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Abstract
This article examines whether drawing attention to specific parts of appeals for prosocial behavior (i.e., “message splitting”) can increase their effectiveness. Results of four experiments support this idea. Using attention-grabbing cues to guide attention toward the benefits of compliance and away from the costs increased message recipients’ willingness to donate cans of food to a community food drive (Experiment 1), volunteer time to help improve the environment (Experiments 2 and 3) and volunteer time to help further scientific inquiry (Experiment 4). Results of Experiment 4 underscore the proposed mechanism by showing that this message splitting technique reduces, rather than increases, compliance when used to direct attention toward the costs of compliance. Implications for research on information processing, helping behavior, and influence are discussed.

Disciplines
Advertising and Promotion Management | Business | Graphic Communications | Marketing | Mass Communication | Social Influence and Political Communication

Comments
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Message Splitting:
Using Attention-Grabbing Material to Increase Prosocial Behavior

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This article examines whether drawing attention to specific parts of appeals for prosocial behavior (i.e., “message splitting”) can increase their effectiveness. Results of four experiments support this idea. Using attention-grabbing cues to guide attention toward the benefits of compliance and away from the costs increased message recipients’ willingness to donate cans of food to a community food drive (Experiment 1), volunteer time to help improve the environment (Experiments 2 and 3) and volunteer time to help further scientific inquiry (Experiment 4). Results of Experiment 4 underscore the proposed mechanism by showing that this message splitting technique reduces, rather than increases, compliance when used to direct attention toward the costs of compliance. Implications for research on information processing, helping behavior, and influence are discussed.
Getting people to engage in prosocial behaviors such as donating food, improving the environment, or cleaning up after a natural disaster is important but difficult (Ariely, Bracha, & Meier, 2009; Cialdini & Goldstein, 2004; Goldstein, Cialdini, & Griskevicius, 2008). While there are many reasons for this difficulty, one especially persistent challenge is that appeals for prosocial behavior contain not only potential benefits (e.g., opportunities to experience the intrinsic satisfaction of helping others or signal one’s social worth through altruistic acts; Ariely et al., 2009; Mowen & Cialdini, 1980; Nelson & Norton, 2005) but also costs (e.g., the time, effort, or money required; Groves, Cialdini, & Couper, 1992). Thus, the requester is faced with the conundrum of whether to increase or decrease attention to the overall message.

To illustrate, consider the case of would-be blood donors. When people are asked to donate blood, they are presented with an opportunity to feel good about helping others (a potential benefit), but also the costs of donating blood in the forms of time, effort, and pain. Consequently, while one might try to maximize compliance by increasing attention paid to the content in the message (e.g., Burnkrant & Unnava, 1989), doing so will not only elevate the salience of the benefits, but also the costs. Likewise, trying to minimize the impact of the costs by reducing processing of the overall message will not only decrease awareness of the costs but also the benefits (e.g., Petty Wells, & Brock, 1976). How might this challenge be overcome?

MESSAGE SPLITTING

We suggest that a rhetorical tool called amplification, highlighted by Aristotle and other masters of rhetoric, points to a potential solution. Amplification refers to a process whereby one increases the impact of a key point or argument in a speech or piece of writing, typically by
exaggerating or repeating the relevant content (O’Gorman, 2005). Along these lines, we propose that attention-grabbing content can be used to selectively amplify the impact of beneficial content in persuasive appeals for prosocial action.

A wealth of research has demonstrated that exposure to self-relevant material, such as one’s own name, leads to a spike in attention and subsequently increases the processing of material that follows (e.g., Bargh, 1982; Cherry, 1953; Moray, 1959; Wolford & Morrison, 1980; Wood & Cowan, 1995). Research on the cocktail party effect, for example, shows that people suddenly pay more attention to content or tasks when they hear their names mentioned and, likewise, reduce the degree to which they attend to other available content or tasks (e.g., Cherry, 1953; Wood & Cowan, 1995). Neuroscientists have bolstered this research, confirming that people experience a boost of attention-related neurological activity when they read or hear self-relevant material (Gray, Ambady, Lowenthal, & Deldin, 2004; Perrin et al., 2005; Laureys et al., 2004).

Building on these ideas, we propose a novel influence process to increase compliance to requests for prosocial behavior. If strategically placed, attention-grabbing content (e.g., self-relevant material such as a person’s name) should be able to selectively alter the impact different content embedded in a single message (i.e., benefits as opposed to costs). To return to the example of blood donation, drawing attention to the opportunity to help or be seen as helpful, and away from the time and pain required, should increase compliance because it increases the impact of the beneficial content of the appeal. We refer to this process as message splitting because it involves splitting the message into two parts that differ in their impact on the target.

Four experiments test this idea. Experiment 1 was conducted in the field and examined whether message splitting could increase food drive donations. Experiment 2 used a non-face-to-
face setting to test whether message splitting could increase requests to help improve the environment. Experiment 3 was also conducted in the field and more directly tested the role of message splitting in the effects. Finally, experiment 4 looked for further evidence of the role of attention in these effects by testing whether message splitting can also decrease compliance depending on what parts of a message it draws attention to.

PRETEST

Before discussing the main experiments, we first wanted to ensure that our distinction between beneficial and costly content would be interpreted as such. To test how costly and beneficial people view helping others, as well as donating time and money, we asked 26 students to indicate how costly (1 = not at all; 5 = very) and beneficial (1 = not at all; 5 = very) it would be for them to engage in four activities. Two items assessed helping (i.e., helping other people; assisting a specific person who asks for help) and two assessed the giving of tangible resources (i.e., giving one’s time or money; voluntarily completing a survey).

As expected, participants reported that they would benefit more from helping people (M = 3.85) or helping a specific person (M = 3.73) than from giving time/money (M = 2.54) or voluntarily completing a survey (M = 1.92; ts > 4.38, ps < .001). Similarly, they reported that giving their time/money (M = 3.42) or voluntarily completing a survey (M = 2.77) would be more costly than helping people (M = 2.08) or helping an individual (M = 1.96; ts > 2.96, ps < .008). Taken together, these results indicate that helping others is seen as more beneficial to the self while giving up time and resources is more costly. Thus, to the degree that one can focus
attention on the aspect of the appeal that highlights the opportunity to be helpful, one should obtain greater compliance.

**EXPERIMENT 1: COMMUNITY FOOD DRIVE**

Our first experiment tested whether using message splitting could increase canned food donations in the field. We appealed to residents to donate food, and based on the pilot data, used targets’ names to draw attention to the benefits of compliance (i.e., demonstrating helpfulness) but not the costs (i.e., retrieving and donating cans of food). We hypothesized that drawing attention to the opportunity to help—and/or the opportunity to be seen as helpful—would increase compliance because it would increase the impact of the beneficial content of the appeal.

**Method**

Research assistants, unaware of the study’s hypotheses, went door-to-door in a local community, asking people \( N = 30 \) to donate canned food. Each of the research assistants alternated between two scripts. In all cases, they introduced themselves, asked for the person’s name (ensuring a level of familiarity across conditions), and requested a donation. The only difference between conditions was whether they used self-relevant material to split the appeal for donations. In the message splitting condition, the requester used the respondent’s name directly before the beneficial content (i.e., the opportunity to signal helpfulness). The control [message-splitting] scripts were as follows:
Hey there, I’m (research assistant’s name) what’s your name? (Participant replies).

Okay, cool. I’m part of Give-Me-5-for-Charity, a group from University XX that is asking people to donate 5 cans of food to charity. [Participant’s name] would you be willing to help me out?

Our key dependent variables were whether participants agreed to donate food and the number of cans they donated. Participants were then thanked for their time (and donations), and all collected food was donated to a local food bank.

In addition, to test alternative accounts other than message splitting, we measured mood and liking toward the requester, both of which have been shown to affect compliance (e.g., Carlson, Charlin, & Miller, 1988; Cialdini, 2009; George, 1991; Groves et al., 1992).

Results

As predicted, message splitting increased food donation. While only 31% of participants donated food in the control condition, compliance increased to 79% in the message splitting condition ($\chi^2(1) = 6.72, p = .01$). Message splitting also led people to donate more cans of food ($M = 3.64$) relative to the control condition ($M = 1.50$; $t(28) = 2.22, p = .035$).

As noted, we also measured mood and liking to help test possible alternative accounts. We asked participants to complete an anonymous, 5-question survey after they had responded to the food request (ostensibly to evaluate the requester). It included three mood items (e.g., Not happy-Happy) and two liking items (e.g., “How much do you like the person who gave you this survey?”), all measured on 7-point scales. Casting doubt on these as explanatory factors,
however, there was no effect of experimental condition on either participants’ mood ($t < 1, p > .40$), or how much they liked the requestor ($t < 1, p > .40$).

Discussion

Experiment 1 provides initial support for our message splitting hypothesis. Using participants’ names just after articulating the cost (i.e., cans of food) and directly before the benefit (i.e., the opportunity to be helpful) more than doubled the rate of compliance to a prosocial request. Additionally, name usage did not affect reported mood or liking toward the requester, casting doubt on the notion that these potential alternatives mechanisms drove the observed effect.

**EXPERIMENT 2: HELPING TO IMPROVE THE ENVIRONMENT**

While the results of Experiment 1 are consistent with our theory, one could argue that message splitting only increased compliance because of the face-to-face setting. Perhaps having a person use one’s name made the requester seem more familiar. Alternatively, maybe hearing one’s name used in a face-to-face setting made it so the target could not comfortably say no. To rule out these possibilities, Experiment 2 used a non-face-to-face setting. The study was conducted entirely online and an automated computer voice made the appeal. As in Experiment 1, the beneficial content involved the opportunity to be helpful and/or signal helpfulness. The cost came in the form of time (i.e., uncompensated participation in a survey).

Method
University students and staff members ($N = 47$) were recruited via email to participate in an online study in exchange for $5. First, participants entered demographic information, including their first names. Next, they completed a set of filler tasks. After they believed the study had been completed, they were asked for additional—but uncompensated—help via an electronic voice. In the control condition, participants were merely presented with the cost and benefit associated with the request. In the message splitting condition, however, the participant’s first name was automatically inserted into the script, directly before the benefit. The control [message splitting] scripts were as follows:

That completes the study. We do, however, have one additional request. We are helping to recruit people for a study on recycling. The study is unpaid and will take about 10 minutes to complete. [Participant’s name] by participating, you might help to make a small improvement in the environment.

Our key dependent variable was whether participants agreed to complete this additional unpaid survey. We also further tested whether mood could explain the results by asking participants to indicate their present mood (1 = Not happy; 7 = Very happy).
Results

As predicted, message splitting again increased compliance. While only 21% of participants in the control condition agreed to complete the survey, compliance increased to 70% in the message-splitting condition ($\chi^2(1) = 11.28, p = .001$).

Further, as in Experiment 1, there was no effect of name usage on mood. Participants in the message splitting condition ($M = 4.35$) did not report feeling happier than those in the control condition ($M = 4.71, t = 1, p > .30$).

Discussion

Experiment 2 provides further evidence that message splitting can be used to boost compliance. Using participants’ names just after articulating the cost (i.e., time) and directly before articulating the benefit (i.e., the opportunity to be helpful) greatly increased the number of people who agreed to help. In addition, by illustrating that this strategy was effective even in a computer mediated environment, the findings cast doubt on the notion that the effect is due to a more personalized state created by a face-to-face encounter. Finally, as in Experiment 1, ancillary results cast doubt on mood as a possible alternative mechanism.

The results so far have addressed a number of alternative explanations, but it is possible that merely using a person’s name anywhere in a request could boost compliance. Remembering someone’s name can be seen as a compliment and may also increase persuasion via flattery (Howard, Jengler, & Jain, 1995). Similarly, simply hearing one’s name could increase self-enhancement and/or assimilative social comparison processes (Mussweiler, 2003), leading to
increased helping. To address these possibilities, Experiment 3 examined whether *where* someone’s name is used in the message impacts compliance.

**EXPERIMENT 3: RECYCLING**

Experiment 3 further tests our message splitting account by manipulating *where* in the script respondents’ names were used. In addition to control and message-splitting conditions (as in Experiments 1 and 2), we included an additional control condition where the name was used but did not split the message. If the previously observed effects were merely driven by name usage, then compliance should increase regardless of where in the message the name is used. However, if they were driven by message splitting, as we suggest, then compliance should increase only when names are used to split the message (i.e., after the cost and directly before beneficial content of the appeal).

**Method**

Research assistants unaware of the study’s hypotheses went door-to-door in a university dormitory. They knocked on doors and asked one-hundred and thirty-eight undergraduates to complete a lengthy 20 minute recycling survey. The survey was ostensibly being conducted by the school’s recycling club who was interested in collecting information about students’ attitudes towards recycling. Thus as with the prior studies, the benefit to saying yes would be feeling good about oneself or signaling helpfulness, but the cost would be the time necessary to complete the survey.
The scripts in the different conditions were as follows:

<table>
<thead>
<tr>
<th>Control Condition</th>
<th>Name-Elsewhere Condition</th>
<th>Message-Splitting Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>I’m doing a 20-minute survey about recycling. Would you be willing to help me out?”</td>
<td>Participant’s name, I’m doing a 20-minute survey about recycling. Would you be willing to help me out?”</td>
<td>I’m doing a 20-minute survey about recycling. Participant’s name, would you be willing to help me out?”</td>
</tr>
</tbody>
</table>

Similar to the first two experiments, our key dependent variable was whether or not participants complied with the request (i.e., agreed to complete the survey).

Results

As predicted, message splitting again increased helping ($\chi^2(2) = 7.71, p = .02$). Specifically, while only 38% of participants agreed to volunteer in the control condition, helping increased to 63% in the message-splitting condition ($\chi^2(1) = 5.70, p = .02$). Further, consistent with our prediction, using names to split the message also boosted compliance relative to using the name elsewhere in the script (38%; $\chi^2(1) = 5.81, p = .02$).

Discussion

Results of Experiment 3 bolster our message splitting account. Using names to split a message increased compliance, both relative to a control condition and relative to a condition in
which the name was used elsewhere in the message, ruling out a mere flattery or general self-awareness account for the results.

**EXPERIMENT 4: ADVANCING SCIENCE**

Our final study had two goals. First, while the first three studies illustrated that self-relevant information can be used to split messages and boost compliance, message splitting should not be limited to the use of self-relevant information. Any phrase or interjection could potentially be used to amplify the beneficial content embedded in prosocial messages as long as it grabs attention. Consequently, to examine the generalizability of the effects, Experiment 4 investigates whether the effects observed so far extend to other types of attention-grabbing material.

Second, we sought to provide further evidence for the proposed attention-based mechanism. The studies so far illustrate that placing attention grabbing material after the costly content in the message and before the benefit increased compliance. But if message splitting works the way we propose, then it should also be possible to reverse the effect. Message splitting should not only be able to increase compliance but also decrease it, depending on whether it draws attention to the cost or the benefits associated with the message. In other words, if message splitting works by increasing attention to (and, therefore, impact of) the various parts of an influence appeal, then its impact should be reversed (and compliance decreased) if attention grabbing content is placed right before content articulating the cost and after content articulating the benefit.
Method

Participants ($N = 86$) were recruited through an online database and completed a set of filler tasks framed as a study in return for a $5$ online gift card. They were randomly assigned to condition in a 2 (Message Splitting: split vs. not split) x 2 (Content Order: cost presented first vs. reversed order) between subjects design.

After participants believed they had completed the study, they were taken to a final page which made a written request for volunteering additional—but uncompensated—time. The benefit was the chance to demonstrate helpfulness whereas the cost was time (i.e., 45 minutes). To show that message splitting is not restricted to self-relevant information, we used the phrase, “But this is important to note,” in the message splitting conditions before the content we wanted to highlight. The reversed order conditions used the same text but reversed the order of the cost and benefit information such that in the message splitting condition, the cost followed the inserted text and the benefits preceded it. The scripts were as follows:

Cost first control (message splitting) condition.

This completes the study. We do, however, have one request. We are recruiting people to volunteer for an attitudes study (to take place next week). The study is unpaid and will take about 45 minutes to complete. (But this is important to note --) By participating, you will demonstrate helpfulness and will assist in advancing knowledge about human behavior.
Reversed order control (message splitting) condition.

This completes the study. We do, however, have one request. We are recruiting people to volunteer for an attitudes study (to take place next week). By participating, you will demonstrate helpfulness and will assist in advancing knowledge about human behavior. (But this is important to note --) The study is unpaid and will take about 45 minutes to complete.

Our dependent variable was whether or not participants agreed to complete the 45-minute, uncompensated survey.

Results

A logistic regression examined compliance based on message splitting, content order, and their interaction. Main effects of both content order ($b = 1.79, SE = 0.64, p = .005$) and message splitting ($b = 1.23, SE = 0.64, p = .06$) were qualified by the predicted content order x message splitting interaction ($b = -3.10, SE = 0.94, p = .001$).

Specifically, consistent with the effects observed in the first three studies, when the attention grabbing material came after the costs and before the benefit, it increased compliance from 33% to 63% ($\chi^2(1) = 3.79, p = .05$). In contrast, however, when the attention grabbing material was placed in a way that should draw attention to the cost (i.e., after the benefit and before the cost), it had the opposite effect. Message splitting actually reduced compliance from 75% to 32% ($\chi^2(1) = 8.11, p = .005$). Put another way, the message splitting manipulation amplified the impact of whatever followed it in the appeal.
Discussion

Results of Experiment 4 generalize the findings of the prior studies while providing more direct evidence of the mechanism behind the effect. First, they demonstrate that the effectiveness of message splitting extends beyond the use of names and self-relevant information. Here, using the phrase “this is important” was enough to amplify the effects of whatever content followed that attention-grabbing phrase. The fact that the effects of message splitting extend beyond self-relevant content also casts doubt on simpler accounts based solely on name usage (e.g., mood, flattery, liking, personalization). Second, they underscore the role of shifting attention in driving these effects by demonstrating that message splitting either increased or decreased compliance, depending on what information followed the attention-grabbing stimulus.

GENERAL DISCUSSION

In this article, we propose a new approach to framing and delivering social influence appeals that can help to increase recipients’ willingness to engage in prosocial action. Information processing research has long recognized that different persuasive messages may receive differing levels of attention (and impact). However, rather than attempting to increase or decrease processing of an entire message, we suggest that analogous effects can occur even within messages. Specifically, we suggest that it is possible to increase the attention devoted to, and thus impact of particular portions of content delivered in a persuasive appeal.

Four experiments supported our predictions, demonstrating that message splitting can be used increase compliance to prosocial requests. Using attention-grabbing material to focus
attention on the beneficial part of an appeal, and away from the costs, led more people to donate to a food drive (Experiment 1), volunteer time to improve the environment (Experiments 2 and 3), and volunteer time to help further scientific knowledge (Experiment 4). These effects were obtained using self-relevant stimuli (i.e., participants’ names; Experiments 1-3) as well as an attention soliciting phrase (Experiment 4).

Our findings also cast doubt on a variety of alternative accounts for increased compliance, including liking (Experiment 1), mood (Experiments 1 and 2), and personalization (Experiments 2 and 3). Experiment 4 also offers further evidence of an attention-based mechanism, showing that message splitting increases compliance when attention-grabbing stimuli are used to amplify the beneficial content in an appeal but decreases compliance when used to amplify costly content. Of course, our studies do not imply that these alternative mechanisms have no impact on prosocial behavior; rather, they alone have trouble explaining the full set of present findings observed. Finally, the fact that message splitting changed actual behavior in the field (and online) underscores the utility of this approach for social change.

Implications and Future Directions

The present findings offer a fresh approach to research on persuasion and social influence. While past work has emphasized the use of strategies drawing on various factors such as obedience to authority, adherence to norms, and self-enhancement motives (for a review, see Cialdini & Goldstein, 2004), these results underscore the idea that directing attention is also a useful and effective strategy.
Future work might examine what types of content most effectively split messages. In group settings, for example, using the group’s name may be effective. Emotion-laden words or interjections may also help focus attention. President Obama, for example, often says “look” before making a point he wants to amplify. Future research could also examine how message splitting may be used in longer appeals (e.g., public speeches), as well as whether these effects apply to any persuasive appeal (prosocial or not) so long as there is beneficial content in the appeal.

Our findings also have a number of important practical implications for those interested in motivating prosocial behavior. Environmental advocates, for example, could use self-relevant material or other attention-grabbing content to highlight opportunities to both be and be seen as helpful in their appeals. In addition, social movements presently rely heavily on email and internet-based campaigns. Our studies—in particular Experiments 2 and 4—demonstrate the value of using names or other attention-grabbing content to split such web based appeals, focusing readers’ attention on the closing appeal for help. Individuals advocating other forms of prosocial behavior, such as voluntarily offering time or resources to schools or nonprofit organizations could also use message splitting to increase the effectiveness of their appeals for assistance.

In conclusion, this research integrates past findings on prosocial behavior, attention-soliciting material, and information processing to provide a theoretically novel contribution to the influence and persuasion literatures. We hope the findings will draw attention to the importance of how prosocial appeals are structured as well as encourage future integrative work on the psychological determinants of prosocial behavior more generally.
REFERENCES


“Neural mechanisms involved in the detection of our first name: A combined ERPs and PET study,” *Neuropsychologia*, 43, 12-19.

