Direct experience and attitude-behavior consistency. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 14). New York: Academic Press.
- Feeley, T. H. (in press). How organ and tissue donation is represented in newspaper stories in the United States. *Health Communication*.
- Feeley, T. H., & Servoss, T. J. (2005). Examining college students' intentions to become organ donors. *Journal of Health Communication*, 10, 237–250.
- Horton, R. L., & Horton, R. L. (1991). Knowledge regarding organ donation: Identifying and overcoming barriers to organ donation. *Social Science in Medicine*, 31, 791–800.
- Kopffman, J. E., Smith, S. K., Ah Yun, J., & Hodges, A. (1998). Affective and cognitive reactions to narrative versus statistical organ donation messages. *Journal of Applied Communication Research*, 26, 279–300.
- Morgan, S. E., & Miller, J. (2002). Communicating about the gifts of life: The effect of knowledge, attitudes, and altruism on behavior and behavioral intentions regarding organ donation. *Journal of Applied Communication Research*, 30, 163–178.
- Morgan, S. E., Miller, J., & Arasaratnam, L. A. (2002). Signing cards, saving lives: An evaluation of the worksite organ donation promotion project. *Communication Monographs*, 69, 253–273.
- Neuliep, J. W., & Crandal, R. (1993). Reviewer bias against replication research. In J. W. Neuliep (Ed.), Replication research in the social sciences [Special Issue]. *Journal of Social Behavior and Personality*, 8(6), 21–29.
- O'Keefe, D. J., & Hale, S. L. (1998). The door-in-the-face influence strategy: A random-effects meta-analytic review. In M. E. Roloff (Ed.), *Communication Yearbook* 21, 1–33.
- Petty, R. E., & Cacioppo, J. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change*. New York: Springer-Verlag.

- Rubens, A. J. (1996). Racial and ethnic differences in students' attitudes and behavior toward organ donation. *Journal of National Medical Association, 88*, 417–421.
- Saub, E. J., Shapiro, J., & Radecki, S. (1997). Do patients want to talk to their physicians about organ donation? Attitudes and knowledge about organ donation: A study of Orange County, California residents. *Journal of Community Health, 23*, 407–417.
- Shapiro, M. A. (1994). Think-aloud and thought-list procedures in investigating mental processes. In A. Lang (Ed.), *Measuring Psychological Responses to Media* (pp. 1–14). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Strom, S. (2003, July 27). Giving of yourself, literally, to people you've never met. *The New York Times*, D3.
- Taylor, S. E., & Thompson, S. C. (1982). Stalking the elusive "vividness" effect. *Psychological Review, 89*, 155–181.
- Woelfel, J. (1992). *Communication and science*. New York: McGraw-Hill.

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