Eco-Guilt:

Personal Responsibility and Actual Behavior’s Affect on Environmental Guilt

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Abstract

In this study, individuals’ levels of personal responsibility and actual behavior towards protecting the environment were studied to examine the effects both these variables would have on the individuals’ environmental guilt or “eco-guilt.” The research measured 95 participants’ personal eco-guilt through surveys. Half received a manipulation that was used to make them feel responsible for their environment’s destruction while the other half fell into a control group. It was predicted that eco-guilt should be highest when individuals feel they should be engaging in pro-environmental behavior but they are not doing so. Conversely, eco-guilt should be lowest when individuals feel they should be engaging in pro-environmental behavior and they do so. Our hypothesis was supported and we conclude that both variables: personal level of responsibility and actual behavior towards the environment, strongly affect how eco-guilty an individual will feel.

(Word Count 138)
Eco-Guilt: Personal Responsibility and Actual Behavior’s Affect on Environmental Guilt

In a world in which human beings are known as the most intelligent species that exist, it is strange to find that only few play a role in preventing the disastrous effects we ourselves place on our environment. If everybody recycled, then the countless vibrant forests would not be destroyed for the mere production of disposable tissue paper. If everyone used public transportation, then the high energy-consuming automobiles emitting dangerous levels of carbon dioxide would not be polluting our air at the same rate it does now. If everybody stopped using toxic chemicals that further contribute to the depletion of the ozone layer, then global warming would not be as big of a crisis as it is today. Case in point, if everyone were as environmental friendly or “eco-friendly” as possible, then our environment would be the safest and healthiest place to exist for all species on Earth. Unfortunately, this is not a perfect world in which everyone works together to protect our environment. However, environmentalism is a global issue that affects every single one of us. In order for us to find solutions that will protect our environment, it is imperative we understand the psychological aspect of individuals that cause them to take part in protective or unprotective environmental behavior in the first place. The question then that this research experiment is trying to answer is specifically what determines whether or not an individual will demonstrate actions that protect the environment and to what extent will they feel guilty about it if they do not. This research proposes to address three components in an individual: the cognitive aspect, the behaviorally based attitude, and the affective response in engaging or not engaging in ecofriendly behavior. In other words, what individuals think they should be doing (cognitive) and what they actually do (behavioral) will determine how guilty they feel (affective). Thus, this study will focus primarily on the environmental guilt or “eco-guilt” within individuals based on these psychological principles.
Guilt is defined as the dysphoric feeling associated with the recognition that one has violated a personally relevant moral or social standard. As an individual develops, guilt emerges along with a sense of responsibility regarding cultural rules for social behavior (Kuglar & Jones, 1992). Thus, the phenomenon of guilt is relevant in this study as we examine the role it plays in determining whether or not an individual will take action to protect the environment in the future. We hypothesize that eco-guilt should be highest when individuals feel they should be engaging in pro-environmental behavior but they are not doing so. Conversely, eco-guilt should be lowest when individuals feel they should be engaging in pro-environmental behavior and they do so.

Predictors of Eco-guilt

McGraw (1979) explains that we experience guilt when we are personally responsible for negative outcomes that violate social or moral norms. Thus, the attribution of responsibility is a key construct in understanding the emotion of guilt. For example, if participants are randomly assigned to a condition in which they are told it is a social norm to recycle paper in an effort to conserve trees then they are manipulated to believe it is their personal responsibility to protect the environment. If they do not recycle, then they are more likely to feel guilty for violating the social norm. However, the opposite is also true. If the same group is placed in a condition in which they are told it is not a social norm to recycle then they are less likely to feel personally responsible and therefore less likely to experience eco-guilt. To further illustrate this case, Ferguson & Branscombe (2010) conducted a research study on collective environmental guilt in which they found that the level of personal responsibility an individual thinks they have towards a certain outcome determines how guilty they will feel. For instance, their results demonstrated that collective guilt for Americans’ greenhouse gas emissions is stronger when participants
believe that global warming is caused by humans other than something else. Thus, the more responsible an individual feels towards a negative outcome in the environment, the more likely he or she will experience eco-guilt. To expand on this discussion in terms of actual behavior, if people are already very protective of their environment and they do recycle on a regular basis, then they are more likely to report having lower levels of eco-guilt regardless of whether they are manipulated to believe it is their personal responsibility or not. Clearly, based on their actual eco-friendly behavior, it is evident they already believe it is their personal responsibility and so they will not be affected by any manipulation. Here the opposite can also be true. If someone does not recycle or does not exhibit any type of behavior that protects the environment, then they are more likely to report feeling higher levels of eco-guilt regardless of whether or not they believe it is their personal responsibility. Simply being unhelpful when knowing there is so much one can do to help produces guilt in an individual. Therefore, another important predictor of eco-guilt is an individual’s actual behavior because based on how protective or unprotective a person already is towards their environment strongly determines how eco-guilty they will feel.

**Consequences of Eco-guilt**

According to Bierbrauer (1992), personal responsibility for norm-violation and the importance of the violated norm for one’s self-concept are the presuppositions for guilt reactions. In other words, feelings of guilt result from violating personal standards. When an individual violates their own moral code they are more likely to use their guilt as a motivator to correct their mistakes. In this sense, guilt’s function provokes proper action which promotes productive behavior. This psychologically atones the individual’s guilt and causes him to change for the better. For instance, in the study previously mentioned, Ferguson & Branscombe (2010) also found that when people believe that their group is responsible for harming the natural world and
that the damage can be repaired (such as when the effects are relatively minor), their feelings of collective guilt are likely to elicit behaviors to repair the harm done. As with guilt based on one’s personal behaviors, guilt based on an ingroup’s collective behaviors can foster pro-environmental behavior as well (Ferguson & Branscombe, 2010). Likewise, in my own example, I described a situation in which a group of people are randomly assigned to a condition in which they feel it is their personal responsibility to recycle in an effort to conserve trees and thus protect the environment. I reasoned eco-guilt is highest in these people who report that they do not recycle. However, by not following the social norm to recycle, these same individuals will try to alleviate their eco-guilt by using it as a motivator that will help cause them to recycle in the future. Clearly, the consequences of eco-guilt can help an individual make corrections in their behavior, thus allowing them to be more responsible in the future.

We predict that eco-guilt should be highest when individuals feel they should be engaging in pro-environmental behavior but they are not doing so. Conversely, eco-guilt should be lowest when individuals feel they should be engaging in pro-environmental behavior and they do so. It is important to examine the emotion of eco-guilt in a world in which so many intelligent people do not take action to protect the environment. By understanding the varying levels that determine personal responsibility and its relation to guilt, we are more capable of predicting who is more likely to engage in pro-environmental behavior. In addition, by examining the consequences of guilt, we are more likely to form an effective resolution that will cause people to feel eco-guilty in an effort to make them correct their behavior so they become eco-friendly in the future. Thus, this research experiment proposes to create a safer and healthier environment by studying the construct of eco-guilt and how it can be used to create a positive change in everyone as well as the world.
Methods

Participants

In our study we recruited a sample of convenience that included 95 participants; 59 of which were female and 35 were male. The majority of the participants were White (62), with 11 Hispanics, 10 Asians and 8 African Americans. The mean age of the group was 25.86 (SD = 9.97) and the range was from 19-57 years old. Most of our participants were college students. Also, all of the participants were volunteers. The participants gave their consent verbally by agreeing to take part in the study.

Design

In our research we used a 2(responsibility: responsible, not responsible) x 2(actual behavior: engaging in eco-friendly behavior, not engaging in eco-friendly behavior) between-subjects design with eco-guilt as our dependent variable. We manipulated value of personal responsibility as our first independent variable (IV) and we measured actual behavior as our second IV. Based on the IVs, we then measured the dependent variable (DV) which was a participant’s feeling of eco-guilt. The dependent variables were self-reported personal eco-guilt about the current state of the environment.

Materials and Procedure

Participants were asked to complete a survey packet and if they had any questions they were allowed to ask the experimenter.

Demographics. Participants were asked to report their gender, age, and race/ethnicity.

Responsibility Manipulation. Next, participants were asked to rate statements about the environment after reading one of two following writing prompts:
No Responsibility Prompt

Since scientists first detected the cumulative effects of our failure to recycle, the state of our environment has continued to rapidly deteriorate. The amount of waste and pollution that individuals generate in this country has increased at an alarming pace. If each person does not start reusing and recycling materials then the world will start running out of available resources. Critics say that citizens of developed nations, including the U.S., are some of the worst environmental offenders. In fact, some believe that individuals who live in countries such as the U.S. are primarily responsible for environmental damage. However, these individuals do not have access to resources or power to change their environmental practices, making it unreasonable to hold them responsible. Therefore, I disagree with this criticism and I do not place the responsibility on each individual for protecting the environment.

Responsibility Prompt

Since scientists first detected the cumulative effects of our failure to recycle, the state of our environment has continued to rapidly deteriorate. The amount of waste and pollution that individuals generate in this country has increased at an alarming pace. If each person does not start reusing and recycling materials then the world will start running out of available resources. Critics say that citizens of developed nations, including the U.S., are some of the worst environmental offenders. In fact, some believe that individuals who live in countries such as the U.S. are primarily responsible for environmental damage. These individuals who have access to resources also have the greatest
power to change their environmental practices, thereby serving as a model for individuals who live in developing nations. Therefore, I agree with this criticism and I place the responsibility on each individual for protecting the environment.

These prompts are structured to be parallel to each other to ensure that the prompts were adequate manipulations. A manipulation check was also placed at the end of the prompts to ensure that the Responsibility and No Responsibility prompts both produced their respective emotions. The manipulation check was also constructed based on the following Likert scale:

<table>
<thead>
<tr>
<th>Question</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>How persuasive was the information in the editorial?</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>How clearly was the editorial written?</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>How responsible is each individual for protecting the environment?</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

**Actual Behavior Measure.** The participants were asked to report their actual behavior towards the environment. This was asked at the end of the questionnaire to not arouse the participants’ suspicion that their actual behavior was one of the independent variables.

**Thinking about your CURRENT BEHAVIOR, to what extent do you engage in the following behaviors...**

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycle plastic bottles</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Turn off lights when not in use</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Recycle paper by using both sides</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Get off of mailing lists to reduce unnecessary junk mail</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Take your own water bottle to refill throughout the day</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Purchase energy-saving lightbulbs</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Make your printer’s toner last by printing in draft mode for works in progress</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Carry your lunch in reusable plastic containers</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Take the bus or ride a bike instead of driving</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Buy locally produced meats and produce</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>
*Eco-guilt.* Participants were then asked to report how guilty they felt for engaging in five actual behaviors. This survey they completed asked them to report levels of eco-guilt. The prompts were followed by the following brief survey measuring levels of personal eco-guilt:

**Thinking about your own PERSONAL BEHAVIOR, to what extent do you personally feel GUILTY that you…**

<table>
<thead>
<tr>
<th></th>
<th>not at all guilty</th>
<th>extremely guilty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consume non-renewable natural resources (e.g., oil).</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Contribute to global warming.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Can do more to minimize the impact that you have on the environment.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Do not always recycle (e.g., cans or paper).</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Waste natural resources.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

**Results**

We began by testing the effectiveness of the manipulation of responsibility. We found that contrary to predictions, participants in the induced responsibility reported higher levels of eco-guilt compared with those in the condition that were not manipulated to take personal responsibility ($M=3.24$, $SD=5.52$) or no responsibility ($M=1.12$, $SD=1.98$), $t(94)=3.46$, $p=.001$. Therefore, we concluded our manipulation of responsibility worked.

We used a 2(responsibility: responsible, not responsible) X 2(actual behavior: engaging in eco-friendly behavior, not engaging in eco-friendly behavior between-subjects ANOVA to test our hypothesis. We expected that there would be an interaction between responsibility and actual behavior on their feelings of personal eco-guilt.

**Eco-guilt**

There was a main effect of responsibility on feelings of eco-guilt. Participants who felt personally responsible for protecting the environment reported more eco-guilt ($M=3.24$, $SD=5.52$) than participants who felt little or no responsibility for protecting the
environment ($M=1.12$, $SD=1.98$, $F(1,91)=12.36$, $p=.001$). In addition, there was a main effect of actual behavior on feelings of eco-guilt. Our results indicate that participants who were not engaging in eco-friendly behavior felt more guilty ($M=6.52$, $SD=7.20$) than those who were in engaging in eco-friendly behavior ($M=1.10$, $SD=1.87$, $F(1,91)=13.27$, $p=.000$). As predicted, there was a significant spreading interaction between responsibility and actual behavior on personal eco-guilt (see figure 1), $F(1,91)=13.89$, $p=.000$. When participants did not engage in eco-friendly behavior and did not feel personally responsible for protecting the environment, eco-guilt did not differ as a function of behavior. However, when participants did not engage in eco-friendly behavior but did feel personally responsible, they reported feeling higher levels of eco-guilt.

Discussion

We predicted that eco-guilt should be highest when individuals feel they should be engaging in pro-environmental behavior but they are not doing so. On the contrary, eco-guilt should be lowest when individuals feel they should be engaging in pro-environmental behavior and they do so. Our results for personal eco-guilt were congruent with our predictions as we found that personal responsibility did have an effect on personal eco-guilt. We found that those who were manipulated to feel personally responsible experienced higher levels of personal eco-guilt than those that were not manipulated to feel responsible. Under these same conditions, we found that those that were not engaging in eco-friendly behavior felt more eco-guilt than those who did.

Our results correspond with the research findings of previous experiments in that the levels of eco-guilt correlate with an individual’s personal responsibility and actual behavior. As McGraw (1979) clearly states, the greater one’s responsibility for a negative outcome, the more
guilt one should feel. He goes on to explain that greater levels of guilt are experienced when followed by intentional transgressions. This is because more responsibility is attributed to intentionally produced outcomes. This means that people who intentionally harm the environment directly (littering) or indirectly (wasting paper) are more likely to feel higher levels of eco-guilt than those who accidentally or unintentionally harm the environment (oil spill, forgetting to recycle, etc) because they feel a greater sense of responsibility. This basic principle is supported in our experiment as we too found participants more eco-guilty if they felt they were more personally responsible. In addition, Ferguson & Branscombe’s (2010) present research (as discussed earlier) supports the notion that personal levels of responsibility can indeed create more eco-guilt in an individual and even cause them to change their current behavior. They have found, however, the change in behavior is even greater when collective guilt is produced rather than individual guilt. When people believe that their group is responsible for harming the natural world and that the damage done can be repaired, their feelings of collective guilt are likely to elicit behaviors to repair the harm done (Ferguson & Branscombe, 2010). As with guilt based on one’s personal behaviors, individual guilt can also foster pro-environmental behavior as long as they feel personally responsible for protecting the environment. Lastly, as cross-cultural researcher Bierbrauer (1992) noted, guilt reactions are mainly caused by an individual’s sense of personal responsibility for norm-violation and the importance of the violated norm for one’s self-concept. This means that in order for a person to really feel personally responsible for violating a social norm and causing them to correct their behavior, one must first believe the social norm is worthy of not violating. The norm must first be valuable and in line with a person’s moral code in order for the person to feel responsible and to take actions to correct their behavior. Otherwise, the person will not care and will continue to violate the norm. What this means is that pro-
environmental behaviors should be promoted and emphasized to the point where everyone feels they are personally responsible for following the norm to be protective of the environment. Eventually, it will become essential to follow the norm of engaging in eco-friendly behaviors and if people choose not to then they will be frowned upon and stigmatized thus producing higher levels of eco-guilt and causing them to change their behaviors. With all this in mind, it is evident that levels of personal responsibility and actual behavior can regulate the amount of eco-guilt in individuals making both these variables valuable instruments in stronger efforts to promote a sustainable world for future generations.

Implications

Our results imply that there is a relationship between an individual’s feelings of personal responsibility and eco-guilt as well as a person’s actual behavior and eco-guilt. With this in mind, we can influence a person’s apathetic behavior towards the environment by producing guilt in such individuals so that they actively take action to protect the environment. It is crucial to understand the importance of this study because eco-guilt promotes protective behavior towards the environment. This study supports the existence of eco-guilt and helps further our understanding of people’s feelings and actions towards the environment. Using this knowledge, we can apply our findings of eco-guilt and influence people’s behavior by portraying eco-friendly behaviors in public media that heighten an individual’s sense of personal responsibility towards the environment thus causing the individual to take action to protect it.

Limitations

Although both our findings supported our hypothesis, there are several aspects of our study that could be changed to produce more accurate results. For instance, had our sample size been larger, our findings could better generalize towards a greater population. Speaking of
which, the population sample represented in the study features people mainly living in Chicago, Illinois. Our results may have been different if we included other cities and even other countries especially taking into consideration the “collectivist” mindset most other states and countries have. Secondly, another restriction placed on our experiment is regarding the participants’ anonymity. Even though all participants in the study are anonymous, they may have felt their answers were less confidential simply because of the manner in which they were answering them (on physical packets, close to peers, in a rush, etc). If they were given the survey online or had a private space at the time they were completing the survey, they may have felt more anonymous and comfortable providing us with more truthful answers. Finally, the manipulation check given may not have produced a significant difference in our manipulated responsibility group and our control group as we might have expected. However, because our findings confirm our hypothesis, it is safe to say that it did work to some extent. Still, it is essential we verify our manipulation check and make sure it creates a significant difference in all conditions. We can do this in a variety of ways. Instead of our responsibility manipulation taking the form of a paragraph prompt, we can use other visual techniques such as advertisements or pictures with emotional and thought-provoking captions to produce a stronger sense of personal responsibility in an individual. Such methods work exclusively to confirm the manipulation check, giving the experiment higher levels of internal validity as well as test-retest reliability.

Future Research

Our experiment helped to establish the existence of eco-guilt, however further investigation is necessary to understand if eco-guilt can significantly influence behavior. Moreover, future experiments could test to see if people were more likely to engage in environmentally protective behaviors after expecting feelings of eco-guilt. This new experiment
would manipulate participants into feeling eco-guilt and then test their tendency for pro-environmental behavior. For example, we could first produce eco-guilt in individuals by showing them an advertisement geared towards protecting the environment. Then, as they are dismissed, we could form a scenario without their awareness that tests to see whether or not their eco-guilt motivates them to correct their behavior. For instance, we could create a situation in which newspapers are scattered all over the ground next to a recycling bin and watch to see if our participant takes action to recycle the newspapers or chooses to walk right past them. This kind of situation is important because not only does it serve as a manipulation check, but it also tests to see whether or not eco-guilt can actually change one’s behavior. Thus, experiments like these could and should be tested in the future to examine more closely the affect eco-guilt has on an individual’s personal level of responsibility as well as their actual behavior.

Conclusion

As human being’s harmful effect on the environment continues to be researched, potential strategies to combat our own negative impact on the world are repeatedly surfacing. Our study indicates that eco-guilt towards the environment is highest when people believe they should be protective of the environment but they are not. This finding allows us to promote eco-friendly behavior by harnessing the eco-guilt people have and using it to correct their behavior towards the environment. The first steps we could take to promote eco-friendly behavior could be to spread information. Many people do not see their own impact on the environment and thus do not feel it is their personal responsibility to protect it. Just as packs of cigarettes have blatant warnings of smoking’s hazardous consequences, so too could we tap into the same strategy by showing advertisements of landfills, oil spills, etcetera to these same people who are completely unaware. Once these people do become aware of the issue, the next step we could take would be
to educate them on the myriad of ways they can help protect the environment through recycling, use of public transportation, refilling water bottles, etc. The ultimate goal is to further our understanding of the construct of eco-guilt so that eventually we can use its power to influence people to drive hybrid cars and stand side by side with the purpose of protecting the environment and saving our planet.
References


Figure 1: Measurement of Personal Eco-Guilt