

## Managing social norms for persuasive impact

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In order to mobilise action against a social problem, public service communicators often include normative information in their persuasive appeals. Such messages can be either effective or ineffective because they can normalise either desirable or undesirable conduct. To examine the implications in an environmental context, visitors to Arizona's Petrified Forest National Park were exposed to messages that admonished against the theft of petrified wood. In addition, the messages conveyed information either about descriptive norms (the levels of others' behaviour) or injunctive norms (the levels of others' disapproval) regarding such thievery. Results showed that focusing message recipients on descriptive normative information was most likely to increase theft, whereas focusing them on injunctive normative information was most likely to suppress it. Recommendations are offered for optimising the impact of normative messages in situations characterised by objectionable levels of undesirable conduct.

After decades of debate concerning their causal impact, (e.g., Berkowitz, 1972; Darley & Latané, 1970; Fishbein & Ajzen, 1975; Krebs, 1970; Krebs &

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Miller, 1985; Sherif, 1936; Staub, 1972; Triandis, 1977), it now seems established that social norms can both spur and guide human behaviour (Aarts & Dijksterhuis, 2003; Allison & Kerr, 1994; Kerr, 1995; Schultz, 1999; Terry & Hogg, 2001; Turner, 1991). As a consequence, researchers and theorists have turned to questions of when these norms have impact and whether different types of social norms affect behaviour in different ways. In this regard, Cialdini and his associates (Cialdini, Reno, & Kallgren, 1990; Cialdini, Kallgren, & Reno, 1991) have developed the Focus Theory of Normative Conduct, which asserts that norms are only likely to influence behaviour directly when they are focal in attention and, thereby, salient in consciousness.

The theory further holds that there are two distinct types of social norms, each of which affects conduct differently because each calls on a separate source of human motivation. On the one hand are *descriptive norms* (sometimes called the norms of “is”), which refer to what is commonly done, and which motivate by providing evidence of what is likely to be effective and adaptive action: By registering what most others are doing, one can usually choose efficiently and well. On the other hand are *injunctive norms* (sometimes called the norms of “ought”), which refer to what is commonly approved/disapproved, and which motivate by promising social rewards and punishments. Thus, whereas descriptive norms are said to inform behaviour via example, injunctive norms are said to enjoin it via informal sanctions. Research explicitly designed to test the theory has provided support for both central postulates by demonstrating (a) that norms guide action directly only when they are focal (Kallgren, Reno, & Cialdini, 2000) and (b) that activating one or the other of the two types of norms produces significantly different behavioural responses (Reno, Cialdini, & Kallgren, 1993).

A conceptually and practically important upshot of this formulation becomes apparent when communicators seek to persuade an audience to behave in accordance with existing norms. For information campaigns to be successful, their creators must recognise the distinct power of descriptive and injunctive norms and must focus the target audience only on the type of norm that is consistent with the goal. This is far from always the case. For instance, there is an understandable but misguided tendency of public officials to try to mobilise action against socially disapproved conduct by depicting it as regrettably frequent, thereby inadvertently installing a counterproductive descriptive norm in the minds of their audiences.

Examples abound. To underscore the need for government action against cigarette smoking among children, the Federal Drug Administration Commission announced that “more than 3 million youths in the US smoke and that 3,000 become regular smokers each day” (Scott, 1995). To chronicle the magnitude of substance abuse in this country, news outlets fashion alarming headlines (“22 million in U.S. abuse drugs, alcohol”; *The*

*Arizona Republic*, 2003). To justify a concerted effort to combat tax cheating, proponents described the problem as “rampant” and cited the estimated \$70 billion in resultant losses each year (Anderson, 2002). Although their claims may be both true and well intentioned, the creators of these campaigns have missed something basic about the social influence process: Within the statement “Look at all the people who are doing this *undesirable* thing” lurks the powerful and undercutting normative message “Look at all the people who *are* doing it.”

Thus, according to Focus Theory, in situations characterised by high levels of socially censured conduct, it is a serious error to focus an audience on what is done there; instead, communicators attempting to reduce such conduct should focus the audience on what is approved/disapproved there. The theory makes a clear recommendation to the communicator in such situations: Induce a normative focus, but only on the injunctive norm. Any other combination of the options—inducing a descriptive norm focus or failing to induce a normative focus at all—will prove less effective. We sought to examine this prediction in a domain that has received substantial public attention—that of environmental action. For a variety of reasons (e.g., dwindling supplies of renewable energy, concern for the welfare of future generations, and a general reverence for nature), numerous organisations have urged citizens towards a pro-environmental stance and away from environmentally damaging activities (P. L. Winter, Cialdini, Bator, Rhoads, & Sagarin, 1998).

Very often, these organisations have sent normatively muddled messages to the public concerning environmental action. In a long-running print ad entitled “Gross National Product”, the US Forest Service mascot, Woody Owl, proclaims, “This year Americans will produce more litter and pollution than ever before”. Other organisations are equally guilty. In the State of Arizona alone, the Department of Transportation stacks roadside litter collected each week in “Towers of Trash” for all to see. In a 6-week long series entitled “Trashing Arizona”, the state’s largest newspaper asked residents to submit for publication in a “Haul of Shame” photos of the most littered locations in the region. And in Arizona’s Petrified Forest National Park, visitors quickly learn from prominent signage that the park’s existence is threatened because so many past visitors have taken pieces of petrified wood from the grounds: “Your heritage is being vandalised every day by theft losses of petrified wood of 14 tons a year, mostly a small piece at a time.”

This last instance of a problem behaviour spurring a problematic persuasive remedy was of special interest to us, because it allowed a test of our theoretical hypotheses in a naturally occurring setting where the outcomes could have significant environmental implications. Indeed, at the time, because of the estimated average theft of more than a ton of wood per

month, the Petrified Forest was in crisis and had just been added to the list of America's 10 most endangered national parks. Against this background, we sought to examine our main hypothesis—that in a situation characterised by unfortunate levels of socially disapproved conduct, a message that focuses recipients on the injunctive norm will be superior to messages that focus recipients on the descriptive norm or that fail to establish a strong normative focus. To do so, we gained permission from Petrified Forest National Park officials to place pieces of petrified wood in designated spots along visitor paths in three park locations.<sup>1</sup> At the entrance to each path, we displayed signage that emphasised either injunctive or descriptive norms regarding the theft of petrified wood from the park.

### IS IT BETTER TO USE POSITIVELY WORDED OR NEGATIVELY WORDED NORMATIVE MESSAGES?

Previous research on the behavioural implications of normative messages has failed to examine an important distinction between two approaches to message wording that could greatly affect communication effectiveness: The distinction between positively and negatively worded messages. That is, such messages can be stated in ways that either encourage desirable conduct or discourage undesirable conduct. For instance, a message could encourage Petrified Forest visitors to leave the wood on the park premises, or it could urge them *not* to take it from the premises. Which would be more influential in our situation? There is reason to believe that the negatively worded communications should be more compelling because they would be more likely to lead recipients to focus on the message content. There is now quite a lot of research indicating that, over a wide range of instances, negative stimuli have more impact than positive stimuli (for reviews, see Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Rozin & Royzman, 2001). Although there are varying explanations for this effect, it appears that, in general, negative information is accorded greater attention, scrutiny, and weight in consciousness (Crawford & Cacioppo, 2002; Dijksterhuis & Aarts, 2003; Fazio, Eiser, & Shook, 2004; Fiske, 1980; Gilbert, 1991; Ito, Larson, Smith, & Cacioppo, 1998; Krull & Dill, 1998; Pratto & John, 1991; Smith & Petty, 1996). Thus, negatively worded messages should be more focal for those exposed to them.

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<sup>1</sup> The wood was provided to us from the park's large "conscience pile", which consisted of pieces that had been stolen by visitors who later experienced attacks of conscience and sent them back by mail, often with profuse apologies. These pieces were considered useless by park administrators because replacing them in arbitrary locations would have distorted the naturally occurring wood distribution patterns, which are matters of historical and scientific interest.

According to this analysis, in our experimental situation signs carrying negatively framed normative messages should have the greatest impact on theft. However, it is important to recognise that this greater impact should serve either to decrease or to increase theft depending on which kind of norm—injunctive or descriptive—is highlighted in the message. Earlier, we contended that in situations characterised by frequent undesirable conduct, communicators would be well advised to present the injunctive (“ought”) norm regarding the conduct. However, in keeping with Focus Theory, a more refined theoretical contention is possible: When presenting the “ought” norm, communicators would be best advised to instruct audience members in what they ought *not* to do. Thus, in our situation, park visitors should be exposed to a negatively worded form of the injunctive norm regarding wood theft. In other words, they should be told not to remove petrified wood from the park (rather than told to leave petrified wood in the park).

On the other hand, just the opposite recommendation would be made with regard to descriptive information. Focusing visitors more effectively on the fact that numerous others have stolen wood could worsen the problem. Consequently, we would expect that negatively worded versions of this type of normative message (i.e., messages suggesting that many past visitors have damaged the environment) should, of the various normative combinations, generate the most theft. The resultant prediction, then, is for an interaction between our independent variables such that negatively worded appeals (with their accompanying intensified focus) should lead to the least theft in the case of injunctive normative messages, but to the most theft in the case of descriptive normative messages.

## METHOD

### Participants

A total of 2655 visitors to the Petrified Forest National Park participated during consecutive weekends of a 5-week period of observation.

### Procedure

At three popular visitor sites within the park (Jasper, Long Logs, and Crystal), we placed 3-foot square (91.5 cm × 91.5 cm) signs at the start of paths that wound through sections of the park where theft of wood had been a problem. The signs, which carried one or another of four experimentally derived messages, were in place for 2 hours at a time during five 2-hour blocks during each weekend. The signs were rotated around the three sites so that each sign would appear equally often at each site and at each time block.

During each 2-hour time block, we placed 20 pieces of petrified wood in designated locations along each of the paths. At the end of each 2-hour block, a researcher counted and replaced the number of wood pieces that had been removed, changed the sign, and began the process anew.

### Independent variables

Within a  $2 \times 2$  factorial design, we manipulated the independent variables of Type of Normative Information (injunctive versus descriptive) and Normative Focus (strong [negatively worded] versus weak [positively worded]).

In the case of injunctive normative information, all participants saw a plea to preserve the natural state of the park. But for those in the negatively worded condition, the plea was phrased in the negative: "Please don't remove the petrified wood from the park". This wording was accompanied by a picture of a visitor stealing a piece of wood, with a red circle-and-bar symbol superimposed over his hand. For those in the positively worded condition, the plea was positively phrased: "Please leave petrified wood in the park". This wording was accompanied by a picture of a visitor admiring and photographing a piece of wood.

In the case of descriptive normative information, all participants were informed about what many past visitors had done. In the negatively worded conditions, participants were informed that "Many past visitors have removed the petrified wood from the park, changing the state of the Petrified Forest". This wording was accompanied by pictures of three visitors taking wood. In the positively worded condition, participants learned that "The vast majority of past visitors have left the petrified wood in the park, preserving the natural state of the Petrified Forest". This wording was accompanied by pictures of three visitors admiring and photographing a piece of wood. We depicted three visitors in these signs in order to convey the popularity of the addressed behaviour, as the concept of popularity is central to descriptive norms.

### Dependent variable

The major dependent measure was the proportion of the number of pieces of marked wood stolen in each condition divided by the number of pieces of marked wood that we had placed on the paths and that, consequently, could have been stolen in each condition.<sup>2</sup>

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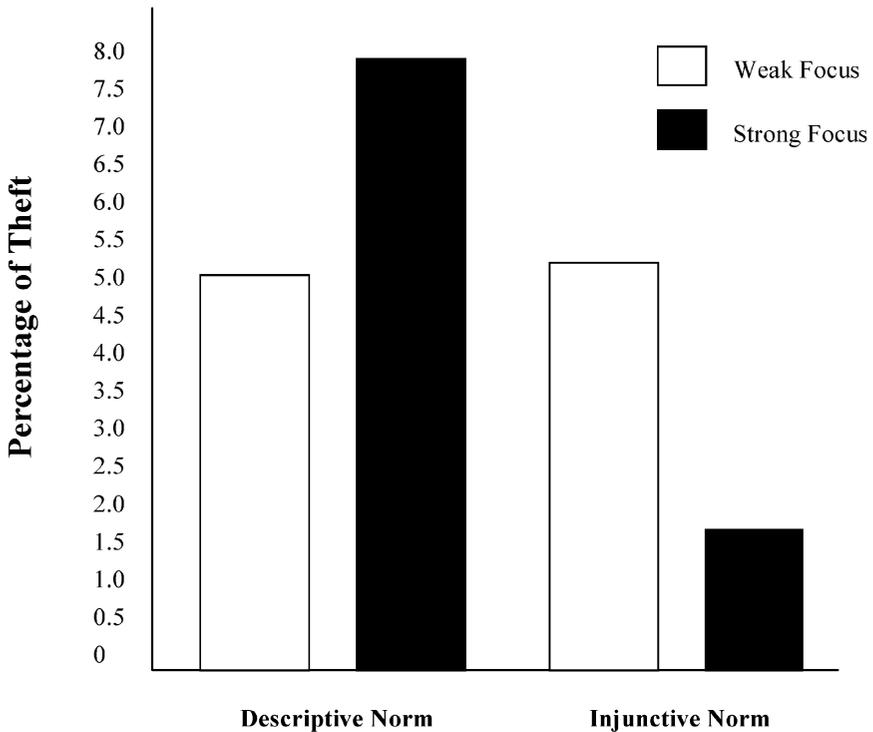
<sup>2</sup> The overall number of pieces of wood placed at our marked path locations was 300 for each condition, except for the Descriptive/Strong Focus condition, which had only 240 owing to a rainstorm that halted the study during one of the 2-hour blocks assigned to that condition.

## RESULTS

To provide confidence that the focus manipulation had the desired effects, we showed the signs to a separate set of 72 college students enrolled in Introductory Social Psychology classes at Arizona State University and asked them to consider how they would respond if they saw the signs while visiting the Petrified Forest. When shown the injunctive norm signs and asked to indicate the extent to which each sign “would cause you to focus on whether *people approve or disapprove of taking* pieces of petrified wood from the park”, participants reported significantly more of this focus in the case of the negatively worded than the positively worded message (3.6 versus 2.9, on a scale ranging from 0 to 6),  $F(1, 71) = 27.61, p < .001$ . Similarly, when shown the descriptive norm signs and asked to indicate the extent to which each sign “would cause you to think of whether *visitors do or do not take* pieces of petrified wood from the park”, participants reported significantly more of this focus in the case of the negatively worded than the positively worded message (4.0 versus 3.2, on a scale ranging from 0 to 6),  $F(1, 71) = 12.79, p < .001$ . These findings comport well with those of research indicating that pro-environmental communications (for recycling) elicited more message scrutiny when they contained negation (Werner, Stoll, Birch, & White, 2002).

The most general implication of the Focus Theory of Normative Conduct (Cialdini et al., 1990, 1991) for our data is an expected interaction between the Normative Focus factor and the Type of Normative Information factor, such that negatively worded appeals (with their intensified focus) should lead to the least theft in the case of injunctive normative messages but to more theft in the case of descriptive normative messages. To test this implication, we performed a logistical regression analysis that revealed a significant interaction,  $\text{Wald}(1, N = 1140) = 7.20, p = .007$ , which conformed to the expected pattern (see Figure 1). Additionally, we performed a set of more specific tests to assess our predictions in more detail. The first examined whether the Injunctive/Strong Focus condition produced less theft than the combination of the other three conditions (1.67% versus 5.95%, respectively)—it did,  $\chi^2(1, N = 1140) = 8.84, p = .003$ . The second test examined whether the Descriptive/Strong Focus condition produced more theft than the other three conditions combined (7.92% versus 4.00%, respectively)—it also did,  $\chi^2(1, N = 1140) = 6.33, p = .012$ .

We also conducted two simple tests within the significant interaction to determine the impact of our focus manipulation on injunctive and descriptive normative information, respectively. The first simple test compared the percentage of theft when injunctive information was worded negatively, and the focus should thereby be strong, versus when it was worded positively, and the focus should thereby be weak (1.67% versus



**Figure 1.** Percentage of theft as a function of type of norm and strength of normative focus.

5.33%, respectively). That test proved significant,  $\chi^2(1, N = 600) = 5.97$ ,  $p = .015$ . A comparable test comparing the percentage of theft when descriptive information was worded negatively versus when it was worded positively (7.92% versus 5.00%, respectively) was not significant,  $\chi^2(1, N = 540) = 1.92$ ,  $p = .166$  although the difference was in the expected direction. Finally, we examined whether the two weak normative focus conditions differed from one another (5.33% versus 5.00%)—as expected, they did not,  $\chi^2(1) < 1$ .

## DISCUSSION

In large measure, the outcomes of our study supported the implications of Focus Theory. In our situation, which was characterised by regrettable levels of undesirable conduct, a message that strongly focused recipients on descriptive normative information regarding this conduct was least effective in deterring the unwelcome behaviour, whereas a message that strongly focused recipients on injunctive normative information regarding the

conduct was most effective. Moreover, messages that focused recipients only weakly on descriptive or injunctive normative information were intermediate and no different from one another in their impact.

Even though a negatively worded, injunctive message produced the greatest success in our study, it is important to recognise that negatively stated injunctions need not be any more offensive or threatening than their positively stated counterparts. For example, “Please don’t leave your campfire” seems no more coercive than “Please stay with your campfire”. Thus, our data should not be interpreted as recommending incivility in the language of norms. They are better viewed as suggesting that, because negative information seems to be processed more fully than positive information (e.g., Baumeister et al., 2001; Smith & Petty, 1996), recipients are more likely to focus on message *content* when the message is negatively worded.

This implication is akin to that of research into the Elaboration Likelihood Model of attitude change, showing that procedures that stimulate fully considered processing of a message increase or decrease persuasion depending on the substance of the message. If the message contains good arguments, such procedures enhance desired change, but if the message contains poor arguments, the same procedures retard desired change (Petty & Cacioppo, 1984; Petty & Wegener, 1999). In our instance, the message content did not differ by type of argument (good or poor) but by type of norm (injunctive or descriptive). Using negative language to focus participants on the fact that park thievery is consistently disapproved fostered desired outcomes, whereas using negative language to focus visitors on the fact that park thievery is consistently carried out diminished desired outcomes.

## CONCLUSION

It is clear from our findings that norm-based persuasive messages can affect societally relevant responding to a significant degree. It is equally clear, however, that variations in the type of normative information presented (descriptive or injunctive) can dramatically alter the form of that responding. Moreover, how one communicates the descriptive or injunctive information can also influence recipients’ responses to the message.

Our study demonstrated that in a setting afflicted with unfortunate levels of environmentally destructive behaviour (theft of petrified wood), the injunctive normative message that such theft is strongly disapproved was more effective overall than the descriptive normative message that such theft is regrettably frequent. Furthermore, increasing the likelihood that observers would focus on the content of the normative messages (by phrasing the messages in negative terms) increased the size of this difference.

These results fit well with the central contention of the Focus Theory of Normative Conduct—that norms are unlikely to generate norm-consistent action unless they are currently focal in attention.

It is worthy of note that our most ineffective persuasive message simulated the sort of negatively worded, descriptive norm message that was regularly and officially sent at the Petrified Forest National Park. Indeed, it simulated the sort of message that is regularly sent by public health and community service officials regarding a wide variety of social problems. Our results indicate that appeals of this type should be avoided by communicators in their persuasive undertakings. Unfortunately, this is not always the case, even when communicators are able to act in line with available scientific evidence.

For instance, after we reported the outcomes of the present study to park administrators, they decided not to change the relevant aspects of their signage. This decision was based on evidence from Park Ranger interviews with visitors, who felt that information indicating that the theft problem at the park was sizeable would not increase their likelihood of stealing wood, but would decrease it. We were disappointed—but, truth be told, not surprised—that park officials weighted visitors' subjective responses more than our empirical evidence in their signage decision, as it confirms what appears to be a lack of understanding of and confidence in social science research within the larger society (Cialdini, 1997, 2005).

## CODA

At the outset of this piece, we chronicled the tendency of many communicators to try to reduce the incidence of a problem by describing it as regrettably frequent. We have argued that such a tendency is misguided because it presents audience members with a muddled normative picture, implying that the targeted activity is socially disapproved but widespread. However, there is another sense in which this tendency may be misguided. Often, the problem behaviour is not widespread at all. It only comes to seem that way by virtue of a vivid and impassioned presentation of its unwelcome levels of occurrence and/or injurious consequences.

Take, for example, the theft of petrified wood. Our results, as well as other findings (Roggenbuck, Widner, & Stratton, 1997), indicate that very few visitors remove pieces of wood from the park when given the opportunity—fewer than 5%. Still, because the park receives approximately a million visitors per year, the number of thefts is objectively high and the consequences are dire for the park environment. Therefore, the park signage we initially observed was accurate in claiming “Your heritage is being vandalised every day by theft losses of petrified wood of 14 tons a year, mostly a small piece at a time.” Even so, by focusing visitors solely on the

fact that thefts did occur with destructive regularity, well-intentioned park officials may have erred twice. Not only did they set the force of descriptive norms against park goals (by implying that thievery was pervasive), they also missed the opportunity to harness the force of those same norms on behalf of park goals (by failing to label the thieves as a tiny minority).

This particular method for “turning lemonade into lemons” is far from limited to pro-environmental endeavours. After a university-based eating disorder education programme featuring the testimony of many young women describing their harmful eating behaviours, participants showed more disorder symptoms than before (Mann, Nolen-Hoeksema, Burgard, Huang, Wright, & Hansen, 1997). After a suicide prevention programme that informed New Jersey teenagers of the alarming number of adolescents who take their own lives, participants became more likely to see suicide as a potential solution to their own problems (Shaffer, Garland, Vieland, Underwood, & Busner, 1991). After exposure to an alcohol-use deterrence programme that included exercises in which participants role-played resisting their classmates’ repeated urgings to drink, junior high-school students came to believe that alcohol use was more common among their peers than they originally thought (Donaldson, Graham, Piccinin, & Hansen, 1995). This last study frames the relevant issues nicely. Well-meaning programme designers turned something likely to have positive consequences (the true descriptive norm for drinking) into something likely to have negative consequences (an exaggerated descriptive norm for drinking) (Prentice & Miller, 1993). In fact, the opposite strategy seems warranted: Persuasive interventions should employ information and techniques that marginalise rather than normalise undesirable conduct.

In all, norm-based persuasive communications are likely to have their best effects when communicators align descriptive and injunctive normative messages to work in tandem rather than in competition with one another. It is possible to do so by conveying to recipients that the desired activity is widely performed and roundly approved, whereas the unwanted activity is relatively rare and roundly disapproved. Such a line of attack unites the power of two independent sources of normative motivation and can provide a highly successful approach to social influence.

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