

THE EFFECT OF GROUP CATEGORIZATION ON INJUSTICE STANDARDS, HARM  
JUDGMENTS, COLLECTIVE GUILT AND MOTIVATED BEHAVIOR

By Anne D. Herlache

This study focuses on whether or not participants' group categorization would impact the standards they used to judge future harm to an outgroup. In this case, harm is referring to current paper waste in university computer labs and the financial and stress-related consequences this carries for future students. Also of interest is whether or not the participants' judgments of harm would impact collective guilt (the guilt felt on behalf of the ingroup) and if collective guilt would impact willingness to help the outgroup (i.e. engage in conservation of resources—proenvironmental actions). Participants in the inclusive condition (who saw themselves as part of a group including future students) were expected to set lower standards of harm (require less evidence to believe harm had been done), judge more harm had been done, feel more collective guilt, and be more willing to engage in proenvironmental actions, as compared to participants in the exclusive condition (current students only). The manipulation alone was not sufficient to impact the predicted variables; however, the interaction of the group categorization manipulation and level of group identification did differentially impact collective guilt and willingness to engage in proenvironmental actions in an unexpected way. Participants who were highly identified with their group and were in the exclusive condition felt more collective guilt and were more willing to engage in proenvironmental actions than participants who were less identified with their group. Implications of the findings are discussed in terms of changing proenvironmental behavior.

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by

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## Introduction

Given the current focus on environmentally friendly living, conservation of resources has become part of everyday discourse and events. The way we are exposed to this “green” zeitgeist varies from debates on alternative forms of energy, to car companies touting their vehicles’ increased miles per gallon, to new green buildings on campus. We encounter evidence of a proenvironmental movement on a daily basis, but what influences our judgments about the value of these innovations? The current study seeks to better understand people’s reactions to resource conservation.

This research focuses on how current university students judge the impact they will have on future students in the context of poor resource conservation (i.e., paper waste in the campus computer labs, which could create financial and stress-related consequences for future students). Specifically, the research presented in this paper explored how group dynamics (i.e. ingroup vs. outgroup) can impact the judgments people make. If current students see themselves as part of a group that includes future students, will they require less convincing to believe that harm will befall the future students? Conversely, if current students see themselves as part of a group that does not include future students, will they require more evidence to believe harm has been done?

A confirmatory standard of injustice is defined as the amount of evidence that is required to determine whether or not a person or group definitely has a particular attribute (Miron, Branscombe, & Biernat, 2010). The current research took a closer look at the confirmatory standards used to judge the effect of an ingroup’s (i.e. current students)

paper waste on future students and investigated how those standards affect collective guilt and willingness to help future students.

Consider a hypothetical situation of Corporation Y being subsumed by Corporation X. Corporation X employees are wondering whether or not the Y newcomers have what it takes to succeed. If they are thinking of them as fellow employees in Corporation X (part of the ingroup), they will require less evidence (a lower confirmatory standard) to think of them as competent workers. On the other hand, if they are thinking of them as interlopers from another company (outgroup), they will require more evidence to think of them as capable in their new positions (Biernat & Kobrynowicz, 1997).

Now, let us imagine that Corporation Y employees have to take a cut in pay to keep their jobs after the merger. Corporation X employees who see them as part of the ingroup would require less evidence to view this as unfair, think more harm was done, and consequently feel more collective guilt than Corporation X employees who saw people from Y as foreign intruders. All of the illustrated processes start with how one group categorizes members of another group (outgroup vs. ingroup) (Brockner, 1990; Wenzel, 2001).

## Group Identity

Group identity colors how we perceive many things throughout life. It seems as if humans cannot help but to categorize incoming information; categorization is a shortcut that expedites the understanding of a complex world (Tajfel, 1969; Macrae, Milne, & Bodenhausen, 1994). One form of categorization is seen in how we evaluate others. Is a

particular individual in the same group as us or a different one? As we saw in the above example, this can depend on how the person's social category is framed (ingroup vs. outgroup).

As the example illustrates, group identity is often situational. Minard (1952) studied racial interactions between White and Black coal miners in West Virginia. He found that White coal miners would treat Black miners as their equals within the work environment but would treat them as social inferiors outside of the mine. Normative pressures in the mid-1900s weighed upon the miners' interactions; when it comes to group formation, context is highly important (Yzerbyt & Kuppens, 2009). Yzerbyt and Kuppens (2009) argue that attitudes are inherently flexible and are fashioned each time we believe an evaluation to be necessary. Due to this flexibility, attitudes, such as how one identifies with a group, are context-sensitive (e.g. a coworker in a mine or another person in one's hometown) (Smith & Conrey, 2007).

**Self-categorization theory.** Self-categorization theory examines the role of contextual salience on group identification. Turner and colleagues' research suggests that people, when group identity is salient, see themselves as interchangeable prototypes of the group rather than as separate, unique individuals (Haslam, Turner, Oakes, McGarty, & Reynolds, 1998; Oakes, Haslam, & Turner, 1994; Turner & Onorato, 1999). This can lead to shared higher-order identity (i.e. group identity, e.g. "we Wisconsinites," "we Americans," etc.). When describing themselves people often reference group identity, frequently before referring to the unique personal qualities of the self (McGuire & McGuire, 1988). Such examples demonstrate that social identities are as much a part of

the representation of *self* as personal qualities. This notion is a central component of the self-categorization theory (Onorato & Turner, 2004).

When it is made salient, social identity can even lead to self-stereotyping— ascribing ingroup-defining traits to the self. This is more likely to occur when a person is in a situation involving an outgroup (intergroup comparison) rather than the ingroup (intragroup comparison). For example, Hogg and Turner (1987) found that stereotypical gender traits were applied to the self more strongly in an intergroup condition (two females debating two males) than an intragroup condition (two same-sex individuals expressing opposing views).

Onorato and Turner (2004) found similar evidence in a study on dependence/ independence and gender stereotypes. They predicted that all men (even those who would normally rate higher on dependence than independence) would respond in line with their social identity as male (i.e. independent) when gender identity was made salient. Similarly, they predicted that all women, even those highly independent, would offer responses more in keeping with stereotypical gender qualities of dependence when identification with their gender was primed. Moreover, they predicted that, when their gender is made salient, participants would respond quickly and confidently, irrespective of how they thought of themselves previously (e.g. whether or not women thought of themselves as independent).

In their second experiment, Onorato and Turner (2004) had female undergraduates fill out an initial questionnaire that was used to identify them as having either high or low independence. Participants were then either person- or group-primed.

Person-primed participants rated the degree to which each of three traits (tactful, cautious, and dependent) was more characteristic of them than of the typical woman. They were also asked to explain each of their ratings in a few sentences. Group-primed participants were asked to rate the same three traits, but the phrasing of the questionnaire was altered. This group was asked to what degree the traits were more typical of women than men. The participants then completed a response latency task where they were either instructed to think of themselves as an individual (personal condition) or as a woman (social condition). The task had them rate 84 trait adjectives as either me/not me (personal condition) or us/them (social condition referring to women vs. men) and how confident they felt about their response on a scale from one to six.

Onorato and Turner's (2004) data show that even women in the high independence category gave responses in keeping with gender stereotypes when in the social condition. Not only did they respond affirmatively to questions that implied dependence, they also did so more quickly than to questions that implied independence (when the gender group was primed). This study demonstrates how social identity, when made salient through self-categorization at the group level, can override traits of personal identity. This perceived interchangeableness of group members (e.g. women or men within their gender group) and focus on the similarities between a person and other group members is known as the depersonalization process, which influences phenomena such as stereotyping and prejudice (Yzerbyt, Dumont, Gordijn, & Wigboldus, 2003).

Given that self-esteem can derive from group categorization (Yzerbyt & Kuppens, 2009), it follows that people who are strongly identified with their group are more

motivated to invoke coping strategies to protect their positive mental representations of said group (Ellemers, Spears, & Doosje, 2002). When the ingroup's image is threatened by an outgroup, the protective measure can involve the derogation of the outgroup (Branscombe & Wann, 1994; Ellemers et al., 2002). This places the ingroup in a comparatively favorable light. When one's group has wronged another group, a way to maintain a positive view of the ingroup is through altering how one interprets the harm done. The group members may assess the harm as "not that bad" and therefore not worthy of eliciting guilt (Branscombe & Miron, 2004; Walster, Berscheid, & Walster, 1973).

Another possible influence on outgroup evaluation is reduced salience of group boundaries. One specific strategy is *decategorization* (Dovidio & Gaertner, 1999). Decategorization can be brought about by providing examples where outgroup members are seen as individuals rather than exemplars of the other group. For example, a person may be assigned to work on a task with a partner who happens to be from an outgroup. The process of collaborating could help the person to cease seeing the partner in terms of outgroup stereotypes. *Recategorization*—another strategy—occurs when members of the ingroup are induced to perceive that members of the outgroup share attributes with the ingroup. In this way, people begin to appraise outgroup members as part of the ingroup. Improved group relations can be an outcome of both decategorization and recategorization (Urban & Miller, 1998).

**Common Ingroup Identity Model.** Another form of the recategorization process is proposed in the Common Ingroup Identity Model (Gaertner, Dovidio, Anastasio,

Bachman, & Rust, 1993). The main assumption of this model is that intergroup relations can improve if people perceive their ingroup and an outgroup as both being part of one inclusive ingroup. While the cross-cutting form of recategorization works by mixing two groups, the Common Ingroup Identity Model causes the group members to categorize themselves at a higher level, as part of a superordinate group that also includes the former outgroup.

Tarrant, Dazeley, and Cottom (2009) used a social categorization manipulation in their research on empathy. In their first study, participants were led to view another person as part of their ingroup (a fellow student at their university) or as a member of an outgroup (a student at another university). The researchers found that participants felt more empathy for and were more interested in helping the ingroup target than the outgroup target, which demonstrates a pro-ingroup bias. The Common Ingroup Identity Model can improve group relations by bringing the outgroup—which was formerly subjected to a negative bias—into the fold of a more inclusive umbrella group. The new inclusive group brings with it a pro-ingroup bias that even applies to the former outgroup. This helps to reduce “us versus them” thinking (Dovidio & Gaertner, 1999).

### Shifting Standards of Harm

Some researchers investigated how participants employ different standards for different groups in situations where groups are competing for outcomes like jobs or school placements. For example, Hodson, Dovidio, and Gaertner (2002) studied White college students who evaluated applications to their university. The applicants were either

Black or White and had strong, weak, or ambiguous (mixed) credentials (as measured by high school GPA and aptitude and achievement tests). Participants scoring highly on prejudice scales weighed the ambiguous credentials in a way that rationalized their preference for admission of White students over Black students. They tended to focus on the good in the White applicants' files and the bad in the Black applicants' files, even though the applicants were equally qualified. This study showed a difference in judging criteria of adequacy depending on the applicant's race.

Recent research has moved to studying *quantitative* standard shifting in the context of judgments of justice. A *confirmatory evidentiary standard* (Biernat & Fuegen, 2001) refers to the amount of evidence that is required to determine whether or not a person or group definitely has a particular attribute. With regard to judging the injustice of an ingroup's actions, if the ingroup is perceived as having done harm to the outgroup, the protective measure may take the form of shifting the threshold for what is deemed an injustice (i.e. asking for more evidence to appraise the harm as unjust—a higher confirmatory evidentiary standard) (Miron, et al., 2010).

An essential component for the manifestation of guilt is the appraisal that the self or the ingroup has committed an injustice (Branscombe, Doosje, & McCarthy, 2003; Devine, Monteith, Zuwerink, & Elliot, 1991; Wiker, Payne, & Morgan, 1983). If ingroup members set high standards of judgment, they will not perceive injustice in the outcomes of their actions and have little to feel guilty about. Shifting one's views of injustice by setting a higher confirmatory evidentiary standard is protective for the ingroup's positive identity (Miron et al., 2010; Miron, Warner, & Branscombe, in press).

Miron et al.'s (2010) study illustrated how group-protective motivation can impact the shifting of confirmatory evidentiary standards. Participants were asked to make judgments about past actions taken by their ingroup (e.g., "what constitutes injustice" when referring to America's past slavery practices. Put another way, how much harm would need to have been done in order to call America's past actions racist? By setting lower standards, participants can more readily admit harm has been done). Participants who were highly identified with the ingroup (Americans) were hypothesized to make a more lenient assessment of the ingroup's actions (require more evidence—a higher confirmatory evidentiary standard) when compared to those participants who were less identified with the group. The results supported the authors' hypotheses. High identifiers set higher standards (as compared to low identifiers) and, as a result, judged that less harm was done to African Americans. This also led to high identifiers feeling lower levels of collective guilt. This research illustrated how motivational concerns (i.e. group identification) can prompt people to shift the standards they use to make judgments and how that shift impacts both the subsequent judgments as well as the emotional outcomes of said judgments.

### Judgments of Harm

The standards of harm people use to judge ingroup actions affect how much harm they believe was done by the ingroup. In the study mentioned above, Miron et al. (2010) found that standards fully mediated the impact of group identification on judgments, with higher identified group members setting higher standards and judging less harm to have

been done. In turn, judgments fully mediate the impact of standards on collective guilt. Thus, group identification, standards of harm, and judgments of harm all influence the experience of collective guilt, at least when the harm in question occurred in the past (Miron et al., 2010; Miron & Branscombe, 2008).

### Collective Guilt

A study conducted by Dumont, Yzerbyt, Wigboldus, & Gordijn (2003) showed that participants who socially categorize themselves as a part of a victim group feel group-based emotions (*GBEs*) as a result of their membership in the victim group. Dumont et al. found an increased fear response in Europeans who, through subtle phrasing, were categorized as part of the same group as Americans in a study conducted a week after the 9/11 terrorist attacks, as opposed to Europeans who were not linked to Americans (i.e. who saw Americans as an outgroup). This link also led to a change in behavioral tendencies, such as seeking more information or providing support and help to the victims. Dumont et al.'s study provides support for the basic assumption proposed by the Common Ingroup Identity Model that identification with a larger group that includes both the old ingroup and a salient outgroup can influence emotions and behavior.

Previous research has shown that people are motivated to protect their ingroup's image (Branscombe & Miron, 2004; Miron, Branscombe, & Schmitt, 2006). One reason for this is that some of a person's self-esteem may be derived from the group they belong to (collective self; Tajfel & Turner, 1986). The personal self can also be source of self-esteem. The personal self is comprised of the unique qualities of the individual, as

opposed to the qualities ascribed to the self via their existence in the ingroup. Either one of these sources of self-definition (personal or collective) may be salient at any given time, depending on the context (Glasford, Pratto, & Dovidio, 2009; Turner & Onorato, 1999).

One of the theoretically necessary antecedents of group emotions—such as collective guilt—is categorizing the self as a member of a particular group (Branscombe, Doosje, & McGarty, 2003). If people are self-categorized at the group level, their reaction to a social event will differ from the reaction displayed if self-categorization were at the personal level. The degree that people share goals with their group influences the likelihood that the emotions arising from those motivations are shared. The degree of identification with the group also influences the level of intensity of the experienced group emotion with higher identification producing greater group-based emotion (Branscombe, et al., 2003).

Branscombe et al. (2003) theorize that the other necessary condition for collective guilt is that people perceive their group to be responsible for a salient illegitimate act toward an outgroup (or a violation of the ingroup's moral values). That is, anything that the ingroup did that harmed another group in a way that was not justifiable in the eyes of an ingroup member can cause collective guilt in that group member. An alternative way that collective guilt can arise is through the ingroup violating a moral value held by the group, which does not necessarily have to involve an outgroup (e.g., the ingroup being found guilty of animal abuse).

## Guilt-Motivated Actions

Reactions to collective guilt may vary. One possibility is defensive; people from the ingroup may shift the blame (Sahdra & Ross, 2007) to avoid feeling guilt, when it is either very costly or impossible to make up for the harm (Schmitt, Miller, Branscombe, & Brehm, 2008; Walster, Berscheid, & Walster, 1973). Another possible outcome is prosocial; the group may wish to make amends for harm done (Iyer, Leach, & Crosby, 2003).

Previous research has provided evidence for collective guilt motivating willingness to engage in proenvironmental behavior in the context of the ingroup's environmental harm (Herlache & Miron, 2010). In a recent study, we primed participants to self-categorize at the group level (i.e., UW Oshkosh students). They then read an introduction about wasteful uses of resources and how it can impact future generations. We measured the standards participants set for evaluating the future harm (i.e., how much evidence they required), the collective guilt they felt over the harm, and their willingness to engage in proenvironmental behaviors. The results of the study showed that participants who set lower standards of injustice felt more collective guilt and were more willing to engage in proenvironmental behavior than those participants who set higher standards. Moreover, collective guilt mediated the effect of standards of injustice on willingness to engage in proenvironmental behaviors that would help the future students' situation.

## Overview of the Current Study

We used a social categorization (the Common Ingroup Identity Model) manipulation for the current study to investigate an important antecedent of the standard-shifting process described above. The participants were instructed to read a vignette that primed them to see future students as part of their ingroup or a vignette that primed them to see only current students as part of the ingroup. This manipulation of group categorization allowed the current study to meet one of the necessary conditions to elicit group-level emotions, namely categorization at the group level. The second necessary condition was a salient illegitimate act toward another group. This condition was met through an introduction describing current students' waste in computer labs and how it will negatively impact future students, which is something current students are capable of influencing.

Standards of injustice were measured by asking current students to evaluate how much harm would be required for current students' paper waste in computer labs to be considered unjust to future students. Participants then indicated how much harm they believed current usage rates would cause future students. Following this, they filled out a collective guilt scale and a questionnaire designed to assess how likely they were to take behavioral measures to improve the situation for future students. Participants have an opportunity to make up for their group-caused harm (since future students have yet to experience the harm); therefore, those feeling more collective guilt were predicted to choose the prosocial route.

## Overview of the Hypotheses

**Hypothesis 1.** Participants in the inclusive condition (both current and future students included in the ingroup) would set lower standards of harm (they would require less confirmatory evidence of harm), indicate that more harm is currently being done to future students, feel more collective guilt, and be more likely to engage in behaviors benefiting future students than participants who were in the exclusive condition (current students only).

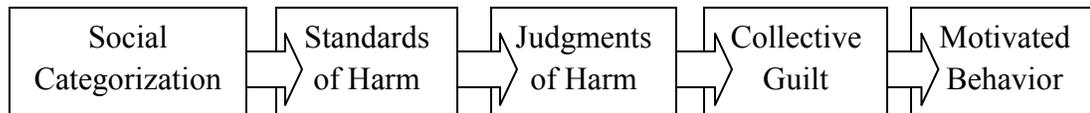
**Hypothesis 2.** Standards of harm will mediate the impact of group categorization on judgments of harm. That is, participants in the inclusive condition (both current and future students forming the ingroup) would set lower standards of harm than participants in the exclusive condition (current students only). Those standards would carry the influence of the group categorization to the participants' judgments of harm. Participants who set lower standards (who were in the inclusive condition) would judge more harm to have been done than participants who set higher standards of harm (who were in the exclusive condition).

**Hypothesis 3.** Judgments of harm will mediate the impact of standards on collective guilt (judgments would carry the influence of the standards to collective guilt). Participants who judged more harm to have been done (who set lower standards) would feel more collective guilt than participants who judged less harm to have been done (who set higher standards). Thus, judgments of harm would carry the influence of standards to collective guilt.

**Hypothesis 4.** Collective guilt will mediate the impact of judgments of harm on motivated behavior. Participants who felt more collective guilt (who judged more harm to

have been done) would be more willing to engage in proenvironmental behaviors than participants who felt less collective guilt (who judged less harm to have been done). Collective guilt would carry the impact of judgments to motivated behavior. Figure 1 displays the hypothesized mediation model.

*Figure 1.* Hypothesized mediation model.



## Method

### Participants and Procedure

One hundred and twenty-one participants (74.4% self-identified as female, 25.6% self-identified as male) were recruited from introductory psychology courses via SONA Systems and were brought into the Psychology Department laboratory in small groups (three to six participants) for a 30 minute study. The participants' ages ranged from 18 to 42, with a mean age of 19.59, and the majority of them were freshmen (64.5%). The majority of the participants self-identified as Caucasian (85.1%, Asian-American 9.1%, African-American 2.5%, Hispanic-American 2.5%, Native American .8%). Participants were randomly assigned to an experimental condition, which the researcher remained blind to. The participants received class credit in exchange for their participation.

The study took place in a standard classroom. The participants were seated at tables facing the front of a classroom with an open space (i.e. an empty chair) between each student. Participants were only seated in the front row of tables. With this seating arrangement distractions from other participants were minimal. Also, placement at the front of the classroom lowered the chances of overhearing any noise from other researchers collecting data. Participants signed an informed consent form (see Appendix A, p. 42) and received a verbal reminder that they were free to withdraw from the study at any time without any negative consequences.

The questionnaire was presented in a manila envelope. Before the questionnaire was handed out, the participants received verbal instructions. The researcher repeated the following: “Today you will be completing a questionnaire. Please read the instructions carefully. Answer the questions in the order given. I will remain in the back of the classroom. If you have any questions at any time, please raise your hand and I will assist you. When you have finished the questionnaire, slide it back into the envelope and raise your hand. I will collect the packet from you.” After the participant completed the questionnaire and raised his or her hand, the researcher approached. If the participant had not placed the questionnaire back into the envelope, the researcher reminded the participant to do so before accepting the packet (in order to remain blind to condition). The researcher then gave the participant a statement explaining the study. The participant was quietly instructed to read the paper and raise his or her hand when finished. Once the participant had read the debriefing statement and signaled that he or she was done, the researcher asked if he or she had any questions. After any questions had been answered, the researcher thanked the student for participating and escorted him or her to the door.

### Social Categorization Manipulation

The participants were instructed to read a vignette and answer group identification questions. Both of the vignettes (i.e. for the inclusive and exclusive condition) were a paragraph in length and supposedly taken from a student speech to be given at an assembly. For the inclusive condition the speech referred to positive qualities of UW Oshkosh students across time. For the exclusive condition, the speech referred

only to current UW Oshkosh students but was otherwise similar in nature to the inclusive vignette. Previous research has shown how subtle phrasing can influence group categorization (Dumont et al., 2003). Appendix B (p. 44) displays the manipulation.

### Group Identification

A measure of group identification followed the manipulation vignettes (Appendix B, p. 44). For the inclusive condition, the questions were worded to include future students as part of the ingroup. For the exclusive condition, the questions were similar, but referred to only current students. After the manipulation, the participants read an introductory statement describing how computer lab waste may impact future students (Appendix C, p. 47).

### Dependent Measures

The following dependent variables were assessed in the order described below:

**Standards of injustice.** This section was comprised of eight items rated on a 7-point scale. These items assessed the evaluative standards participants used for assessing the injustice of current students' actions. The items were indicative of how much harm will need to have been done in order for the participants to have considered the consequences of their group's actions unfair to future students (Appendix D, p. 49).

**Judgments of harm.** Judgments of harm were assessed via a questionnaire comprised of eight items measured on a 7-point scale. These items were analogous to the standards questions. The questions asked students to rate the current waste of paper in

computer labs. An item also asked what year this waste may affect future students (Appendix E, p. 53).

Collective guilt. Participants were asked to what degree they agree (ranging from 1 = *strongly disagree* to 9 = *agree strongly*) with collective guilt items. The collective guilt items were adapted from those in Branscombe, Slugoski, and Kappen's (2004) measure (Appendix F, p. 57).

Motivated behavior. Participants were asked to rate how likely they were (from 1 = *not at all likely* to 9 = *extremely likely*) to partake in several behaviors that would help to lower the negative impact of current students' printer usage on future students. The behaviors range from supporting assignments being turned in electronically (via D2L) to decreasing printer usage (Appendix G, p. 59).

### Manipulation Checks

Included in the section assessing motivated behavior, participants were asked a question designed to assess how effective the group categorization manipulation was ("how similar or dissimilar do you feel to future students?"; ranging from 1 = *very different* to 9 = *very similar*). Another question was included to determine what time period participants had in mind when they were thinking of "future students" (ranging from 2015 to 2026 or later). Participants were also asked two questions assessing how severe they believed the impact on future students to be and a question assessing how unfair they believed the situation to be for future students (on a nine-point scale ranging from 1 = *strongly disagree* to 9 = *strongly agree*). This was followed by demographic

questions (e.g. gender, age, year in school, approximate graduation date, political affiliation<sup>1</sup>, ethnic group origins, and how conservative or liberal they are) (Appendix H, p. 62).

### Debriefing

At the end of the study, the participants were given a statement describing the nature of the study (see Appendix I, p. 65). After being given time to read the paper, the participants were asked if they had any questions and were given the option to receive updates on the progress of the study. They were thanked for their time and participation before being escorted out of the laboratory area.

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<sup>1</sup> Political affiliation was originally intended to be used as a covariate but, due concerns about order of presentation, was excluded from the analyses.

## Results

### Preliminary Analyses

The analyses required the creation of several indices. The questions assessing group identification were used to create a *Group Identification* index (10 items, Cronbach's  $\alpha = .92$ , Appendix B). The questions assessing the standards participants set in regards to evaluating harm done to future students (8 items) were used to create the *Standards* index (Cronbach's  $\alpha = .71$ , Appendix D). Likewise, a *Judgments* index, referring to the evaluations participants made about harm to future students, was created (8 items, question 3 was reverse coded, Cronbach's  $\alpha = .83$ , Appendix E). A *Collective Guilt* index (4 items, Cronbach's  $\alpha = .93$ , Appendix F) was also created.

Two action indexes were created. A factor analysis with varimax rotation was performed on 13 items for a sample of 121 participants. The items loaded on two factors. One factor yielded a *Proenvironmental Action* index (6 items, Cronbach's  $\alpha = .85$ , Appendix G). This index was created to assess actions participants were willing to take that were not directly associated with guilt. The second factor produced called for the creation of a *Guilty Action* index (7 items, Cronbach's  $\alpha = .92$ , Appendix F), which was comprised of questions that were directly associated with feelings of guilt. The items in the two scales are theoretically related but distinct. Both assess willingness to act; however, only the Guilty Action index acknowledges why (i.e. a desire to "make up" for

potential harm to future students). The Proenvironmental Action index offers a way for participants to show a desire to help without continuing to acknowledge fault.

All indices that were entered as predictor variables in the regression analyses were first centered.

## Analyses

**Manipulation checks.** A general linear model multivariate analysis of variance (GLM MANOVA) was used to assess the impact of the group categorization manipulation on the manipulation checks. There were no significant differences between conditions on any of the manipulation checks (i.e. level of similarity to future students, perceived degree of injustice to future students, perceived severity of harm to future students, and time frame in mind when referring to future students), all  $F_s < 1.83$ , all  $p_s > .18$ . These results were the first indication that the manipulation of group categorization was not effective.

**Hypothesis 1.** Hypothesis one stated that participants in the inclusive condition (who were primed to include future students in their ingroup) would set lower standards of judgment, indicate that more harm is currently being done to future students, feel more collective guilt, and ultimately be more likely to engage in behaviors that conserve current resources than participants who are in the exclusive condition (participants who were primed to include only current students in their ingroup). This was not supported, as

there were no significant group differences as a function of the manipulation. A GLM MANOVA was used to test the effect of the manipulation on Standards, Judgments, Collective Guilt, Proenvironmental Action, and Guilty Action. No significant effects were found, all  $F_s < 1.42$ , all  $p_s > .24$ .

The remaining hypotheses were on the specific meditational links within the initial hypothesis. Since the link between the manipulation and the predicted variables was not established, further analyses of the hypothesized meditational processes were not pursued.

### Internal Analyses

Given the lack of significant findings supporting the hypotheses, further analyses were run to assess the role Group Identification played in predicting Standards, Judgments, Collective Guilt, Proenvironmental Action, and Guilty Action. As a reminder, group identification was measured at the beginning of the questionnaire, right after the manipulation of group categorization. The remaining analyses used multiple regression tests unless otherwise stated. The Group Identification variable was entered as a predictor with the group categorization manipulation, along with their interaction. Both Group Identification and the manipulation were centered. The interaction between the manipulation and Group Identification was also computed and then centered.

**Effects on Standards, Judgments, and Collective Guilt.** None of the three centered predictors (manipulation, Group Identification, and interaction) significantly predicted Standards ( $\beta = .02$ ,  $p = .82$  for the manipulation effect;  $\beta = -.02$ ,  $p = .82$  for the Group Identification effect;  $\beta = -.09$ ,  $p = .37$ , for the interaction). None of these predictors significantly predicted Judgments ( $\beta = -.05$ ,  $p = .58$  for the manipulation effect;  $\beta = .12$ ,  $p = .20$  for the Group Identification effect;  $\beta = -.01$ ,  $p = .94$  for the interaction). The manipulation and the manipulation x Group Identification interaction also did not predict Collective Guilt ( $\beta = .06$ ,  $p = .52$  for the manipulation,  $\beta = .14$ ,  $p = .14$  for the interaction). The effect of Group Identification on Collective Guilt was marginally significant,  $\beta = .17$ ,  $p = .06$ , suggesting that participants who were highly identified as UW Oshkosh students felt greater levels of collective guilt irrespective of group categorization.

**Effects on Proenvironmental Action.** The centered manipulation, centered Group Identification, and their interaction were entered as predictors of Proenvironmental Action. Group Identification was a significant predictor of this index of action,  $\beta = .31$ ,  $p = .001$ . Participants who were highly identified with UW Oshkosh showed a greater willingness to take part in measures that would promote conservation of resources. Neither the manipulation ( $\beta = -.13$ ,  $p = .15$ ) nor the interaction ( $\beta = .16$ ,  $p = .08$ ) were significant predictors of Proenvironmental Action.

**Effects on Guilty Action.** The centered manipulation, centered Group Identification, and their interaction were entered as predictors of Guilty Action, none of

which were significant (manipulation,  $\beta = .05$ ,  $p = .60$ ; Group Identification,  $\beta = .14$ ,  $p = .14$ ; interaction,  $\beta = -.01$ ,  $p = .88$ ).

### The Freshmen Sample

The above analyses were repeated for only those participants who were freshmen ( $N = 78$ ). We expected freshmen (post hoc) to respond more strongly to the manipulation of group categorization as a UW Oshkosh college student, as they have the most time remaining in that social context, as opposed to other classmen who are nearing the end of their college careers. Since the college experience is more salient to freshmen, information related to student activities may weigh more heavily upon their subsequent responses. Freshmen may set lower standards of judgment (i.e. require less evidence to believe harm has been done) because they may be more likely to see future students as similar to themselves. For the same reason, freshmen may be more likely than other students to judge the harm to future students to be severe. Because their group's behaviors (e.g., harm committed by their group to future generations of students) may be more important to them, they may experience collective guilt more strongly and be more willing to help rectify the injustice committed by the ingroup.

**Effects on Standards.** None of the three variables were significant predictors of Standards (manipulation,  $\beta = .06$ ,  $p = .61$ ; Group Identification,  $\beta = -.12$ ,  $p = .30$ ; the interaction reached marginal significance,  $\beta = -.22$ ,  $p = .06$ ). Given the marginally

significant interaction, slopes at 1 *SD* below and above the Group Identification mean in the two categorization conditions were computed using the online multiple regression calculator, (<http://people.ku.edu/~preacher/interact/mlr2.htm>). None of the simple effects were significant, all  $B$ s < .46, all  $p$ s > .20.

**Effects on Judgments.** Group Identification significantly predicted Judgments,  $\beta = .26$ ,  $p = .03$ . Participants who were highly identified with UW Oshkosh judged that more harm will have been done to future generations of students than participants who were less identified with the university. Neither of the other predictors was significant (manipulation,  $\beta = -.06$ ,  $p = .62$ ; and interaction,  $\beta = -.02$ ,  $p = .83$ ).

**Effects on Collective Guilt.** The centered manipulation, centered Group Identification, and their interaction were entered as predictors of Collective Guilt. Group Identification ( $\beta = .29$ ,  $p = .009$ ) and the interaction ( $\beta = .23$ ,  $p = .04$ ) were significant predictors of Collective Guilt, while the manipulation was not ( $\beta = .10$ ,  $p = .37$ ). Simple effects using the online multiple regression calculator suggested that participants who were primed to categorize themselves as current UW Oshkosh students (exclusive condition) and who were highly identified with this group felt more Collective Guilt than participants who were primed to categorize themselves as current UW Oshkosh students and who were less identified with the group,  $B = .73$ ,  $SE = .35$ ,  $t = 2.09$ ,  $p = .04$  (see Table 1 below).

Table 1

*Means of Collective Guilt as a Function of Group Identification and Manipulation of Group Inclusiveness for Freshmen only.*

	Manipulation	
	<u>Inclusive</u>	<u>Exclusive</u>
Low Group Identification	5.34 <sub>ab</sub>	4.80 <sub>a</sub>
High Group Identification	5.58 <sub>ab</sub>	6.65 <sub>b</sub>

*Note.* Means with different subscripts are different at  $p < .05$ . High Group Identification is referring to participants who have scored 1 *SD* above the mean on Group Identification. Low Group Identification is referring to participants who have scored 1 *SD* below the mean for Group Identification. This table is referring to freshmen participants only ( $N = 78$ ).

**Effects on Proenvironmental Action.** The Proenvironmental Action index measures willingness to conserve resources without including reminders of group responsibility for harm. The centered manipulation, centered Group Identification, and their interaction were entered as predictors of Proenvironmental Action. Group Identification ( $\beta = .35$ ,  $p = .001$ ) and the interaction ( $\beta = .30$ ,  $p = .006$ ) were significant

predictors of this index of action, while the manipulation was not ( $\beta = .03, p = .98$ ).

Simple regression effects suggested that participants who were primed to categorize themselves as current UW Oshkosh students (exclusive condition) and who were highly identified with this group showed greater willingness to act than participants who were primed to categorize themselves as current UW Oshkosh students and were less identified with the group,  $B = .83, SE = .38, t = 2.16, p = .03$  (see Table 2 on pg. 25).

Table 2

*Means of Proenvironmental Action as a Function of Group Identification and Manipulation of Group Inclusiveness for Freshmen only.*

	Manipulation	
	Inclusive	Exclusive
Low Group Identification	6.40 <sub>ab</sub>	5.37 <sub>a</sub>
High Group Identification	6.60 <sub>ab</sub>	7.47 <sub>b</sub>

*Note.* Means with different subscripts are different at  $p < .05$ . High Group Identification is referring to participants who have scored 1 *SD* above the mean on Group Identification. Low Group Identification is referring to participants who have scored 1 *SD* below the mean for Group Identification. This table is referring to freshmen participants only ( $N = 78$ ).

**Effects on Guilty Action.** The Guilty Action index refers to willingness to act while acknowledging one's group's responsibility for wrongdoing. Group Identification was a marginally significant predictor of Guilty Action,  $\beta = .22$ ,  $p = .06$ , but the manipulation and the interaction were not,  $\beta = .11$ ,  $p = .32$  and  $\beta = .15$ ,  $p = .20$  respectively. This suggests that participants who scored high on Group Identification were more likely than low group identifiers to try to rectify the harm done to future students, even if those actions reminded them of their guilt. While this trend is not as strong as the one shown for Proenvironmental Actions, it is still informative.

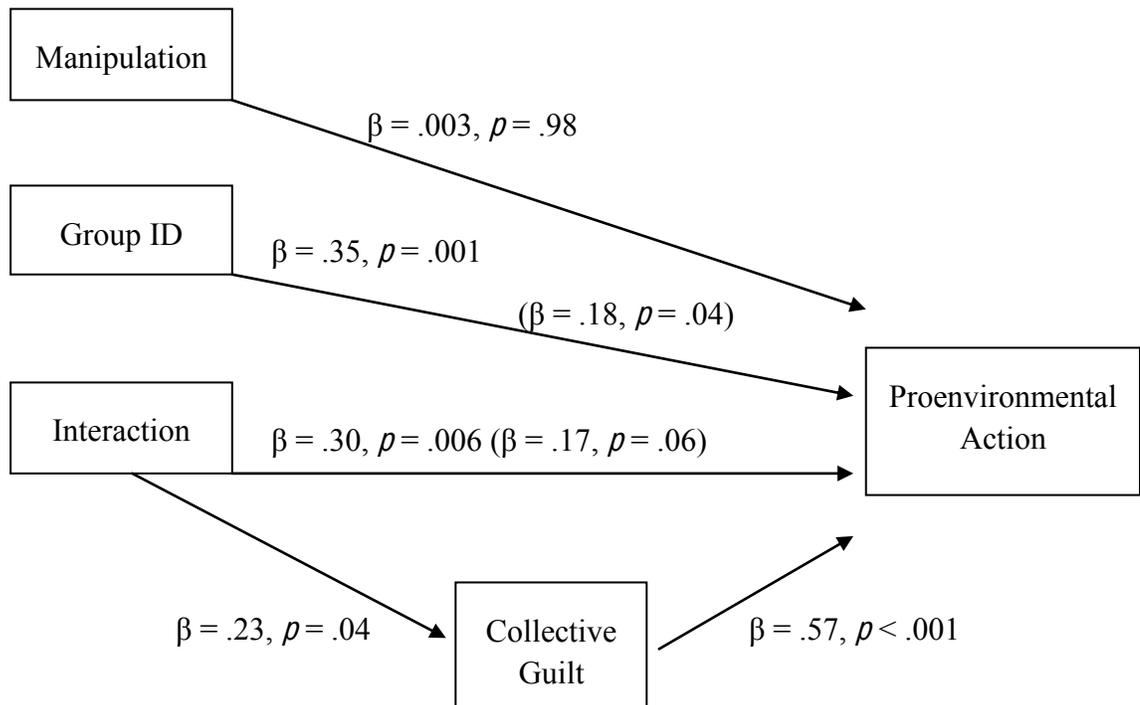
### Mediation Analyses

We tested Collective Guilt as a mediator of the interaction on Proenvironmental Action. This was accomplished by regressing the interaction, along with the main effects of manipulation and group identification, on Collective Guilt ( $\beta = .23$ ,  $p = .04$ ) and Proenvironmental Action ( $\beta = .30$ ,  $p = .006$ ). Next Collective Guilt was included with the interaction (along with the manipulation and group identification) as a predictor of Proenvironmental Action. Collective Guilt significantly predicted Proenvironmental Action ( $\beta = .57$ ,  $p < .001$ ), but the predictive power of the interaction became marginally significant ( $\beta = .17$ ,  $p = .06$ ). A Sobel test using an online calculator (<http://people.ku.edu/~preacher/sobel/sobel.htm>) was used to assess if Collective Guilt carries the influence of the interaction to Proenvironmental Actions. The result showed that Collective Guilt was a full mediator of the effect of the interaction on

Proenvironmental Actions, Sobel  $z = 1.99$ ,  $SE = .17$ ,  $p = .05$  (see Figure 1 on pg. 27).

This suggests that the interaction predicted Collective Guilt, which in turn predicted Proenvironmental Action. In other words, participants were more willing to engage in proenvironmental actions because they experienced more collective guilt.

Figure 2. Predicting Proenvironmental Action for Freshmen



*Figure 1.* Predicting Proenvironmental Action as a function of the categorization manipulation, Group Identification, and their interaction for freshmen only. Collective Guilt is a significant full mediator of the effect of the interaction on Proenvironmental Action (Sobel  $z = 1.99$ ,  $SE = .17$ ,  $p = .05$ ).

## Discussion

Participants were either primed to categorize at the group level with both current and future students (inclusive manipulation) or just with current students (exclusive manipulation). The main hypothesis of this study was that participants in the inclusive condition would set lower standards of judgment (require less evidence of harm), indicate that more harm is currently being done to future students, feel more collective guilt, and be more likely to engage in behaviors that conserve current resources than participants who are in the exclusive condition. However, the categorization manipulation did not have the predicted effect on the dependent variables. This is perhaps because the manipulation did not create a strong enough of a distinction between groups (i.e. a group excluding future students versus a group including future students).

The standards that the participants set (regardless of the manipulation) did not significantly predict the variables that followed them. That is, participants who set lower standards (who presumably required less evidence to assume harm had been done) did not score higher on the Judgments index or feel greater collective guilt. As the links between standards of harm/injustice, judgments of harm/injustice, and collective guilt have been shown in other works (e.g. Miron, et al., 2010), the lack of such a link in this study is presumably due to unclear measures. For example, the questions assessing standards (Appendix D) became quite lengthy as a result of incorporating the idea of harm to future students.

## Internal Analyses

Group identification was included as a predictor variable; participants' strength of identification with their group may influence their interpretation of group-relevant information, such as a need for community involvement (Bilewicz & Wójcik, 2009).

Highly identified group members were found to perceive themselves and their group positively, particularly when confronted with information about harm done by the group to another group (Doojse & Branscombe, 2003). Because of this defensive reaction, highly identified group members are not expected to feel collective guilt. In contrast, less identified members of a perpetrator group, who react less defensively to information about the negative actions of their group, have been found to feel collective guilt over harm done to a victim group by the ingroup (Doojse, Branscombe, Spears, & Manstead, 1998; Miron et al., 2010). However, this pattern is generally applied to past harm and is displayed when the victim group is generally distinct from the perpetrator group.

With the current study, the perpetrator and victim groups are very similar (i.e. current and future UW Oshkosh students). It may be that there was not a clear division between groups in the exclusive condition (i.e. current students—ingroup vs. future students—outgroup), which would make that condition similar to the inclusive condition. This means that the exclusive (current UWO students only) group might also see future

students as similar to themselves and include them in their ingroup. As can be seen in the breakdown of the simple effects (Tables 1 and 2), there is no difference between the inclusive and exclusive conditions with regards to Collective Guilt or Proenvironmental Actions for either low or high Group Identification. The difference between the manipulated conditions is not strong enough on its own to produce significant differences in the predicted variables. It is only with the interaction of the manipulation and Group Identification that we begin to see group differences. The exclusive condition is host to the significant differences between low and high Group Identification for freshmen participants. The combination of making group membership salient for people who differed on levels of group identification yielded interesting differences in Collective Guilt and Proenvironmental Actions, which will be explained in the section to follow.

### Freshmen vs. Other Students

Social identity theory argues that the more important a group identity is to the self, the more likely people are to experience emotions stemming from group membership (Smith, Seger, & Mackie, 2007; Tajfel & Turner, 1986). For this reason, we focused on freshmen participants for internal analyses. We argue that, for freshmen, the UWO student identity may be more prominent in everyday life. Freshmen have recently gone through orientation, the majority live on campus, and they have several years remaining in the UWO community; these things are especially salient in their first term—the fall semester—which is when the majority of this study was conducted. At UW

Oshkosh, there are also several promotional activities geared toward freshmen, such as “Titan Nights,” a free activity hosted at the student union on occasional Friday nights that has games and refreshments. Activities such as Titan Nights may promote group cohesion and a sense of belonging to the campus community (i.e. being a UWO “Titan”). Previous research has suggested that social cohesion predicts affective commitment to a group (Hashimoto, Karasawa, & Isozaki, 2010).

Research has also shown greater emotional positivity and understanding of *personal-level* development and identity at the end of a college career than the beginning (McAdams, et al., 2006). The experiences students have throughout their time at a university presumably provide them with the life skills needed to form a stronger sense of self. These personal identity-creating experiences have probably not yet occurred for traditional freshmen, which could make the development of a group-level identity as a college student occur more easily. Other research has shown that self-uncertainty motivates group identification (Hohman, 2010). College freshmen, who likely have yet to form a strong personal identity, may be more motivated to identify with a personally-relevant group such as the current students at UW Oshkosh. Their identification with and desire to belong to the UWO student community may lead them to feel greater levels of group-based emotions, such as collective guilt, because the events of the group are more pertinent to them (Branscombe & Doosje, 2004).

**Standards.** While the effect of the interaction on Standards was not significant, the pattern displayed by the means mirrors those shown in Collective Guilt and

Proenvironmental Actions. Participants who were primed to include future students in their ingroup (inclusive condition) did not show much of a difference between low and high Group Identification (Inclusive/High Group Identification  $M = 2.80$ ; Inclusive/Low Group Identification  $M = 2.65$ ). Participants primed to include only current students in their ingroup set lower standards when they were more identified with their group (Exclusive/High Group Identification  $M = 2.58$ ; Exclusive/Low Group Identification  $M = 3.10$ ). While not significant, this trend is like that of the other two predicted variables discussed. Highly identified participants in the exclusive condition required less evidence to admit harm will have been done than the exclusive participants with low group identification. The lack of significant findings on this variable is likely due to the manipulation not being strong enough to produce distinct group categorizations. The confusing nature of the wording of the Standards items (Appendix D) may also have contributed to these results.

**Collective Guilt.** The interaction of the manipulation and Group Identification significantly predicted collective guilt. In the inclusive condition (participants who were primed to see future students as part of their ingroup), there was no significant difference between low and high group identification. This may be because the inclusive participants were induced to see future students as part of their ingroup regardless of their degree of identification with the group. High group inclusiveness would explain why the participants in this condition averaged scores above the midway point for collective guilt

across low and high identification (Low Group Identification  $M = 5.34$  vs. High Group Identification  $M = 5.58$ ).

Participants with low group identification and who were primed to identify with current UW Oshkosh students (exclusive condition) showed the lowest levels of collective guilt ( $M = 4.80$ ). On the other hand, participants who were highly identified with current UW Oshkosh students showed the highest levels of collective guilt ( $M = 6.65$ ). Previous research has suggested that highly identified group members will revise the meaning of historical events that were harmful to an outgroup (Baumeister & Hastings, 1997). This defensive mechanism may involve blaming the circumstances in which the harm occurred or by shifting the standards used to judge the harm (Zebel, Doosje, & Spears, 2004). However, in the current study the participants cannot shift the blame onto something or someone else, because the harm has yet to occur and therefore is *preventable*. The responsibility for the ingroup's wrongdoing is presumably inescapable for the highly identified participants, resulting in higher levels of collective guilt.

Likewise, previous research has shown that high group identifiers experience more collective guilt than low identifiers when the group has apologized for past harm (Branscombe, Doosje, & McGarty, 2003). Presumably, once the group has acknowledged its role in injustice, the members are unable to remove themselves from responsibility. In the current study, highly identified participants in the exclusive (current students) condition could not escape responsibility for potential harm, as they have a degree of

control over the outcome. They therefore felt higher levels of collective guilt than low identifiers.

**Proenvironmental Actions.** The Group Identification x Manipulation interaction also predicted willingness to engage in proenvironmental actions. The actions measured in this index were not directly associated with feelings of guilt. The items asked participants how likely they would be to engage in behaviors that would help to ameliorate the potential harm to future students but did not explicitly remind the participants of that harm. To clarify, the items asked how likely the participants would be to do a certain behavior (e.g. “How likely are you to print your PowerPoint slides at least three to a page in the future?” as a way of lowering printer usage). It is not likely that these questions prompted guilty thoughts.

Participants in the exclusive condition who were highly identified as group members reported greater willingness to engage in proenvironmental actions ( $M = 7.47$ ) than participants in the exclusive condition who were less identified with the group ( $M = 5.37$ ). Branscombe, Doosje, and McGarty (2003) theorize that high identifiers may be motivated to avoid identity-threatening approaches to intergroup relations (i.e. an admission of illegitimate harm done), so perhaps the high Group Identification participants in the exclusive condition had incentive to quickly move away from the acknowledgement of their group’s responsibility. They could achieve this distancing by showing their willingness to engage in proenvironmental activities. At the same time, it is

likely that displaying such willingness to do positive things had a self-affirming effect (Steele & Spencer, 1992). We elaborate on this interpretation in the next paragraph.

**Mediation by Collective Guilt.** Collective Guilt fully mediated the link between the interaction and proenvironmental actions. The interaction predicted Collective Guilt, which in turn predicted Proenvironmental Actions. Dissonance that arises in life, such as when one's actions do not match one's beliefs, can be ameliorated through self-affirmation (Steele & Spencer, 1992). Participants in the current study likely see themselves as generally good people. The potential harm caused by the ingroup would not fit with the "good person" schema. Steele and Spencer (1992) suggests that we are motivated to maintain self-integrity. When we fail to do so for one reason or another, we try to compensate by affirming the self in another realm. It could be that participants in this study who were highly identified as UW Oshkosh students responded with a willingness to behave pro-socially as a form of self-affirmation in response to the potential harm done to future students. Engaging in proenvironmental actions offered them the opportunity to repair the tainted social self without directly acknowledging ingroup blame. In other words, they were experiencing guilt on behalf of their group's actions and a possible way to lessen the aversive feeling was to remove themselves from the negative association between the ingroup and the potential harm.

Branscombe, Doosje, and McGarty (2003) showed that highly identified group members are motivated to avoid admissions of guilt. Once guilt has been acknowledged, it follows that high identifiers would be likely to choose a route to rectifying the situation

that does not dwell on the negative aspects of the ingroup. In the case of the current study, an effective way of doing that may be through taking action to prevent the harm from happening (i.e. engaging proenvironmental actions) in a manner that does not reiterate who is at fault. This would both disengage the participants from the responsibility of harm and reaffirm the participants' integrity as a good person.

**Guilty Action.** Lending credence to the above explanation is that neither group identification nor the Group Identification x Manipulation interaction predicted Guilty Action. The Guilty Action index refers to behaviors that are directly associated with the harm to future students (e.g. "I want to make up for the harm that current students have caused to the future students' welfare"). It would make sense that even though they were geared toward improving conditions for future students, the statements would not promote self-affirmation; a reminder of harm is included in the item, which is potentially guilt-provoking.

## Conclusions

When focusing only on freshmen students, Collective Guilt fully mediated the impact of the Group Identification x Manipulation interaction on Proenvironmental Actions. Participants who are highly identified with current UW Oshkosh students may be more prone to feeling collective guilt for their group's actions that would harm future UW Oshkosh students. The results of this study, although not anticipated, provide some interesting information. Given the post hoc nature of the explanations, these results must be interpreted with caution.

This study suggests that targeting highly identified university students may prove to be a fruitful way of promoting conservation of campus resources. Highly group-identified students are more likely to feel collective guilt for their group's behavior that is potentially harmful to future students. Willingness to engage in proenvironmental behaviors was driven by collective guilt. The pro-social outcomes of the collective guilt are a way to self-affirm and also would enhance the group's image, since the members are doing something positive.

As UW Oshkosh works toward being a "green" campus, incorporating the ideal of conservation as a student characteristic might be a productive option. Students who are identified as a member of the campus community would recognize conservation as a characteristic of their group membership. The act of conservation could then become a

self-affirming (or group-affirming) aspect of everyday life. If this could become pervasive enough, then perhaps the collective guilt-motivated aspect of conservation would lessen, replaced by an intrinsically-motivated management of resources. Whether or not the above would be a viable option would, of course, require far more research. For now, though, it is a pleasant notion.

APPENDIX A

Consent Form

## CONSENT DOCUMENT

The Psychology Department is conducting a study to assess college students' perceptions of various current events. The following information is provided for you to decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time without penalty.

As a part of the study you will be asked to answer some questions about yourself and some questions about recent events. The study will last no longer than a half an hour. Although participation will not directly benefit you, we believe that the information will be useful in understanding some aspects of human behavior. You should be aware that some of the questions you may be asked to respond to may cause strong emotional responses.

The information that you give us throughout the study will be recorded in confidential form. Be assured that your name will not be associated with the research findings in any way. The information will be identified only by a code number. We do solicit your participation but it is strictly voluntary. If you want to withdraw from the study at any time, you may do so without penalty. You will receive your research participation credit even if you decline to volunteer. The information collected from you up to that point would be destroyed if you so desired.

Once the study is completed, we would be glad to give the results to you. Do not hesitate to ask any questions about the study before, during, or after the research is complete. If you would like additional information concerning this study before or after it is complete, please feel free to contact us by phone, mail, or email:

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If you have any complaints about your treatment as a participant in this study, please call or write:

Chair, Institutional Review Board  
 For Protection of Human Participants  
 c/o Grants Office  
 UW Oshkosh  
 Oshkosh, WI 54901  
 920-424-1415

Although the chairperson may ask for your name, all complaints are kept in confidence.

Consent Statement: I have received an explanation of the study and agree to participate. I understand that my participation in this study is strictly voluntary, and that I may withdraw at any time. By signing this, I confirm that I am either 18 years old and can give consent or if I am under 18 years old, I am enrolled in a psychology course at the University of Wisconsin Oshkosh.

\_\_\_\_\_  
 Print Name

\_\_\_\_\_  
 Signature

\_\_\_\_\_  
 Date

This research has been approved by the University of Wisconsin Oshkosh IRB for the Protection of Human Participants for a one year period, valid until \_\_\_\_\_.

APPENDIX B

Manipulation

Please read the following portion of a speech to be given at a student assembly. We are interested in your reaction to the speech.

We, the students of UW Oshkosh across time, possess some unique qualities. Current and future students of UW Oshkosh are the same; we all are or will be exposed to the transitional period of life here at UWO. Also, we all learn to handle challenges and hardships. UWO offers 58 undergraduate majors, which help to supply a broad knowledge base for students to draw upon. Both the current and future students of UW Oshkosh will grow as people through their experiences in college. We are all likely to make connections with our fellow students and gain new friends—something that is universal in college life. All students develop goals during their higher education. The pursuit of those goals provides a challenge that we UW Oshkosh students, both now and those starting college in the future, are able to handle. As we learn to balance our studies with our free time, we make a transition that will allow us to pursue careers and goals of our choosing, both now and in the future. We are UW Oshkosh!

Please read the following statements carefully and, using the scale below, write down the number that best indicates your reaction to the above speech excerpt:

1      2      3      4      5      6      7      8      9

Disagree Strongly

Agree Strongly

- \_\_\_\_\_ I value being part of UWO's student body.
- \_\_\_\_\_ I am proud to be part of UWO's student body.
- \_\_\_\_\_ I feel positively about my student group.
- \_\_\_\_\_ Being part of UWO's student body gives me a good feeling.
- \_\_\_\_\_ I have a lot in common with other members of my student group.
- \_\_\_\_\_ I often think of myself in terms of my student group.
- \_\_\_\_\_ Being part of UWO's student body is a meaningful part of who I am.
- \_\_\_\_\_ Being part of UWO's student body is central to my identity.
- \_\_\_\_\_ I identify with other members of UWO's student body.
- \_\_\_\_\_ I feel strong ties with other members of UWO's student body.
- \_\_\_\_\_ I feel similar to future members of UWO's student body.

Please read the following portion of a speech to be given at a student assembly. We are interested in your reaction to the speech.

We, the current student body of UW Oshkosh, possess some unique qualities. As compared to other groups of students, our placement in history provides us with a deep sense of an ability to overcome challenges and hardships. Whatever challenges our group of students may face, we are able to handle them. Life as students attending UW Oshkosh today provides us with an opportunity to find ourselves. UWO offers 58 undergraduate majors which help to supply a broad knowledge base for us to draw upon. We also are likely to make connections to our fellow students and gain new friends. In addition, we develop goals during higher education. The pursuit of those goals provides a challenge that we, current students of UW Oshkosh, are able to handle. As we learn to balance our studies with our free time, we are making a transition that will allow us to pursue careers and goals of our choosing. We are today's UW Oshkosh students!

Please read the following statements carefully and, using the scale below, write down the number that best indicates your reaction to the above speech excerpt:

1	2	3	4	5	6	7	8	9
Disagree Strongly					Agree Strongly			

- \_\_\_\_\_ I value being a member of today's UWO student body.
- \_\_\_\_\_ I am proud to be a member of today's UWO student body.
- \_\_\_\_\_ I feel positively about my student group.
- \_\_\_\_\_ Being a member of today's UWO student body gives me a good feeling.
- \_\_\_\_\_ I have a lot in common with other members of my student group.
- \_\_\_\_\_ I often think of myself in terms of my student group.
- \_\_\_\_\_ Being a member of today's UWO student body is a meaningful part of who I am.
- \_\_\_\_\_ Being a member of today's UWO student body is central to my identity.
- \_\_\_\_\_ I identify with other members of today's UWO student body.
- \_\_\_\_\_ I feel strong ties with other members of today's UWO student body.

## APPENDIX C

### Introduction

## Introduction

An independent agency is interested in University of Wisconsin Oshkosh students' perspectives on the current paper and printer ink usage in computer labs. Recent reports suggest that at this time there is a great deal of waste, as current students are printing much more than is necessary. The university is concerned about the negative effects the current students' actions will have on the future cohorts of students who will be starting in fall 2015.

As you may know, the university budget shows a deficit that is predicted to continue in the next years, and it is estimated that starting in fall 2015, the future cohorts of students will be paying more money for printing. There is a strong concern that future students will have difficulty affording access to computer labs because of instituted computer lab fees.

Due to neglectful usage in the computer labs going on now, the university may be forced to institute a policy where future students pay a certain rate per printed page. In addition, future students will have to purchase a lab pass, similar to a parking pass (which would be monitored via their Titan Cards at the time of entry into the computer labs). These fees would be above and beyond the current fees included for use of campus technology.

The added stress and financial consequences on future students are predicted to ultimately decrease their academic performance.

APPENDIX D  
Standards of Harm

We are interested in your opinion of this issue. You might feel uncertain about some information we ask about in the questions. However, we ask that you try to make an educated guess and answer each question. Please answer the questions in the order given, without going back. For each question, please check one option.

**1. For me to consider the impact of current students' actions on future students to be unfair to future students, the percentage of current students who use more paper and printer ink than they need would have to be....**

- less 15%
- 15-30%
- 30-45%
- 45-60%
- 60-75%
- 75-90%
- 90-100%

**2. For me to consider the percentage of current students who print PowerPoint slides in wasteful manner to be unfairly impacting future students, the percentage of current students doing so would have to be...**

- less 15%
- 15-30%
- 30-45%
- 45-60%
- 60-75%
- 75-90%
- 90-100%

**3. For me to consider the current students' waste of paper to be unfair to future students, the effect of the increased cost of paper, cartridges, and lab fees would have to begin with:**

(students beginning college in...)

- 2015-2016
- 2016-2018
- 2018-2020
- 2020-2022
- 2022-2024
- 2024-2026
- 2026 or later

4. In order for me to consider the paper waste of current students unfair to future students, the cost to future students per year would have to be an additional \_\_\_\_\_ percentage of the cost of tuition, on top of the regular tuition costs:

- \_\_\_\_\_ less than 3 %
- \_\_\_\_\_ 3-5 %
- \_\_\_\_\_ 5-7 %
- \_\_\_\_\_ 7-9 %
- \_\_\_\_\_ 9-11 %
- \_\_\_\_\_ 11-13 %
- \_\_\_\_\_ more than 13 %

5. For me to consider the effects of the current rate of paper consumption by students to be unfair to future students, the computer lab fees per semester starting in the fall of 2015 would have to be:

- \_\_\_\_\_ less than \$50
- \_\_\_\_\_ \$50-\$100
- \_\_\_\_\_ \$100-\$150
- \_\_\_\_\_ \$150-\$200
- \_\_\_\_\_ \$200-\$250
- \_\_\_\_\_ \$250-\$300
- \_\_\_\_\_ greater than \$300

6. For me to consider the current rate of paper consumption by students to be unfair to future students, the cost of a printed page for future students starting in fall of 2015 would have to be:

- \_\_\_\_\_ less than 5 cents
- \_\_\_\_\_ 5 cents
- \_\_\_\_\_ 10 cents
- \_\_\_\_\_ 25 cents
- \_\_\_\_\_ 50 cents
- \_\_\_\_\_ 75 cents
- \_\_\_\_\_ 1 dollar or more

**7. For me to consider the current students' wasteful printing to be unfair to future students, the negative effect on the future students' academic performance would have to be:**

- less than .1 GPA points.
- .1 GPA points
- .25 GPA points
- .5 GPA points
- 1 GPA points
- 1.5 GPA points
- more than 1.5 GPA points

**8. For me to consider the current students' actions to be harmful to future students, the negative effect on the future students' financial situation would have to be:**  
(an additional \$ \_\_\_ per semester)

- less than \$100
- \$100-\$200
- \$200-\$300
- \$300-\$400
- \$400-\$500
- \$500-\$600
- greater than \$600

APPENDIX E  
Judgments of Harm

Please answer the following questions in the order given.

1. The number of current students who use more paper and printer ink than they need, **therefore negatively affecting future students is...**

- Extremely low
- Very low
- Somewhat low
- Neither low nor high
- Somewhat high
- Very high
- Extremely high

2. The percentage of current students who are negatively affecting future students by **printing PowerPoint slides in a wasteful manner is...**

- Extremely low
- Very low
- Somewhat low
- Neither low nor high
- Somewhat high
- Very high
- Extremely high

3. If the current rate of paper consumption by students is continued, when will future cohorts of students begin to be affected because of the increased cost of paper, cartridges, and lab fees?

(Starting with students beginning college in...)

- a very short time
- a short time
- somewhat of a short time
- neither a short nor a long time
- somewhat of a long time
- a long time
- a very long time

4. The wasteful use of paper and printer ink by current students will cause the **university's computer lab** expenses to increase by what percentage per year?

- a very small percentage
- a small percentage
- a somewhat small percentage
- a moderate percentage
- a somewhat large percentage
- a large percentage
- a very large percentage

5. If the current rate of paper consumption by students is continued, how high will be the computer lab fees for future students per year starting 2015?

- Extremely low
- Very low
- Somewhat low
- Neither low nor high
- Somewhat high
- Very high
- Extremely high

6. If the current rate of paper consumption by students is continued, how high will the cost of a printed page be for future students starting in fall of 2015?

- Extremely low
- Very low
- Somewhat low
- Neither low nor high
- Somewhat high
- Very high
- Extremely high

7. How will academic performance of future students suffer due to the added stress dealing with the consequences of current wasteful computer lab practices?

- Extremely low
- Very low
- Somewhat low
- Neither low nor high
- Somewhat high
- Very high
- Extremely high

**8. Overall, how severe is the amount of harm done to future students' financial situation?**

- Extremely low
- Very low
- Somewhat low
- Neither low nor high
- Somewhat high
- Very high
- Extremely high

Please turn the page.

APPENDIX F  
Collective Guilt

Please read the following statements carefully and, using the scale below, write down the number that best indicates your agreement or disagreement with each statement.

1	2	3	4	5	6	7	8	9
Strongly Disagree				Neither Disagree Or Agree				Strongly Agree

\_\_\_\_\_ I feel guilty for current students' wasteful actions that are contributing to hardships for future students.

\_\_\_\_\_ I feel guilty about the negative things current students are doing to future students' financial situation.

\_\_\_\_\_ I feel guilty about the negative things current students are doing to future students' academic performance.

\_\_\_\_\_ I feel regret for some of the choices current students are making regarding paper and ink waste that will have a negative impact on future students.

\_\_\_\_\_ I feel morally outraged by what is being done to future students through current students' actions.

\_\_\_\_\_ I feel angry when I learn about the harm done to future students' financial situation because of paper waste.

\_\_\_\_\_ I feel sad when I hear about the future consequences of neglect by current students.

\_\_\_\_\_ I want to make up for the harm that current students have caused to the future students' welfare.

\_\_\_\_\_ I feel current students should do *more* than what they have done previously to make up for the harm done to the future students' financial situation.

\_\_\_\_\_ I feel that we should attempt to rectify the harm done to future students.

\_\_\_\_\_ I feel that one way to rectify the consequences of paper waste is to be open-minded to the little things we can do every day to improve the situation.

\_\_\_\_\_ I feel that one way to rectify the harm done to future students through wasteful practices, especially in the computer lab, is to acknowledge that paper and printer ink are being wasted.

Please turn the page.

APPENDIX G  
Motivated Behavior





## APPENDIX H

### Manipulation Checks and Demographics





APPENDIX I

Debriefing

### Study Information

In this study we are interested in the effects of group membership on people's perceptions of their group's actions. Some of the participants are asked to imagine that they are similar to future students; whereas, other participants are asked to imagine that they are different from future students. We also measured your perception of the extent to which current students waste paper and ink and how much evidence you need to judge current students' actions as unfair to future students. We expect that people who see future students as part of the same group as themselves will set lower standards of harm. This means that they would ask for less evidence of harm to future students' welfare in order to conclude that the current students' wastefulness is harmful to future students. Conversely, people who see future students as different from them will set higher standards of harm (i.e. it will take a greater amount of harm for them to consider the damage done to future students to be severe).

We are also assessing collective guilt—the guilt people feel for the actions that their group committed. We predict that people who see future students as part of their group will feel more collective guilt about wastefulness done by their student cohort than those who see future students as part of a different group. We predict that feelings of collective guilt will motivate current students to partake to a greater extent in the conservation of printing resources.

It would have been difficult to tell you about the hypotheses of the study ahead of time, and doing so might have affected your responses. For this reason, we ask that you not tell other students who might be participating in our research what the specific purposes of this study are.

If you wish to be kept informed on the progress of this study, feel free to contact Anne Herlache at [herlaa84@uwosh.edu](mailto:herlaa84@uwosh.edu). If you have any concerns or questions about the nature of the study, you may contact Anne Herlache or Dr. Anca Miron by e-mail or phone ([mirona@uwosh.edu](mailto:mirona@uwosh.edu), 424-2328).

Thank you again for your participation, it is appreciated.

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