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# **Effects of Normative Messages on Pro-Environmental Attitudes and Behaviors**

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## **Effects of Normative Messages on Pro-Environmental Attitudes and Behaviors**

### **Introduction**

As stated in the fourth assessment report of the Intergovernmental Panel on Climate Change (IPCC), the planet's climate is warming at an unprecedented rate, and humans are responsible for the large majority of causes creating this situation. If humans are to repair the balance between themselves and nature, then a global environmental movement that includes widespread behavior and attitude reconstruction will have to occur. The current study seeks to build upon past research attempting to promote pro-environmental behavior change in individuals. The author examines the ability of modeling and norms presented in a video format to motivate individuals to change their behavior to become more environmentally sustainable.

Research shows that normative information can promote behaviors that are either harmful or beneficial to the environment (Cialdini, 2003; Stern, 2000; Stern et al, 1999). For purposes of this study, a norm is defined as any behavior perceived to be typical or normal by the participants. This study examines the influence of injunctive and descriptive norms on environmental attitudes and commitment to engage in pro-environmental behaviors. An injunctive norm is defined as a request to act in a pro-social manner. Injunctive norms usually target behaviors that are desired but not typical, such as asking someone to give up all use of their automobile. A descriptive norm on the other hand describes the desired behavior as typical and expected.

Based on previous research, we created two videos that presented descriptive information to create one of two norms: actions taken to protect the environment such as driving efficient vehicles, using less electricity, and recycling, or actions taken that harm the environment such as driving inefficient vehicles, using more electricity, not recycling, etc. (Cialdini, 2003; Bator & Cialdini, 2000). Both videos also presented injunctive norm information asking participants to engage in pro-environmental behaviors. The first video asks participants to behave in a way that is consistent with the descriptive norm. This will be called the combined norm condition. The second video asks participants to oppose the described norm because the norm in this condition is undesirable. This will be called the contrasting norm condition. The author hypothesized that the combined norm video would promote more



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positive reactions and an increased willingness to commit to pro-environmental behaviors than would the contrasting norm video. The author also hypothesized that the contrasting norm condition would be ineffective, reasoning that people rarely act against the norm, even if the norm is presented as negative or undesirable (Cialdini, 2003; Bator & Cialdini, 2000; Gardner & Stern, 2002).

**Method**

The participants were 54 (16 men, 38 women) undergraduate (mean age = 21 years) students. Each participant viewed either the combined norm video, or the contrasting norm video. Both videos were exactly seven minutes and ten seconds long. The videos were broken up into several parts that described particular behaviors. The videos discussed similar but opposing behaviors in each section. To control for this, both videos spent the same amount of time (within 1 second) on each section. Both videos conclude by asking participants to increase their conservation efforts. All of the information presented in the clips described real behaviors that people do, but the proposed frequency with which some of these behaviors occur was exaggerated in order to portray them as norms.

As dependent variables, participants filled out demographic information, several emotional responses, and completed Dunlap's (2000) New Ecological Paradigm scale as well as other items pertaining to responsibility, self-efficacy, and saliency of norms. However, the primary measure of conservation behaviors was a modified version of Western Washington University's sustainability pledge. The pledge consisted of 34 behaviors that participants could be or were already doing. The behaviors were broken up into six categories, which are: energy, waste, food, water, transportation, and education. Participants were asked to rank from 1 (not at all) to 5 (very much) how often they currently did each behavior, and given the opportunity to commit to increasing that behavior on the same 1 to 5 scale.

**Results**

Statistical testing found that participants in the combined norm condition expressed greater happiness, more encouragement, and higher levels of optimism than those in the contrasting norm condition. It also found that participants in the contrasting norm condition expressed greater sadness, more discouragement, higher levels of pessimism, and



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marginally more worry than those in the combined norm condition.

A similar test was also used to examine whether or not participants committed to increase their conservation behaviors. Participants in the combined norm condition and participants in the contrasting norm condition committed to increase their current environmental behaviors. Upon closer examination, testing showed that participants in the combined norm condition committed to significantly increase their current conservation behaviors on 24 of the 34 possible items. Those in the contrasting norm condition committed to significantly increase their behavior on only 13 of the 34 items.

The authors also measured the difference between participant scores on the New Ecological Paradigm (NEP) scale after the movies. The scores were significantly different between groups on two items in the measure. In regard to item 6 on the NEP, which states that the earth has plenty of natural resources if we learn how to use them, participants in the combined norm condition ranked this statement as more true than participants in the contrasting norm condition. In regard to item 10, which states that the current ecological crisis has been greatly exaggerated; participants in the combined norm condition marginally agreed more with this statement than participants in the contrast condition.

**Discussion**

The results support the first hypothesis that the combined norm video would promote positive emotional responses, while the contrasting norm video would promote negative emotional responses. These results support the second hypothesis in part. The author hypothesized that the combined norm video would cause participants to commit to increasing their conservation behaviors but that the contrasting norm video would not. Participants in the combined norm condition significantly committed to increase their behaviors on 24 of the 34 items, but those in the contrast condition also committed to increase 13 of the 34 items. Because of this difference, it is appropriate to say that the combined norm video was more effective at promoting commitments to increased conservation behaviors. However, based on the literature, the author did not expect participants in the contrasting norm condition to commit to increase their environmental behaviors at all. When people are distressed and feel that they have no power to control a situation, they often deny that the problem exists (Gardner & Stern, 2002; Kates, 1962; and Lehman & Taylor, 1987). However, people who adopt the core beliefs of environmental movements accept that environmental



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problems are real, and that they have the potential to disrupt their lives (Dunlap, 2000; Gardner & Stern, 2002; Stern et al. 1999). Participants in both the combined norm (Mean = 3.64) and the contrasting norm (Mean = 3.82) ranked relatively higher on the NEP than the average endorsement of the NEP in the United States (Mean = 3.42) (Shultz, 2000). This indicates that compared to most Americans, WWU students may be more likely to identify themselves with the environmental movement.

In the case of environmentalists, it may therefore be possible that instead of denying the problem when presented with information that increases perceived threat, they prepare more for the potential disaster because they have already accepted that the problem is real. Stern et al. (1999) theorized that three essential concepts are necessary for individuals to begin acting in environmentally friendly ways. The Value-Belief-Norm (VBN) theory states that if an individual values a particular object, believes that it is in danger, and develops a personal norm for action, they will engage themselves in behaving consistently with that belief. If WWU students have already endorsed the first component of Stern et al.'s (1999) VBN theory, then when presented with the threat, they may endorse a personal norm for participating in more environmentally significant behaviors. However, further research is necessary to see if environmentalists are more likely to be positively influenced by contrasting norms than non-environmentalists.

One shortcoming of the current experiment is that it was not possible to include a control group for comparison. This is a critical contrast that this study failed to address. Because the author considered this a pilot study, it was not of primary concern. However, because the videos have shown to produce the intended emotional responses and to promote commitments to increase conservation behaviors, future related studies should include a control group as well as slight adjustments to the videos.

The complexities surrounding sustainable behavior promotion are many and challenging. However, significant achievements have occurred in the last twenty years that are helping to increase sustainability efforts around the world. The problems surrounding issues like global warming, toxic hazards, and other global health risks require participation from the majority of citizens from the majority of countries all around the world. For these reasons it is imperative that we encourage sustainable behaviors of all types and at all levels of society if we hope to preserve a healthy planet for future generations to inhabit.



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