March 13, 2012

Honors Committee
Dominican University
7900 W. Division
River Forest, IL 60305

Honors Director and Committee Members,

I am requesting Honors Committee approval for a project entitled “Can We Be Manipulated to Help Another by Recalling Our Past?” in partial fulfillment of the requirements for a degree with distinction in Psychology. I am a senior at Dominican University and my G.P.A. is 3.41. My Psychology G.P.A. is 3.83. My readers for this project are Dr. Tracy Caldwell and Dr. Alisa Beyer, both of the Psychology Department. They will submit their approval forms to my group page on the Departmental Honors site on Blackboard.

I have successfully completed the following classes at Dominican University which I believe have taught me the proper skills and knowledge necessary to effectively complete this project: Behavioral Research & Statistics I (Psyc 290), Behavioral Research & Statistics II (Psyc 291), and Advanced Topics in Psychology (Psyc 460).

Thank you for your consideration of the current project and I request approval for a Degree with Distinction in Psychology.

Respectfully submitted,
Sandra Garcia
Can We Be Manipulated to Help Another by Recalling Our Past?

A Project in Partial Fulfillment
Of the Requirements for the
B.S. Degree with Distinction in
Psychology

Submitted to the Honors Committee by

Sandra Garcia

March 13, 2012
Abstract

The goal of the present study was to examine whether individuals primed with empathy would intervene more quickly in a mild emergency relative to those primed with apathy and whether women would be helped more quickly than men. In addition, the study investigated whether the main effect of the target’s sex would be qualified by an interaction with hostile and benevolent sexism, such that those high in hostile and benevolent sexism would be especially fast to help out a woman. Sixty participants, with a mean age of 22.92 years old, were placed in a mild staged crisis and their speed of intervention was timed. The main effect of prime was not statistically significant; however, there was an interaction between prime and target sex, such that those primed with empathy tended to help out a male target more quickly than a female target whereas those primed with apathy helped out a female target more quickly than a male target. Hostile and benevolent sexism was not found to be correlated with helping behavior. Future research and limitations are discussed.
Can We Be Manipulated to Help Another by Recalling Our Past?

Today, in our society, there are many instances when a person aids a stranger with various altruistic acts (i.e., holding the door open for another, picking up an item that has been dropped, etc.). However, there are circumstances in which we choose not to act when we see a person in need of assistance. The current project investigates when a person is most likely to help out another. This study investigates two different ideas. The first is that the decision to help out another, in a non-emergency type of situation, is one that is probably made automatically. Second is that, these often split-second decisions can be influenced by what we were thinking about immediately prior to the decision to help. Previous research has shown that a person’s actions can indeed be influenced by something an individual experiences immediately before the action takes place.

If one values or feels empathy towards someone it may increase their likeliness to help out that person when in need of help. Batson, Eklund, Chermok, Hoyt, and Ortiz (2007) researched the significance of valuing a person before deciding to help them or not. The researchers hypothesized that one must value a person first in order to have empathic feelings towards that person - feelings that cause an individual to help. Batson et al. (2007) had their participants read a story to prime them with high valuing perspectives (empathy condition) and low valuing perspectives (apathy condition). Priming is the practice of arousing associations in memory, which in turn, influences one’s behavior. The researchers further primed their participants with stories by instructing them to either imagine the feelings of the person in need or to stay objective on the issue. Subsequently, using four different stories, the researchers hypothesized that more participants would volunteer their time to help someone if they were put into the imagined, high valuing condition because these participants are being primed with the highest levels of empathy, compared to the other experimental groups. In other words,
participants will be more likely to help out a valued other if they have been primed to be empathic towards them. Results showed that when someone values another person, they are more likely to assist them whereas if they do not value the person they will be more likely to avoid someone in need. Also, having the participants in a high valuing condition, rather than a low valuing condition, had a greater impact on helping behavior. Therefore, if one is primed to value another then there will be a greater chance of that person helping out a stranger in need because their empathic feelings towards that target person are heightened. This current study will prime participants with empathy and apathy to see if, like Batson et al. (2007), participants primed with empathy will be quicker to help out a stranger than participants who are primed with apathy.

A pilot study that I conducted focused on investigating whether priming empathic feelings influences one’s helping behavior (Garcia, Bednarz, & Gorman, 2010). Empathy and apathy were primed using a similar procedure to Batson et al. (2007). In the study, my research colleagues and I primed individuals’ apathy or empathy by asking them to read either a passage describing a person who behaves selfishly or selflessly. The participants were then placed into a situation where a confederate acted as if he had lost something and we measured how long it took for the participant to help, if they chose to intervene. The data suggested that the priming manipulation was not strong enough to get the desired effect. For this reason, this present study will incorporate a new manipulation by having the participants engage in an autobiographical memory task, an idea taken from a study by Nakash and Brody (2006).

Nakash and Brody (2006) investigated whether social role and an autobiographical memory task influence each other. The researchers assigned their participants to a communal social task or a lone social task. In the communal social task, the participants were asked to
build a creative structure out of tinker toys and to work with a partner. In the lone social task, the participants were asked to work independently on the same task. After being given the task, the participants completed an autobiographical memory task. The researchers hypothesized that a participant in the communal condition would think of a more communal memory when given an autobiographical memory task than participants in the isolated condition. The results showed that social role can indeed shift one’s memory content such that when given a task to do communally, one is then more likely to remember a communal memory. Likewise, when given a task to do independently, one is more likely to remember a memory that does not involve other people.

Similarly to Nakash and Brody’s experiment (2006), Brewer and Gardner (1996) found that being primed with a simple task like circling the word “we” or “us” in a word search, as opposed to words like “me” and “his”, can influence a person’s social values and judgments in memory. These two studies are relevant in that they show it is possible to alter one’s memory given a certain task. The present study will investigate whether this finding can be seen in the other direction. In other words, if one’s social role can alter their memory then perhaps having a participant think of a certain memory can influence them to play a certain social role. The purpose of the autobiographical memory task in this present study is to prime empathy, which is hypothesized to affect helping. Therefore, this study will investigate whether priming someone to think of a certain memory will influence them to play out a social role of helping out a stranger. However, there are other factors that could influence our decisions about whether or not to engage in these roles.

In addition to priming empathy and apathy, one’s own judgments about gender may also play a role in whether or not they choose to help out a person in need. Therefore, this study
chose to include the Ambivalent Sexism Inventory (ASI). Salvaggio, Streich, and Hopper (2009) used the ASI to assess gender stereotypes and sexist attitudes to theoretical job applicants. The researchers varied the gender of the applicant and then measured the participants’ attitudes using the ASI on a job position thought to be more male oriented. Their results showed that those with hostile and benevolent sexist attitudes evaluated a female applicant least positively for the position than a male applicant. This was found to be true across both male and female participants with high hostile and benevolent sexist attitudes. Therefore, the current study will use the ASI to see whether there is an impact of one’s hostile and benevolent sexism on their helping behavior for either sex. The current study hypothesizes that those high in hostile and benevolent sexism would be more likely to help out a woman. This is because those who are high in hostile and benevolent sexism hold very traditional beliefs when it comes to the social roles of men and women in society. These traditional beliefs would include that women are in more need of help and that men are more independent.

To evaluate whether participants’ ASI score will have an impact on their helping behavior for either sex, the current study will vary the sex of the target needing help. An analysis by Eagly and Crowly (1986) investigated gender and helping behavior. Eagly and Crowly (1986) explained that the social-role theory of gender and helping indicates that men and women act and think differently when it comes to helping strangers. Men tend to take a heroic role, whereas women think of helping as a more motherly or caring role. Results from their meta-analysis, a statistical tool used to combine the results of more than two studies, showed that women, on average, received more help than did men. Therefore, this study will vary the sex of the target in order to further test this idea that women will obtain more help than men.
To sum up, the current study will be adding to past research in several ways. Instead of using self-report methods to ask participants whether they are likely to help out a stranger in need, as done in much research examining helping behavior and empathy, this study will use an observational method to assess intervention. Also, much of the past research on priming empathy and apathy does not include a control group. Without a control group, one cannot say that the manipulation caused the desired effect relative to no prime. Therefore, this study will include three levels of the priming condition: empathy, apathy, and control. In addition, this study will incorporate an autobiographical memory task to have the participants use a personal approach instead of simply reading a story as I had instructed in my pilot testing. This will provide the current research with a more powerful manipulation of empathy or apathy. Asking participants to remember a time when they have been empathic or apathetic will have the participants relive the moment and, hopefully, bring out the empathic, or apathetic feelings again. Lastly, this study will vary the sex of the target in need to test whether there is a correlation between ASI scores and helping behavior and to see if women will receive faster help than men.

This study has three hypotheses. The first is that, relative to the control group, participants who are primed with empathy will be quicker to help out a target in need and participants primed with apathy will take the longest to help. Second, a female target will receive faster help than a male target. Third, participants high in hostile and benevolent sexism will be faster to help out a woman. In other words, there will be an interaction between target sex and the participant’s ASI score on their reaction time.
Method

Participants

Sixty students attending summer school at Dominican University were recruited for this study using convenience sampling. The ages of participants ranged from 18 to 55 with the mean age being 22.92 years of age (modal and median age was 20 years). Approximately 62 percent of the participants were female and 38 percent were males. The majority of the participants were seniors (28.3 %). There were also graduate students (25%), juniors (11.7%), sophomores (16.7%), and freshmen (18.3%).

Design

This study employed a 3 (prime: empathy, apathy, control) X 2 (target sex) between-subjects experimental design. I also measured a third independent (predictor) variable: participants’ ASI scores. The dependent variable in this study was the time it took for a participant to help out a target in need.

Materials

This study utilized the ASI to measure both hostile and benevolent sexism. Hostile sexism is a more deliberate kind of sexism with its main beliefs being that women are inferior to men. A sample item of hostile sexism is “Women are easily offended.” Benevolent sexism is more subtle and its main beliefs are that women are kind and pure. A sample item of benevolent sexism is “Every man ought to have a woman he adores.” Responses for this 22-item self-report measure are based on a five-point Likert-type scale (1=strongly disagree to 5=strongly agree). Cronbach’s alpha in a recent sample was .89 indicating strong inter-item reliability (Salvaggio et al., 2009). Item and scale scoring followed the ASI scoring manual. Hostile sexism and benevolent sexism were measured separately using this scale.
In addition, two further measures were utilized: a manipulation check and a demographics questionnaire. The manipulation check consisted of the question, “What did I ask you to write about at the beginning of this experiment?” This was just to assure that the participant was aware of the priming group they were in, without actually knowing they had been primed. The demographics questionnaire asked participants to state their gender, age, college level, and ethnicity.

**Procedure**

Participants were run one at a time to avoid diffusion of responsibility in helping the target in need. Participants were randomly assigned to one of three groups for the autobiographical memory task: empathy, apathy, or control. After collecting informed consent, participants were told that the goal of the study was to collect stories of different events people have experienced. Participants then were instructed to remember a specific event in their lives based on the group to which they have been randomly assigned. Participants in the empathy condition were given the following instructions:

Please think back to a time when you behaved empathetically [identifying oneself completely with another person: including their feelings, thoughts, and/or attitudes]. It can be any memory. Please describe the situation including what you did, how you felt, and what made you feel that way.

Participants in the apathy condition were given the following instructions:

Please think back to a time when you behaved apathetically [absence or suppression of emotions towards another person]. It can be any memory. Please describe the situation including what you did, how you felt, and what made you feel that way.
Those in the control condition were given instructions to come up with a different memory:

Please think back to a time when you did an activity by yourself. It can be any memory.

Please describe the situation as much as you can.

The participant was then given five minutes to write out their personal memory. Next, the participant was made to believe that essential forms had been forgotten in a different room and waited as the researcher retrieved them. As the participant waited, a target showed up with a mild staged crisis. The target acted as if he/she had lost something. The participant was timed to see how long it took for them to intervene and aid the target. Three minutes was the cut off time if the participant did not help the target. The target then left and the researcher re-entered the room. The participants were then given the Ambivalent Sexism Inventory (ASI), assessing benevolent and hostile sexism, as well as a demographics questionnaire and manipulation check. The participant was lastly debriefed and thanked for their participation in the study. The study session lasted approximately twenty minutes.

Results

Each participant was asked to fill out a manipulation check to assure they remembered the content of the memory they had earlier been asked to write down. This was shown to be successful in that every participant correctly noted the type of memory.

A Pearson’s r correlation was computed to see the relationship between ASI score and time it took to intervene. This correlation was not found to be significant, $r=.100, p= .445$. Therefore, one’s ASI score did not influence the participant’s reaction time to intervene.

A univariate analysis of variance was computed to test the hypothesis that those high in hostile and benevolent sexism would be faster to help out a female target than a male target.
There was not a significant interaction between ASI score and target’s sex on time to intervene, $F(5, 59) = .376, p = .867$.

The data for time to intervene was not normally distributed. The modal response was 180 seconds, which was determined as the cutoff point if a participant did not intervene, making the distribution negatively skewed. This data was therefore transformed into a dichotomous variable on a nominal scale using the following labels: intervene (score of 1) and did not intervene (score of 2). After transforming this variable, it was found that in total 28 participants intervened and 32 did not.

A hypothesis of this study was that those primed with empathy, relative to the control group, would be faster to help out a target and those primed with apathy would take the longest to help. A Chi-Square analysis, a test that analyzes differences between nominal (categorical) variables, was done to examine whether those who took the maximum amount of time to intervene were disproportionately represented in any of the three experimental conditions. The resulting chi-square analysis was not statistically significant, $\chi^2 = .0913, p > .05$, which means that no particular priming condition was overrepresented in the no intervene group. That is, when time to intervene is treated as a categorical variable, being in any of the three experimental groups (empathy, apathy, or control) did not predict intervention.

Another hypothesis of this study was that a female target will receive faster help than a male target. In the control condition, there was no effect of target sex, $\chi^2 (2) = .833, p = .361$. This however was expected in that we want the control group to not differ in the intervene variable among the targets’ sex. In other words, this group shows what would happen when one is not primed for empathy or apathy; therefore we can be certain that the results found for the other two conditions are a result of being primed with empathy or apathy.
In the empathy and apathy groups, there was a marginally significant interaction between target sex, such that those in the empathy condition tended to help out a male target more than a female target and those in the apathy condition tended to help out a female target more than a male target, $\chi^2(2) = 3.33, p = .068$. The effect size, or the strength of this relationship, was .408 which suggests a moderate relationship. A perfect effect size is a 1.0.

Since no one condition was overrepresented in the no intervene group, as mentioned earlier, the dependent variable of time was used as the original continuous variable (not a categorical variable of “intervene” or “did not intervene”) for the remaining analyses. This was done to see if the data show the same results when the dependent variable is treated as a continuous variable.

A one-way ANOVA was executed and there was not a main effect of priming condition on time it took to intervene, $F(2, 57) = 1.359, p = .265$. This means that no group was quicker to intervene than any other group. Unexpectedly, there was an interaction between target sex and priming group on time, $F(2, 59) = 7.230, p = .002$. This interaction can also be seen in Figure 1. A post-hoc analysis for the simple effect of sex in the empathy condition showed that participants were faster to intervene for a man than for a woman, $F(1, 18) = 8.589, p = .009$. Conversely, when primed with apathy, participants were faster to intervene for a female than for a male, $F(1, 18) = 6.491, p = .020$. There was no effect of sex in the control group on time to intervene, $F(1, 18) = .173, p = .683$.

To better understand the interaction between the target’s sex and priming group on time, additional post-hoc analyses were computed. For these analyses, the data was investigated separately by those who intervened for a male target and those who intervened for a female target. Post-hoc analysis on the effect of priming group on time to intervene only for a male
target was not found to be significant, \( F(2.27) = 1.610, p = .219 \). In other words, priming did not affect intervention on behalf of men. Post-hoc analysis on the effect of priming group on time to intervene only for a female target was statistically significant, \( F(2.27) = 9.050, p = .001 \). There were significant differences between priming condition only when a female target was present. Therefore, priming only affected intervention significantly when the target was a female.

**Discussion**

The first two original hypotheses are as follows: (a) relative to the control group, participants who are primed with empathy will be quickest to help out a target in need and participants primed with apathy will take the longest to help and (b) a female target will receive faster help than a male target. Results showed that there were no differences among priming groups on time it took to intervene. Nonetheless, there was an unanticipated interaction between target sex and priming group on time. Originally it was expected that, no matter the sex of the target, participants primed with empathy would intervene the fastest. Results showed that priming condition only had an effect on intervention when the target was a female and the participant primed with apathy. When primed with apathy, 80% of participants with a female target intervened whereas only 20% intervened for a female target when primed with empathy. There was no effect of prime when the target was a male. The last hypothesis was that participants high in hostile and benevolent sexism would be even faster to help out a woman. However, ASI scores (hostile or benevolent sexism) did not affect the time it took to intervene, no matter the sex of the target.

**Analysis**

The present study shows that sex of the target had an influence on whether or not the participant intervened in a particular priming condition. Priming condition only affected
intervention significantly when the target was a female. Those primed with apathy tended to help out a female target quicker than a male target. A study by Carlsmith and Gross (1969) investigated helping behavior and guilt. The researchers found that those who had done a bad deed tended to have an eagerness to do a good deed (Carlsmith & Gross, 1969). Specifically, because others (the experimenters) knew that the participants had done wrong, the participants felt an urge to fix their public image. A social role that everyone should try and help out each other had been broken and the guilt drove the participants to behave altruistically. This could explain why this study only found significant differences in reaction time when in the apathy condition. Participants were instructed to remind themselves of when they broke a social role, which may have brought back feelings of guilt. Therefore, participants chose to help out a target in this condition in hopes to remove the guilt.

This finding of intervention in the apathy condition, however, was only seen when the target was a female. The default response in this study was not to intervene, but it may be the case that those in the apathy condition felt an urge to remove their guilt. The participants may have chosen to only help out a female target in this condition because it is more comfortable to help out a woman. Gender role stereotypes suggest that women are in more need of help and men are more independent (Heilman & Chen, 2005). Therefore, the presence of a male target could have been unsettling. Although the participant had guilt to wash away, they fell short when they saw a male. A female target was easier to help since women are expected to need more help. This also supports the findings of the pilot testing. In that study, colleagues and I did not manipulate the sex of the target; there was only a male target. There were no significant findings of that study which may indicate that people are more hesitant to help out a male.
Although not significant, there was a slight tendency for participants to help out a male target more in the empathy condition of the present study. Intervention for a female target was no different in the empathy condition than the control condition. This could be because, by default, one sometimes helps out a woman because of that belief that women need help. Therefore, priming someone with empathy is no different than how one usually feels when they see a female in distress. However, priming participants with empathy slightly changed the default orientation towards men. The gender stereotype is that men are independent so when one witnesses a male needing help, the thought is that men will figure it out on their own (Heilman & Chen, 2005). Being primed with empathy, however, gave participants the extra courage to help out a male. Participants acted out of the norm because their sense of empathy was heightened.

In addition, this study did not find ASI scores to influence helping behavior. This could be explained using the reactions recorded from the participants about the ASI itself during the debriefing stage of the experiment. Many of the participants noted that they were simply unable to pick a side on the statement. Many wished that there had been a neutral possible response. For example, the Likert type scale used in the ASI consisted of the following scores: 0 = *strongly disagree*, 1 = *somewhat disagree*, 2 = *slightly disagree*, 3 = *slightly agree*, 4 = *somewhat agree*, and 5 = *strongly agree*. There was not a response of “neither agree nor disagree”. Many participants did not like the fact that this response was not present in the questionnaire. Therefore, their scores may not be fully representative of their true beliefs since they were indecisive on many statements on the ASI. Although feedback from the participants themselves should be taken into consideration, it could also be that the ASI was not an effective measure for this experiment. Since this study found an unexpected interaction between the sex of the target and the priming condition, hostile and benevolent sexism may not be playing a role in the
relationship between these variables. A female target was not helped more than a male target overall so it makes sense that there was no influence by ASI score. Instead there was an interaction between the priming condition and the presence of either a male or female target on reaction time. In addition, the ASI scores had very little variability which restricted the range of the scores.

**Strengths**

The strengths of this current study are the ways that it went beyond previous research. Most past research on priming empathy and apathy have participants reading a story (Batson et al., 2007; Garcia, Bednarz, & Gorman, 2010). The present study used an autobiographical memory task in order to take a personal approach rather than have participants read a story. Batson et al. (2007), in addition, asked participants their likeliness to volunteer their time when measuring helping behavior in hypothetical circumstances. The current study took a step further and staged a mild crisis and timed how long it took to intervene. This makes the results of this study a worthy contribution such that there is a possibility that being primed with empathy or apathy effects whether or not someone will actually help a target in an immediate crisis, not just a theoretical one.

**Weaknesses**

Overall, there was a lack of power in the current study when it came to some of the analyses. A way to possess more power in this experiment would have been by having a larger sample. By increasing sample size, it would be easier to see clear effects of prime on altruistic behavior since some of the results were found to be marginally significant.
Future Research

Future research should aim at increasing power by increasing their sample time. In addition, future research should examine the possibility of third variables. Since ASI scores were not found to be predictive of one’s helping behavior, there could be third variables playing a role in why and when a person chooses to help a stranger. In addition, there needs to be more investigation on the relationship between helping behavior and the sex of the target. Much of past research focuses on the relationship between participant sex and their helping behavior. However, with gender stereotypes in mind, future researchers should further examine which sex receives more help and the circumstances in which they do so. It may also be interesting to examine what participants themselves think about this by having a more elaborate debriefing session in which the researchers ask the participants why they think they helped out. Lastly, future researchers could investigate these hypotheses incorporating a within subjects design. In this case, participants would be exposed to two different targets that need help. If each target is of a different sex, it would be interesting to examine helping behavior in this circumstance. It would be interesting to examine helping behavior if each target is a different sex.
References


Figure 1. Average time it took to intervene for each priming group by target sex. Those primed with apathy were quicker to help out a female target rather than a male target. The differences found in time it took to intervene for a male target are not significant. There was no significant difference in average time it took to intervene in the control condition for either a male or female target.