

## The Desire to Help and Behavior in Social Dilemmas: Exploring Responses to Catastrophes

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The desire to help can exercise a powerful influence on behavior, leading to greater helping in a variety of settings. This research explored people's desire to help in 2 naturally occurring community traumas. Study 1 revealed that this desire led to greater contributions in settings in which people normally loaf. Specifically, participants making unidentifiable contributions exerted greater effort when they believed their contributions would benefit soldiers fighting in the Persian Gulf War. Study 2 revealed greater contributions to a public radio fund drive immediately following the Loma Linda earthquake in California. Ironically, contributions to the radio station increased, even though the station was in Boston and the earthquake victims in California would not benefit from the contributions to the station.

A social dilemma consists of any situation in which the choice or behavior that is best for the individual results in undesirable consequences for the group or society should all members behave similarly (Dawes, 1980). The dependence of public radio on voluntary contributions from listeners makes it a classic example of a social dilemma. As with other social dilemmas, the typical listener to public radio faces a conflict between selfish interests and the interests of the collective. Although it is in the best interest of the individual listener to withhold personal contributions from the radio station, thereby listening to the radio programming at the expense of others, it would be disastrous for the radio station and for these individuals if all listeners behaved similarly. Public radio stations cannot survive without contributions from listeners. Moreover, social dilemmas are not just an issue for public radio or television stations but extend to community traumas such as war, famine, or disaster, in which victims re-

quire assistance from other members of the community.

Researchers investigating social dilemmas typically have focused on the problem of over-taxing some finite public resource such as a stream or the problem of providing some public good such as public television or radio. However, several theorists have noted that group settings in which researchers often find social loafing can also be characterized as a type of social dilemma (Kerr, 1983, 1986; Shepperd, 1993; Stroebe & Frey, 1982). *Social loafing* refers to the reduction in effort and performance when the efforts of people are pooled to produce a collective product than when people's efforts are considered individually. Although effort, rather than some other commodity, is crucial to realizing the public good or desired outcome in these groups, the circumstances are similar to those found in traditional social dilemmas in that it is in the best interests of members to withhold contributions from the group. This similarity is illustrated in a study by Latané, Williams, and Harkins (1979). Participants acting alone on some trials, and in groups on other trials, received instructions to shout and clap as loudly as they could. If everyone shouted and clapped as loud as he or she could, the group performance would be better. Thus, the group stood to benefit (in terms of a better performance) if all members worked hard. However, there is a cost associated with shouting and

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clapping. Shouting and clapping are tiring tasks, requiring participants to expend considerable energy. In addition, when working as part of a group, particularly a large group, people often feel that their individual efforts have little effect on the group's performance. Latané et al. found that the participants shouted and clapped louder when acting individually than when acting as part of a group.

Kerr (1983, 1986) noted that groups often share two characteristics with traditional social dilemmas that can undermine motivation and contributing. First, achievement of the goal is often overdetermined. Groups typically have more than adequate numbers to achieve the group goal, making personal efforts seem unnecessary or dispensable. The result is that group members often reduce or withhold contributions because they know the group goal will likely be achieved without their contributions. This *free-riding* can be thought of as a subtype of social loafing. Thus, following a community trauma, people may not bother with helping because they perceive their contributions as unnecessary or inconsequential. Second, group members who work hard run the risk that others will free-ride on their efforts, enjoying the group's achievements without contributing equitably. The potential inequity in contributions can prompt group members to withhold efforts in groups as a means of restoring equity and avoiding being a "sucker" to others' free-riding.

The literature on social loafing provides a solution to social dilemmas that draws from expectancy-value theory (Karau & Williams, 1993; Shepperd, in press). According to expectancy-value theory, people engage in goal-directed behavior provided three conditions are met (Porter & Lawler, 1968; Vroom, 1964). First, they must perceive a contingency between their behavior and their performance (*high effort expectancy*). Second, they must perceive a contingency between their performance and the outcome (*high performance expectancy*). Third, they must value the outcome, and the value must exceed any costs associated with devoting resources toward the outcome (*high value expectancy*). According to expectancy-value theory, people will uphold the public good (e.g., contribute to a radio station) or engage in other prosocial behavior (e.g., donate blood or volun-

teer to help others following a disaster) provided they believe their efforts will result in a meaningful contribution, their contribution will have an impact on the status of the public good, and they value the public good.

In the present research, I focused on the value component, which functions as an incentive to work toward the public good. Research on social loafing reveals that people generally work hard when individual efforts are identifiable because efforts can be evaluated and people cannot hide in the crowd (Harkins & Szymanski, 1988; Szymanski & Harkins, 1987). However, people will work hard when efforts cannot be evaluated, provided a valued incentive is attached to a good group performance (Shepperd, 1993). For example, in one study, participants working on a collective task believed their efforts could or could not be evaluated. In addition, some participants were offered an incentive for good group performance (leaving the experiment early, thus avoiding a tedious subsequent task), whereas others were not offered this option. When no incentive was offered, participants exerted high effort only when individual contributions could be evaluated. By contrast, when an incentive was offered, participants exerted high effort regardless of whether individual contributions could or could not be evaluated (Shepperd & Wright, 1989).

The research just described explored whether group members would contribute more when offered a direct incentive for a good group performance. In the present research, participants were offered no personal, tangible incentive for contributing. Instead, the incentive was an opportunity to help others. The only personal benefit for contributing was indirect and involved satisfaction with having contributed to a good cause. Specifically, two studies explored the value that people attach to helping in response to a community cause or disaster and examined whether the desire to help can serve as a means of solving social dilemmas. Whether arising from personal distress, patriotism, duty, social role, or some other source, the desire to help can have a powerful effect on behavior, leading to greater helping in a variety of settings (Batson, 1991). One need look no further than the bombing of the federal building in Oklahoma City to find the effect of the desire to help on behavior. News reports indicated that on the days after

the bombing, local blood centers were overwhelmed by thousands of people volunteering to donate blood in an attempt to do something—anything—to help the victims. The desire to help serves to increase the value of contributing to the public good, often overriding any costs that might be associated with contributing.

The goal of this research was to examine whether the desire or motivation to help can function as a solution to social dilemmas that counter the common tendency to withhold contributions to a public good. As such, this research provides a test of the generality of expectancy-value theory to contributing in social dilemmas in which the central value comes from others or the community benefiting rather than oneself. According to expectancy-value theory—provided, of course, that effort and performance expectancy are already high—people should contribute more when they place a high value on the outcome or their contributions than when the value is low.

This research focuses on how individuals respond to a community event or trauma. Moreover, the research focuses on social dilemmas that involved providing for a public good rather than on overtaxing a finite public resource because the former is implicated more directly following a community trauma. That is, following a trauma such as a war or earthquake, the dilemma facing a community is how to mobilize contributions rather than curbing exploitation of a common resource.

In Study 1, I used a variation on the standard social loafing paradigm to examine whether the knowledge that personal contributions would help others would, in turn, lead people working collectively to contribute more, even though personal contributions could not be evaluated. Study 2 was a field study that examined contributions following a community disaster and explored whether people who are aroused by another person's distress will provide help for a second, unrelated target that was not the original source of the arousal and the motivation to help.

### Study 1

Participants working on a collective gum-wrapping task believed that the gum they individually wrapped would or would not be

counted by the experimenter prior to being pooled with gum wrapped by others. In addition, participants believed that the gum they wrapped would either be sent to soldiers serving in the Persian Gulf War (*the incentive condition*) or be discarded (*the no-incentive condition*). When no incentive was offered, I predicted that participants would exert high effort only when individual contributions could be evaluated. By contrast, when an incentive was offered, I predicted that participants would exert high effort, regardless of whether individual contributions could or could not be evaluated.

### Method

*Participants.* Participants (17 women and 23 men) were tested in sessions of 1 to 5 individuals and were randomly assigned to conditions in a 2 (evaluation vs. no evaluation)  $\times$  2 (incentive vs. no incentive) between-subjects factorial design. Data from 2 male participants were eliminated: 1 failed to complete the post-task questionnaire, and 1 reported during the debriefing that he did not understand the instructions. All participants were tested between February 18 and March 21 of 1991, a time corresponding to the United States' bombing of Iraq and Kuwait.

*Procedure.* A female experimenter explained that the experiment examined thoughts and feelings that people have after performing a mundane motor task (wrapping pieces of hard, cylindrical bubble gum). Participants learned that their goal was to wrap as much gum as they could in 10 min. After a brief overview, they were escorted to a lavatory to wash their hands, and were then seated in individual cubicles where they received individual instructions. On the table in each cubicle was a stack of 2 in.  $\times$  3 in. foil wrappers, a bowl filled with bubble gum, and either a box or an additional empty bowl. The cubicles were completely enclosed, making it impossible for participants to monitor one another.

Participants believed that the gum they wrapped would or would not be evaluated at the end of the experiment. *Evaluation* participants were told to place the gum they wrapped in a bowl sitting on the table and believed that the gum they wrapped would be counted before being combined with gum wrapped by other

participants. *No-evaluation* participants were instructed to place the gum they wrapped in a box sitting on the table. On the box was a lid with a slit through which participants were to place the gum they wrapped. The box was partially filled with what appeared to be gum wrapped by participants from previous sessions. In truth, 50 wrapped marbles were placed in the box, enabling the experimenter to calculate how many pieces of gum the participant contributed to the box. No participant voiced suspicion regarding the contents of the box. The experimenter also told participants in the no-evaluation conditions that the amount of gum they wrapped would not be evaluated.

Crossed with the evaluation manipulation was a manipulation of incentive. Participants in the incentive condition learned that the gum they wrapped would "not be thrown out at the end of the experiment. Instead, it will be added to care packages to be sent to troops stationed in the Persian Gulf." In the no-incentive condition, no mention was made of sending the gum to troops stationed in the Persian Gulf. Although wrapping gum is not the same as donating blood, food or money, it nevertheless involves the expenditure of personal resources; namely, effort. Thus, other things being equal, I anticipated people would loaf on the task unless provided a compelling reason not to. I hypothesized that the belief that the gum would benefit others would serve as a compelling reason.

Pilot testing revealed that participants in the two incentive conditions wrapped the gum more neatly (and, consequently, more slowly) than participants in the two no-incentive conditions so that the wrapped gum looked more attractive. The difference across conditions in attention to neatness produced the possibility that any increase in effort among participants in the incentive conditions would not be evident in the amount of gum wrapped. To control for differences in attention to neatness, the experimenter instructed all participants to wrap the gum neatly and displayed a neatly wrapped piece of gum to illustrate the desired result. These additional instructions effectively eliminated differences between the incentive and no-incentive conditions in the attractiveness of the wrapping. When all instructions were understood, participants were signaled to begin wrapping. After 10 min, the experimenter told participants to stop,

then administered a short questionnaire and carefully debriefed participants using procedures recommended by Mills (1976).

### *Results and Discussion*

Preliminary analyses revealed no reliable main effects or interactions involving sex of participants. Likewise, the number of participants attending each session ( $M = 2.9$ ) was uncorrelated with the amount of gum wrapped by participants ( $r = -.09$ ). Thus, sex and session size were excluded from further analysis. All subsequent analyses were conducted by using a 2 (evaluation vs. no evaluation)  $\times$  2 (incentive vs. no incentive) between-subjects analysis of variance (ANOVA).

*Manipulation check items.* After the gum-wrapping task, participants completed a short questionnaire consisting of items designed to assess the effectiveness of the manipulations and using a 9-step scale anchored by 1 (*strongly disagree*) and 9 (*strongly agree*). Analysis of these items revealed that both the evaluation manipulation and the incentive manipulation were effective.

Three items assessed the effectiveness of the evaluation manipulation. Each yielded a single, significant main effect of evaluation. Evaluation participants ( $M = 6.3$ ) were more likely than no-evaluation participants ( $M = 4.1$ ) to report that the experimenter would be aware of how much gum they wrapped,  $F(1, 34) = 7.30, p < .01, \eta^2 = .18$ ; that the experimenter would evaluate how much gum they wrapped ( $M = 6.7$  vs.  $M = 3.6$ ),  $F(1, 34) = 16.44, p < .01, \eta^2 = .33$ ; and that they themselves could (or would be able to) evaluate how much gum they wrapped relative to other participants in the study ( $M = 5.8$  vs.  $M = 3.1$ ),  $F(1, 34) = 12.22, p < .01, \eta^2 = .34$ . No other main effect or interaction emerged for these three items.

One item assessed the effectiveness of the incentive manipulation and yielded a single main effect of incentive,  $F(1, 34) = 65.36, p < .01, \eta^2 = .66$ . Participants who were provided an incentive for wrapping the gum ( $M = 8.1$ ) were more likely than participants who were provided no incentive ( $M = 2.9$ ) to report that the gum they wrapped would be donated to benefit others. Of note, a marginally significant interaction of evaluation and incentive also

emerged,  $F(1, 34) = 4.06, p < .06, \eta^2 = .11$ . Although the pattern of means suggested that the effect of the manipulation was stronger in the evaluation condition (incentive,  $M = 8.6$ ; no incentive,  $M = 2.2$ ) than in the no-evaluation condition (incentive,  $M = 7.5$ ; no incentive,  $M = 3.7$ ), post hoc analyses of the means of this interaction revealed that the interaction was not reliable.

Finally, regardless of experimental condition, participants were equally likely to report that they wrapped as much gum as they could during the wrapping period (grand  $M = 7.2$ ).

*Gum wrapping.* Did the belief that the gum would go to a worthy cause eliminate social loafing? Table 1 presents the amount of gum wrapped by condition. Statistical analyses revealed a significant main effect of evaluation,  $F(1, 34) = 6.01, p < .05, \eta^2 = .15$ , and a significant main effect of incentive,  $F(1, 34) = 7.68, p < .01, \eta^2 = .18$ . These two main effects were qualified by a significant interaction of evaluation and incentive,  $F(1, 34) = 4.19, p < .05, \eta^2 = .11$ . Planned contrasts revealed that, when no mention was made of contributing the wrapped gum to care packages bound for soldiers stationed in the Persian Gulf, participants exerted high effort only when individual contributions could be evaluated,  $t(36) = 3.17, p < .01, \eta^2 = .22$ . By contrast, when participants believed the gum would go to soldiers in the Persian Gulf, they exerted high effort regardless of whether individual contributions could or could not be evaluated,  $t(36) = 0.55, ns, \eta^2 = .01$ .

Importantly, the incentive increased individual contributions in the no-evaluation condition, yet produced no change in contribution in the evaluation condition. Perhaps the anticipated evaluation produced a ceiling effect in contri-

bution. As such, it was impossible for the incentive to produce greater contribution in the evaluation condition because participants were already wrapping as much gum as they could. Although this is possible, I suspect that participants could and would have worked even harder in this condition (as well as the other conditions) if offered an extraordinary incentive for doing so (e.g., \$1 per piece of gum wrapped) or if given a high goal to achieve (Harkins, White, & Utman, 2000).

In sum, Study 1 found that the desire to help can serve as a solution to social dilemmas. The belief that one's contributions would benefit soldiers in the Persian Gulf eliminated social loafing, leading people to exert high effort even when individual contributions could not be identified or evaluated.

## Study 2

Although participants in Study 1 worked hard when they believed their efforts would benefit others in need, it is not always easy or even possible to provide assistance to those who are in need and who have sparked the motivation in others to help. For example, the evening news repeatedly airs stories of individuals suffering from war or famine in a distant land who cannot receive assistance because logistics or other impediments prevent it. Similarly, it is difficult to help people who, out of pride or distrust, refuse help or people who have died and thus can no longer receive help. Situations in which it is difficult or impossible to help can be stressful for potential helpers when the awareness of another's need produces empathic arousal, vicarious distress, or perhaps discomfort over the possibility of violating a norm to help. In such instances, people experience arousal associated

Table 1  
Means, Standard Deviations, and Cell Sizes for the Gum-Wrapping Task

Evaluation potential	M		SD		Cell size	
	Incentive	No incentive	Incentive	No incentive	Incentive	No incentive
Evaluation	63.1 <sub>a</sub>	60.1 <sub>a</sub>	16.0	9.6	10	9
No evaluation	61.0 <sub>a</sub>	41.1 <sub>b</sub>	13.3	10.3	10	9

Note. Means with different subscripts differ at  $p < .05$  using the pooled error term,  $MSE = 161.4$ .

with the awareness of another's need yet are unable to reduce the arousal by helping the person in need.

People who are unable to assist the source instigating their desire to help might be particularly susceptible to other requests for help, leading them to contribute time, energy, or money to people or causes that they otherwise might ignore or deem insufficiently worthy of contributions. Greater helping might occur in such instances for two reasons. First, according to the negative state relief model, the arousal generated from perceiving someone in need is generally unpleasant and people are undoubtedly motivated to reduce or escape it (Cialdini et al., 1987). Moreover, some studies suggest that people will actively engage in helping others to escape these unpleasant affective states (e.g., Cialdini et al., 1987; Manucia, Baumann, & Cialdini, 1984). Second, consistent with excitation transfer theory (Zillman & Bryant, 1974), people experiencing arousal in response to the perception of need in one source, if distracted by a request from a second source, might misattribute their arousal to the second source. As such, the redirection of helping would arise from the mistaken belief that the second source is causing the arousal and motivation to help.

Study 2 examined, in a natural setting, whether another person's distress would motivate someone to provide help for a second, unrelated target that was not the original source of the arousal and the motivation to help—a large metropolitan public radio station. Public radio stations typically hold pledge drives two to three times a year to raise funds to cover their operating expenses. Typically, less than 20% of a public radio station's listening audience contributes to fund drives (Corporation for Public Broadcasting, 1988). Most listeners opt instead to free-ride on the contributions of others.

In October 1989 during the pledge drive of a large New England public radio station, an earthquake struck Loma Linda, California, 2,500 miles away, at 5:01 P.M. Pacific standard time (8:01 P.M. Eastern standard time, Tuesday, October 17). The earthquake caused millions of dollars in property damage and resulted in the death of more than 200 people in the greater San Francisco–Oakland area. The greatest loss of life occurred on a stretch of Interstate 880 where part of a two-level freeway

collapsed, killing or trapping hundreds of commuters on the lower level. Countless Americans witnessed the aftermath of the earthquake via radio, television, and newspapers and followed the removal of the rubble from the freeway and the attempts to rescue survivors.

Similar to other news outlets, the radio station updated listeners on the earthquake throughout the day. Undoubtedly, many listeners experienced tremendous concern over the events and wondered what they could do to help. However, for the first few days following the earthquake, the telephone numbers of the American Red Cross and other emergency philanthropic organizations were not broadcast on New England public radio stations. Thus, most individuals were experiencing tremendous arousal stemming from their desire to help, with no ready means of directly reducing the arousal. Importantly, the earthquake updates provided by the radio station, as well as the regular daily radio station programming, were interrupted periodically by requests for contributions to the radio station's fund drive.

In this study, I examined whether hearing about the plight of the victims of the earthquake corresponded to contributions to the radio station. I collected data from two pledge drives: one in October 1989 that corresponded to the earthquake, and one in March 1990. I predicted that more listeners would contribute to the radio station during the aftermath of the Loma Linda earthquake than at other times during the October pledge drive and the March pledge drive.

### *Method*

Participants were contributors to a public radio station in a large New England urban area. I obtained data from two separate pledge drives separated by 5 months: the fall 1989 pledge drive (October 12–19) and the spring 1990 pledge drive (March 7–March 19). I combined the data from the two drives, thereby eliminating any difference that might have emerged from the two drives occurring at different points in time. I examined three pieces of information about each contribution: (a) day of the pledge, (b) pledge amount, and (c) whether the contributor had pledged to the radio station in the past. Data regarding pledges on Sundays were excluded because contributions on Sundays was

consistently and markedly lower than on any other day of the week (presumably because of far fewer listeners on Sundays), affecting substantially the mean and variance associated with the number of contributors.

The Loma Linda earthquake registered 6.1 on the Richter scale and was centered 65 miles southeast of San Francisco and 10 miles north of Santa Cruz. *The Morning Edition* program of National Public Radio began reporting detailed news of the earthquake at 5:00 A.M. the following morning (Wednesday, October 18) and continued reporting updates throughout the day and for the next several days. I compared the number and amount of contributions on the 2 days immediately following the earthquake with the average number and amount of contributions on all other days during the two pledge drives. I combined data from these two drives to provide adequate data to compute population statistics. I also examined contributions separately for first-time and past contributors.

*Results and Discussion*

Were people more likely to contribute to the New England radio station immediately following the Loma Linda earthquake? Figure 1 presents the mean number of individuals pledging

contributions on each day during the two pledge drives. In general, the number of contributors was similar across days and across pledge drives. However, 2 days in Figure 1 stand out: Wednesday, October 18, and Thursday, October 19, the 2 days during the fall pledge drive immediately following the earthquake. The number of contributors for these 2 days was substantially higher than the number of contributors for any other day for either drive.

For purposes of analysis, I calculated the mean number of contributors to the radio station across the two pledge drives ( $M = 515.8$ ,  $SD = 58.8$ ,  $n = 16$ ). This grand mean excluded two days: October 18 and 19. Using this grand mean and the standard deviation, I transformed the total number of contributors for October 18 and October 19 into z scores to test the hypothesis that these 2 days were atypical, departing significantly from the typical pledge drive day. The z scores for these 2 days were 4.53 for October 18 and 5.11 for October 19. The probabilities corresponding to these z scores were low (in both cases,  $p < .001$ ).

I used the same procedures to analyze the total amount pledged by contributors. The total amount pledged on October 18 (\$47,664) and October 19 (\$57,613) was significantly higher than the average of the daily totals for the other

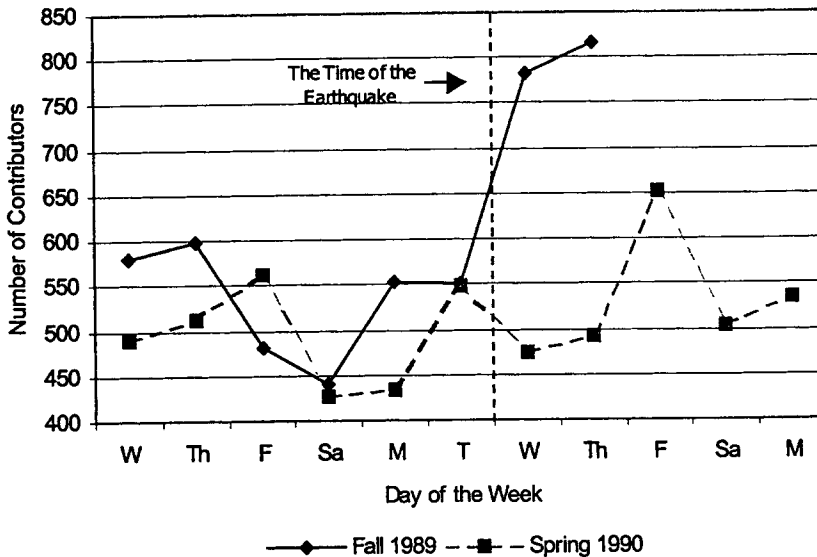


Figure 1. Number of contributors to the radio station.

days ( $M = \$35,147$ ;  $SD = \$4,960$ ). The  $z$  scores associated with the daily total for October 18 and 19 were 2.77 and 4.53, respectively. The probabilities corresponding to these  $z$  scores were again significant (in both cases,  $p < .01$ ). Importantly, the average contribution on October 18 ( $M = \$61.0$ ) and October 19 ( $M = \$70.6$ ) did not depart noticeably from the average of the other 16 days ( $M = \$68.1$ ). In summary, the data suggest that a greater number of pledges lead to more money contributed to the radio station on the 2 days following the earthquake than at any other time during the two pledge drives, and that the greater money contributed was not due to the same number of people donating more money.

I also analyzed the proportion of new versus renewing contributors during the two pledge drives. The number of contributors reporting that this was their first time to contribute to the radio station was 38% and 37%, respectively, for the 2 days following the earthquake. These proportions are similar to those found on other days during the Fall 1989 and Spring 1990 pledge drives ( $M = 38\%$ ). Likewise, 35% of the total funds pledged on the 2 days following the earthquake came from first-time contributors, a percentage that is identical to that found on other days during the Fall 1989 and Spring 1990 pledge drives ( $M = 35\%$ ). These two findings reveal that the increase in the number of contributors and the amount of contributions on the 2 days following the earthquake did not stem from an influx of new listeners to the radio station.

Of note, Figure 1 reveals that the spring pledge drive was longer than the fall pledge drive. Although both pledge drives were scheduled to last 13 days, the fall pledge drive was terminated early because the pledge goal (\$300,000) was reached early in response to the dramatic increase in donations on the 2 days immediately following the Loma Linda earthquake.

Although the nonexperimental nature of the study precludes making causal statements, the results are consistent with the hypothesis that awareness of another's need can produce personal distress that, in turn, can result in greater contributions to a third party, even though the third party is not the source of the personal

distress. Nevertheless, there are several alternative explanations for the findings.

First, it is possible that the greater number of contributions immediately following the earthquake was due to the availability of models of helping. The people chronicled by the media as providing assistance to the earthquake victims may have provided a vivid demonstration of what is appropriate behavior when someone requests or needs help. Although models can have a potent impact on behavior, it seems unlikely that the increase in contributions following the earthquake was due entirely to modeling. A common practice of many public radio stations during fund drives is to announce the name of contributors soon after they have made their pledge. Based on the data, even on the "slowest" day, more than 350 models were available. Moreover, the police, fire department, and other aid workers providing assistance following the earthquake were helping a different target (earthquake victims instead of a radio station) and through different means (e.g., extinguishing fires, removing rubble). Nevertheless, the altruistic models during the aftermath of the earthquake may have had a synergistic effect on contributions. Specifically, the altruistic models from the earthquake may have stimulated a few more individuals to contribute, and announcement of these additional contributors may have motivated a few more people to contribute, who in turn provided the incentive to still more individuals to contribute. In short, the altruistic models from the earthquake may have set a snowball effect into motion, leading to record levels of contributing at the radio station. Although this explanation may seem a stretch, it cannot be dismissed.

It is also possible that the increase in contributions following the earthquake was an artifact of more listeners. Accordingly, the earthquake was captivating news, resulting in more people tuning in to the station. Yet, if more people were listening, then the pattern of data would reveal a greater proportion of new listeners contributing after the earthquake than before. This did not occur, suggesting that the increase in contributions was not due to a crush of new listeners. Alternatively, it might be argued that more regular contributors were tuning in after the earthquake than before. Although public radio stations do not monitor the number of listeners



either hourly or daily, there is reason to suspect that the number of contributors did not increase. Surveys of public radio contributors indicate that repeat contributors are quite routine and predictable in their individual listening patterns (Corporation for Public Broadcasting, 1988); they do not vary from day to day, suggesting again that the number of listeners did not increase after the earthquake.

A final alternative explanation was offered by the manager of the radio station, who suggested that the increase in contributions following the earthquake was attributable to greater appreciation among listeners of the value of public radio. Listening to the aftermath of the earthquake heightened listener awareness of the high-quality news programming provided by the radio station and how much they depend on the radio station to provide information about local, national, and world events. Moreover, some stations emphasize during broadcasting the uniqueness of public radio in providing news (e.g., "This is the kind of detailed, in-depth reporting that you will not hear on any other radio stations"). Although data are unable to rule out this explanation, one might speculate that listeners were thinking little about the quality of the radio programming when listening to California's recovery from the earthquake. Attention more likely focused on the rescue attempts and the plight of the victims. Finally, discussion of the quality and uniqueness of public radio is a central and repeated theme during every fund drive and would not have been unique to the final 2 days of the October fund drive.

### General Discussion

The results from the two studies suggest that the desire to help can have a powerful effect on behavior, leading to greater contributions in settings in which people normally loaf (Study 1) and to greater contributions even though the recipients differed from the source of the desire to help (Study 2).

From a theoretical standpoint, these findings are important because they expand understanding of what can serve as an incentive to act in favor of the public good. In previous research on social loafing, investigators have operationalized the incentive as a personal benefit such as

creating a favorable evaluation or avoiding an unfavorable evaluation (Harkins & Jackson, 1985; Harkins & Szymanski, 1988; Szymanski & Harkins, 1987), avoiding an aversive task (Shepperd & Wright, 1989), or gaining some reward such as extra experimental credit (Zaccaro, 1984) or money (Kerr, 1983; Kerr & Bruun, 1983). In the present research, participants personally gained nothing tangible from contributing to the collective. Instead, someone else (e.g., soldiers in the Persian Gulf and a radio station) was believed to be the primary beneficiary of the contributions. The contributors' gains (i.e., satisfying a desire to help) were secondary. Nevertheless, these secondary gains appear to have been potent, eliciting a high level of contributions, even when personal contributions were ostensibly anonymous or when the contributions would not benefit the source of the motivation to contribute. These findings suggest that the incentive to contribute need not be a tangible, personal reward or benefit. Instead, the knowledge that a needy or deserving person or group will benefit from one's efforts appears to be sufficient to increase contributions for the public good.

The present research has important implications for research on trauma and disaster. Study 1 showed that people will work hard to help others, even if their personal contributions cannot be identified. The implication is that recognition and other external incentives designed to elicit help in time of need are unnecessary. When made aware of the need for help, people appear willing to help of their own accord. Study 2 revealed an increase in contributions in response to a disaster, even to a third party that was unrelated to the disaster. The implication is that government and community agencies that mobilize in response to trauma and disaster have an important and often untapped resource to target for help. These agencies and the victims they serve would benefit by providing opportunities for the community at large to help. They thus should broadcast specific means and locations through which community members can contribute resources such as time, money, food, blood, and energy. Moreover, these agencies should not limit themselves to providing only local opportunities for giving, but instead should broadcast nationally or even

internationally the means by which people can contribute.

Although the present research is suggestive, it also highlights the need for additional research. For example, Study 1 revealed that the desire to help eliminates social loafing, leading to an increase in contributions even when personal contributions are unidentifiable. However, the personal costs associated with contributing in Study 1 (exerting greater effort to wrap gum) were relatively low. An important direction for future researchers would be to examine whether the desire to help would lead to an increase in contributions (anonymously or otherwise) when the personal costs were higher, requiring greater personal sacrifice. Likewise, Study 2 showed that the desire to help leads to an increase in contributions, even though the recipient of the contributions differed from the source of the desire to help. As with nonexperimental field research, it is impossible to eliminate alternative causal explanations for the data. Future research is needed to test the alternative explanation that contributions were higher following the earthquake simply because more people were listening to the broadcast or because listeners were made more conscious of the value of public radio.

Two final comments stemming from the earthquake study deserve mention. First, it seems unwise for public radio and television stations and other donation-dependent organizations to schedule their fund-raising efforts during times of anticipated calamity (e.g., during hurricane, monsoon, and tornado season). Such an opportunistic strategy would likely be ineffective to the extent that emergency philanthropic organizations such as the Red Cross are able to organize donation centers quickly, allowing potential helpers to contribute directly to victims. Indeed, exploiting the helping motivation generated by another source might backfire, leading to reduced contributions to the extent that potential donors allocate all expendable resources to victims and have nothing left for the opportunistic philanthropy or to the extent that excessive requests for help lead to donor fatigue. Second, people who are aroused by learning of another's need should be wary of exploitation, not from the source of the arousal, but from others who would capitalize on the arousal. The results suggest that the arousal and

motivation to help generated by one source can lead to an increase in contributions to a second, unrelated source. People who are aroused by another's need should be careful not to mindlessly misattribute their arousal and motivation and not to reward an unauthentic request with contributions.

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