SOCIAL NORMS:

AN UNDERESTIMATED AND UNDEREMPLOYED
LEVER FOR MANAGING CLIMATE CHANGE

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Abstract

It is widely recognized that communications that make social norms salient can be effective in influencing behavior. What is surprising, given the strength of the evidence, is how little people are aware of the extent to which social norms affect their own behavior. Consequently, this low-cost persuasion strategy is considerably underutilized to promote behaviors to help reduce climate change. In this paper we review recent field experiments that harness the power of social norms to influence pro-environmental behavior. We also elucidate the circumstances under which providing normative information is optimal, as well as circumstances under which such information can backfire to produce the opposite of what a communicator intends.

1. Introduction

It is rare when a public service announcement (PSA) is seen to have the sort of effectiveness normally reserved for the most successful mass media commercial messages, which typically benefit from much larger production budgets and broadcast frequencies. Yet, there is one PSA that is regularly accorded such status. Called the "Iron Eyes Cody spot" (after the actor who starred in it), it begins with a shot of a stately, buckskin-clad Native American chief paddling his canoe up a river that carries various forms of industrial and individual pollution. After coming ashore near the littered side of a highway, Iron Eyes Cody watches as a bag of garbage is thrown, splattering and spreading along the road, from the window of a passing car. From the refuse at his feet, the camera pans up slowly to his face, where a tear is shown tracking down his cheek. In the final moments of the spot, a narrator starkly states: "People Start Pollution, People Can Stop It."

Broadcast for many years in the 1970s and 1980s (and updated in the 1990s), the spot won numerous awards and millions upon millions of dollars of donated airtime. It has even been named the 16th best television commercial of all time by *TV Guide* magazine ("The Fifty Greatest," 1999). But despite the fame and recognition value of this touching piece of public service advertising, we must pause to consider the impact the ad had on the environment: Was this ad effective at curbing pollution? Considering the popularity and emotional impact of the spot, this question may seem preposterous. But much scientific evidence suggests that the ad might not have been optimally designed to reduce pollution—and may even have increased the very behavior it set out to curb.

As we discuss in this article, the key reason why the most popular public service announcement had the potential to do a serious disservice to the environment lies in the power of social norms—specifically, *descriptive social norms* (Cialdini, Reno, & Kallgren, 1990). Descriptive social norms refer to the perception of what is commonly done in a situation. Scholars of various kinds have long documented the powerful influence that observed social behavior has on spurring subsequent similar behavior in the observers (e.g., Cialdini et al., 1990; Festinger, 1954; Le Bon, 1895/1960; MacKay, 1841/1932; Milgram, Bickman, & Berkowitz, 1969). What's surprising, given the ubiquity and strength of the evidence, is how little people are aware of the power of such norms on their own behavior, including many behaviors that can contribute to global warming. In this paper we examine how this potent form of influence can exert its power on us—and on climate change—at two crucial and often-encountered decision points: when, as observers, we decide how to interpret the causes of our own actions; and when, as tacticians, we decide how to influence the actions of others. This analysis offers an important point regarding how we, as communicators, can help manage behaviors that contribute to global warming. In particular, whereas many economists, political leaders, and policy makers emphasize that climate change can only be managed by using costly financial incentives or developing expensive technology, we argue that a strategy harnessing social norms provides an effective and low-cost strategy to help reduce our impact on global warming.

2. People Underestimate the Influence of Social Norms

Consider something that occurred a few years ago, when the producers of a TV news magazine program asked one of us to assist with a segment on why people help in everyday (non-emergency) settings. To examine this question, we went into a busy New York subway station and registered how many people chose to compensate a street musician by putting money in his hat. After getting a good measure of the percentage of passersby who gave money to the performer, we changed things slightly: Just before an approaching individual had the option to make a contribution, we had another person (one of our confederates) reach into his pocket and toss a few coins into the hat.

The results were impressive: Passersby who saw another give a donation were eight times more likely to contribute than those who didn't see anyone giving change. But, in our view, an even more noteworthy finding emerged after the study ended. When the people who made a donation were interviewed, not one attributed the donation decision to the fact that they had seen someone else give money. Rather, they claimed that some other factor had been the cause—"I liked the song he was playing" or "I felt sorry for the guy" or "I had some extra change in my pocket." But because we had altered only one thing in the situation—the presence of a helpful individual—we knew that it wasn't any of these factors that made the difference. Instead, the key feature was the action of another person. Yet when our study's participants thought about the reasons for their choices, they never once hit upon the true cause.

This example illustrates a more specific psychological point than the one articulated masterfully by Nisbett and Wilson (1977) that, in general, people are poor at recognizing why they behave as they do. The subway example asserts that people will be particularly clueless when identifying the similar actions of others as causal antecedents. More systematic evidence in this regard comes from a series of studies of perceived motivations for energy conservation that we conducted with our colleagues.

3. Energy Conservation and Social Norms

As part of a large scale survey of residential energy users, we inquired into respondents' views of their reasons for conserving energy at home, as well as reports of their actual residential energy saving activities such as installing energy efficient appliances and light bulbs, adjusting thermostats, and turning off lights (Nolan et al., in press). When respondents were asked to rate the importance to them of several reasons for energy conservation—because it will help save the environments, because it will benefit society, because it will save me money, or because other people are doing it—they rated these motivations in the same order as listed above, with the actions of others (the descriptive social norm) clearly in last place. However, when we examined the relationship between participants' beliefs in these reasons and their attempts to save energy, we found the reverse: The belief that others were conserving correlated twice as highly with reported energy saving efforts than did any of the reasons that had been rated as more important personal motivators.

To assure that our findings weren't the result of the correlational nature of the survey methodology, a follow-up study employed an experimental design. Residents of a mid-size California community received persuasive appeals on signs placed on their doorknobs once a week for four consecutive weeks. The appeals emphasized to residents that energy conservation efforts would (1) help the environment or (2) benefit society or (3) save them money or (4) were common (normative) in their neighborhood. Interviews with participants revealed that those who received the normative appeals again rated them as least likely to motivate their conservation behavior. Yet, when we examined actual energy usage (by recording participants' electricity meter readings), the normative appeal proved most effective, resulting in significantly more energy conservation than any of the other appeals (Nolan et al., in press; see also Schultz et al., 2007).

The upshot of these studies is plain. When it comes to estimating the causes of their conduct, people seem especially blind to the large role of others' similar behavior. They don't just fail to get this right; they tend to get it precisely wrong. We speculated that people's severe under-estimation of the power of descriptive social norms was costing the environment plenty, including at our very own National Parks.

4. The Petrifying Power of Social Norms

The Petrified Forest National Park in Arizona is regularly in crisis. Each month the park loses more than a ton of petrified wood because of theft. In hopes of preventing such vandalism, the park has instituted a deterrence program whereby new arrivals quickly learn of past thievery from prominently placed signage: "Your heritage is being vandalized every day by theft losses of petrified wood of 14 tons a year, mostly a small piece at a time." Although it is reasonable that park officials would want to instigate corrective action by describing the dismaying size of the problem, an understanding of the workings of social norms tells us that such a message ought to be far from optimal. For example, when one of our former graduate students visited the park with his fiancée—a woman he described as the most honest person he'd ever known, someone who had never taken a paperclip or rubber band without returning it—they quickly encountered a sign warning visitors against stealing petrified wood and decrying the 14 tons of pilfered wood each year. While still reading the sign, he was astonished to detect an elbow in his ribs and to hear his fiancée whisper, "We'd better get ours now."

What could have spurred this wholly law-abiding young woman to want to become a thief and to deplete a national treasure to boot? It has to do with a mistake that park officials made when creating the sign. They tried to alert visitors to the park's theft problem by telling them that many other visitors were thieves. In so doing, they stimulated the precise behavior they had hoped to suppress by making thievery appear commonplace—when, in fact, only 2% of the park's millions of visitors have ever taken a piece of wood.

Park officials are far from alone in this kind of error. Indeed, the producers of the Iron Eyes Cody PSA might have made a similar mistake. Because they didn't give sufficient weight to the power of descriptive social norms, they understandably presented the ten-

dency to litter as regrettably frequent. Although these kinds of claims may be well-intentioned, the communicators have missed something critically important: Within the lament "Look at all the people who are doing this undesirable thing" lurks the powerful and undercutting disclosure "Look at all the people who *are* doing it." In trying to alert one's audience to the growing occurrence of a problem, communicators can inadvertently make it worse. For instance, when the IRS announced that, because so many citizens were cheating on their returns, the agency was going to strengthen penalties for tax evasion, tax fraud went *up* the following year (Kahan, 1997).

To explore this backfire possibility systematically, we conducted an experimental test with our colleagues at the Petrified Forest by alternating a pair of signs in high theft areas of the park (Cialdini et al., 2006). The first sign simulated the kind of sign that was already present at the park: It urged visitors not to take wood, and it depicted a scene showing several different thieves in action, highlighting the problematic prevalence of this behavior. The second sign also urged visitors not to take wood, but it depicted only a lone thief. Visitors who passed the first type of sign—the sign containing the type of normative information that the actual Petrified Forest signage contains—were more than twice as likely to steal the precious wood than those who passed the second type of sign. Thus, by failing to take into account the raw force of descriptive social norms on their guests' behavior, park administrators produced the opposite of what they intended. More generally, because people of all sorts may under-appreciate the strength of social norms, they can engage in persuasion tactics that are not only ineffective but markedly counterproductive.

5. Rethinking the Iron Eyes Cody PSA

At this point it would be appropriate to look back at the Iron Eyes Cody PSA, as the findings of the Petrified Forest study point to reasons for our concern about the effectiveness of that ad. Recall that it depicted a character who shed a tear after encountering an array of litter—rubbish in the water, on the roadside, and tossed from an automobile. No doubt the tear was a powerful reminder that littering is not desirable. But accompanying the reminder was the potentially damaging message that many people *do* litter. Thus, the resultant impact of the message against littering may have been undermined by the unintended presentation of a descriptive social norm for littering.

Were we to suggest a revision of the Iron Eyes Cody PSA, then, it would be to make the procedurally small but conceptually meaningful modification of changing the depicted environment from trashed to clean and emphasizing in the ad that few people litter. Although we would still highlight the lone individual who throws trash on an otherwise pristine highway, this small revision should change the perceived descriptive social norm regarding littering. Then, not only would the tear indicate disapproval of littering by those individuals who do it, but the clean environment would make it clear to viewers that few people actually litter in the first place.

Although we had found that creating signs using this kind of normative strategy was effective at reducing theft at the Petrified Forest, we wanted to investigate whether social

norms would be effective in influencing behavior through PSAs. So, along with several colleagues, we created three PSAs designed to increase recycling. Each PSA portrayed a scene in which the majority of depicted individuals engaged in recycling and spoke disparagingly of a single individual in the scene who failed to recycle. When, in a field test, these PSAs were played on the local TV of four Arizona communities, a 25.4% net advantage in recycling tonnage was recorded over a pair of control communities not exposed to the PSAs but whose recycling was also measured during the length of the study (Cialdini et al., 2008).

5.1 People Underutilize Social Norms to Help the Environment

Because people often fail to appreciate the power of social norms on their own behavior, communicators also often fail to implement persuasion tactics that can be highly effective. For instance, increasingly, leaders are finding themselves in need to promote pro-environmental or green behaviors in communities or work environments. Instead of focusing on how many people's existing practices are harming the environment (e.g., "just look at how much energy we're wasting every day"), they would be well advised to focus on what many people have been doing to preserve it, such as turning off lights and computers at the end of the day, recycling paper, and so on.

To test this idea, we examined conservation behaviors in hotel rooms, where guests often encounter a card asking them to reuse their towels. As anyone who travels frequently knows, this card may urge the action in various ways. Sometimes it requests compliance for the sake of the environment; sometimes it does so for the sake of future generations; and sometimes it exhorts guests to cooperate with the hotel in order to save water, energy, and expense (Goldstein & Cialdini, 2007). But what the card *never* says is that the majority of hotel guests do in fact reuse their towels when given the opportunity.[1] We suspected that this omission was costing the hotels—and the environment—plenty.

Here's how we tested our suspicion. With the collaboration of the management of a major hotel in the Phoenix area, we put one of three different cards in its guestrooms. One of the cards stated "HELP SAVE THE ENVIRONMENT," which was followed by information stressing respect for nature. A different card stated "PARTNER WITH US TO HELP SAVE THE ENVIRONMENT," which was followed by information urging guests to cooperate with the hotel in preserving the environment. A final type of card used a social norms appeal, simply stating "JOIN YOUR FELLOW GUESTS IN HELPING TO SAVE THE ENVIRONMENT," which was followed by information that the majority of hotel guests reuse their towels. The outcome? Compared to the first two messages, the social norms message increased towel reuse by 34% (Goldstein, Cialdini, & Griskevicius, in press).

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[1] According to data from the Project Planet Corporation that manufactures these types of cards, nearly three-quarters of guests who are informed about a hotel's reuse program comply at least once during their stay.

Although the specific lesson of this experiment—that social norms are a powerful lever for change—is one we've already covered, there is a second, larger message that seems at least as telling: The communication that generated the most participation in the hotel's towel recycling program was the one that, to our knowledge, no hotel has ever used. Apparently, this simple but effective type of social norms-based appeal doesn't appear in the persuasive efforts of hotel conservation programs because developers never estimate that it will work as powerfully as it does.

5.2 Optimizing the Power of Social Norms

There are two additional points that one needs to know to maximize the influence of social norms. First, social norms will have particularly strong impact on recipients under conditions of uncertainty (Cialdini & Goldstein, 2004; Griskevicius et al., 2006), which makes sense. After all, when unsure, people don't look inside themselves for answers; all they'll see there is confusion. Instead, they look outside, to others, for evidence of how to act. This means that when conditions have recently changed—because of an introduction of a new green product, a new report on the depletion of the environment, or a new law related to pro-environmental action—the unfamiliar conditions will make people especially attentive and responsive to information about how others are dealing with it. Consequently, it also means that leaders would lose great persuasive leverage if they failed to marshal and employ such information in their communications precisely at these times.

In addition to being particularly influenced under uncertainty, people are also especially influenced by those others who are similar to them (Cialdini & Goldstein, 2004; Goldstein & Cialdini, 2007). Again, this makes sense: We are most trusting of others who are most like us. Indeed, recall the study discussed earlier in which we asked Californians about the reasons why they conserve energy. Although residents' energy conservation was most influenced by whether they believed other people were conserving energy (the social norm), the key factor was *which* other people—other Californians, other people in their city, or other residents in their specific community. Consistent with the idea that people are most influenced by similar others, the power of social norms grew stronger the closer and more similar the group was to the residents: The decision to conserve was most powerfully influenced by those people who were most similar to the decision makers—the residents of their own community (Nolan et al., in press; Schultz, 1999).

Similarity also enhances the power of social norms when the decision maker is connected to others by a similar circumstance. For example, recall that in the hotel study mentioned earlier, guests' towel reuse jumped dramatically when they were simply informed that many of the hotel's guests reuse their towels. But we had included another sign in this study that produced an even higher rate of towel reuse. The persuasive message in this peak condition was almost identical to the one in which people were told about the behavior of other guests, except that we added a few key words—guests were told that the majority of the guests *who have stayed in this room* had reused their towels (Goldstein et al., in press). Because people are especially likely to look to similar others when deciding how to act, the

actions of people who have been in similar situations were especially powerful at influencing their behavior.

6. Conclusion

Anyone who has ever relied on income from a tip jar has probably learned a valuable lesson in the power of descriptive social norms: An empty jar stays empty; a jar with a few bills fills quickly. People who choose to put money in the jar are rarely aware of how the tipping decisions of previous customers influence their own decision—so much so that they are likely to say that the amount of money in the jar has no influence at all. But a large body of scientific evidence counsels otherwise. Although individuals of all kinds underestimate the effects of social norms on their own decisions, that influence is both potent and omnipresent. Yet, this powerful and low-cost source of persuasion remains systematically underutilized by policy makers, leaders, and communicators interested in helping fight climate change. And who can blame them: It's easy to overlook a simple persuasion tool when would-be persuaders believe it doesn't work on them.

Of course, the power of the social norms is not limited to the reduction of littering or to the increase of recycling. Communicators can employ normative approaches to promote numerous behaviors that help fight climate change, ranging from saving energy at the home and office, carpooling, taking public transportation, to supporting public policies that help reduce global warming. In such cases, recall that not only would it be wise to communicate that many others are engaging in these behaviors, but that many others who are similar to your audience, are engaging in that behavior. For example, if a nonprofit group wanted to encourage carpooling in Sacramento, California, by creating a billboard ad, it would be wise to communicate that many residents of Sacramento (as opposed to many residents of California) are carpooling.

It is important to acknowledge that in some circumstances, the descriptive social norms do not seem to be on our side—at least not at first glance. For example, it might be the case that only 3% of all Sacramento residents carpool to work. But a percentage is only but one way of thinking about the descriptive social norms. It may be the case that 3% is the equivalent of tens of thousands of drivers who carpool in Sacramento. And if that were the case, one could honestly convey the message that lots of people are performing actions that help prevent climate change.

In conclusion, almost all individuals or organizations can use social norms by simply bringing to light the true levels of desirable pro-environmental behavior among others. Hotel managers, for example, are aware that most guests reuse their towels during their stay. Yet, as we've seen, none has informed their guests of this environment- and money-saving fact. The bottom line is that the strategic value of peer opinions, experiences, and behaviors should not be lost on communicators aiming to fight climate change. The actions of others can provide a goldmine of persuasive resources. And that mine is… well, a terrible thing to waste.

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