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Because the articles in this journal are primarily the work of undergraduate students, the reader should bear in mind that: (1) the studies are possibly less complex in design, scope, or sampling than professional publications and (2) the studies are not limited to significant findings. The basis for accepting papers for publication is the agreement among three professional reviewers that the project, hypothesis, and design are well researched and findings. The basis for accepting papers for publication is the agreement among three professional reviewers that the project, hypothesis, and design are well researched and

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      (3) that the planning, execution, and writing of the manuscript represent primarily the work of the undergraduate student.

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Make ‘em Laugh? The Mnemonic Effect of Humor in a Speech

Mario J. Baldassari, University of Victoria
Matthew Kelley†, Lake Forest College

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Make ‘em Laugh? The Mnemonic Effect of Humor in a Speech

Mario J. Baldassari, University of Victoria
Matthew Kelley, Lake Forest College

ABSTRACT. The present study investigated the mnemonic effects of using a joke and the influence of the location of the joke within a speech. In Experiment 1, participants heard 2 passages—one beginning with a humorous limerick and the other with a nonhumorous one. In Experiment 2, the limericks were presented at the end of the passages. Across both experiments, humor enhanced memory only for the humorous limericks, $t(44) = 3.22, p < .01; t(35) = 2.59, p < .002$, and did not influence memory for the rest of the passage. These results were discussed in context of the current literature, and future directions for study were outlined.

An elderly husband and wife visit their doctor when they begin forgetting little things. Their doctor tells them that many people find it useful to write themselves little notes. When they get home, the wife says, “Dear, will you please go to the kitchen and get me a dish of ice cream? And maybe write that down so you won’t forget?”

“Nonsense,” says the husband, “I can remember a dish of ice cream.”

“Well,” says the wife, “I’d also like strawberries and whipped cream on it.”

“My memory’s not all that bad,” says the husband. “No problem—a dish of ice cream with strawberries and whipped cream. I don’t need to write it down.” He goes into the kitchen for a while; his wife eventually hears pots and pans banging around. The husband finally emerges from the kitchen and presents his wife with a plate of bacon and eggs.

She looks at the plate and asks, “Hey, where’s the toast I asked for?”

Many guides designed to enhance presentation skills suggest that speakers should start their speeches with a joke in an effort to gain the attention of the audience and to make the presentation more memorable (e.g., Jeary & Cottrell, 2008; Kosslyn, 2007). The present study was designed to assess whether the presence of humor in a speech impacted memory for both the humorous stimulus (i.e., joke) as well as the surrounding content (i.e., speech).

Past research has shown that the cognitive processes involved in humor generally enhance memory for humorous events or material (e.g., Schmidt, 1994; Worthen & Deschamps, 2008). Most commonly, researchers have developed humorous stimuli in the form of sentences, pictures, and lectures (e.g., Kaplan & Pascoe, 1977; Schmidt & Williams, 2001). For instance, Schmidt (1994) assembled a number of humorous sayings and created nonhumorous counterparts (controls) for them. As an example, consider the humorous quote, “The only way to keep your good health is to eat what you don’t want, drink what you don’t like, and do what you’d rather not,” and its nonhumorous revision, “The only way to keep your good health is to eat good food, drink healthy drinks, and do healthy activities” (Schmidt, 1994, p. 954). More complex manipulations have integrated humor into hour-length lectures while manipulating the degree to which the humor related to the topic at hand (Kaplan & Pascoe, 1977). Although it seemed straightforward, the manipulation of the humor was quite difficult because humor is not universal—what is funny to one person may not be funny to the next (Kuiper et al., 2010). Humorous stimuli, therefore,
were carefully normed and pretested to ensure wide-ranging humor responsiveness before being used experimentally.

Researchers interested in the mnemonic effects of humor considered a wide variety of design issues, such as: (a) will participants be informed of the impending memory test (informed/intentional learning vs. uninform ed/incidental learning) and (b) should humor be manipulated between-subjects (unmixed list) or within-subjects (mixed list)? For instance, Schmidt (2002) and Takahashi and Inoue (2009) explored these design issues and found that humor was more likely to elicit an effect with incidental learning, but that effects were also seen with intentional tasks. Although early work (e.g., Schmidt, 2002) seemed to suggest that humor effects were only present in mixed-list designs, where funny material could stand out from the context of unfunny material, more recent work has shown mnemonic benefits to humor with both mixed and unmixed lists (Takahashi & Inoue, 2009). That said, the standard design exploring humor and memory employs an incidental learning task with mixed lists (e.g., Schmidt, 1994; Schmidt, 2002).

Researchers have attempted to explain the mnemonic benefit of humor by appealing to a variety of related mechanisms. One explanation is that the surprise felt by encountering humorous, distinctive, or even bizarre material might lead to deeper (more meaningful) processing, greater elaboration or connection with long-term memory, additional rehearsal (or retelling) of the material, or even the storage of additional contextual information with the unique stimulus—each of which is sufficient to improve memory for such information (Schmidt, 2002). Other explanations have suggested that the mnemonic benefit of humor stems from the greater emotional or physiological arousal that accompanies humor.

In particular, the encoding-based explanations suggested that humorous materials were given additional rehearsal, elaboration, or privileged storage during encoding (e.g., Schmidt, 2002; Takahashi & Inoue, 2009). One implication of these explanations was that the extra rehearsal or elaboration for humorous stimuli would likely be at the expense of surrounding material. In terms of the present research question, this theory might suggest the presence of humor in a speech would negatively impact memory for speech itself. Evidence from Kaplan and Pascoe (1977) caused doubt in this explanation as they found that the material following humorous stimuli was remembered no better or worse than material following nonhumorous stimuli. However, one study does not provide a definitive test of a theory.

In contrast, retrieval-based explanations of the humor effect suggested that humorous materials were easier to distinguish from nonhumorous material in memory—that is, they were more distinctive (Schmidt, 2002). One could argue that the prevalence of humor benefits with mixed-list designs clearly support this theory—presumably, the humorous material stood out from the background of nonhumorous material. However, the presence of humor effects with unmixed designs was potentially problematic, unless one viewed the humorous material as standing out from all other information in memory, most of which is not likely to be humorous. Returning to the present question of interest, if humor influenced memory at the point of retrieval through distinctiveness, one would expect the mnemonic benefit to remain solely with the jokes and not with the surrounding speech information. It was difficult to tell from the current literature whether a retrieval-based account would predict a decline in memory for the speech information, as predicted by the encoding-based accounts.

The goal of the present study was to explore whether there was any truth to the old adage that starting a speech with humor would render the speech more memorable. The major explanations seem to predict that, while memory for the joke would be enhanced, the memory for the surrounding material would be either unaffected or impaired by the presence of humor. Findings in this direction would call into question the utility of starting with a joke.

**Experiment 1**

In Experiment 1, participants listened to two different passages of factual information. One passage began with a humorous limerick, whereas the other began with a nonhumorous limerick. To better simulate the conditions under which one might hear a speech, participants were given a brief orientation statement that asked them to imagine they were about to listen to a keynote speaker at a relevant conference before they actually listened to the limerick and passage. Following presentation, participants completed a brief distracting activity and then completed a recall and recognition test for all of the presented information. Based on previous research, we predicted that the humorous limerick would be remembered better than the nonhumorous limerick—the standard humor
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benefit. Further, based on the encoding-based explanations of the humor effect, we predicted that memory for the passage might be impaired, especially the content that directly follows the limerick.

**Method**

**Participants.** Forty-five (6 men, 39 women) undergraduates were recruited from an Introduction to Psychology course at Lake Forest College and were compensated with extra credit in the course. Participants were run in groups of one to four people and completed the task at separate computers.

**Materials and Design.** Prior to the experiment, we created 16 limericks with ideas from Internet sources (i.e., Jokes.com, Laughoutloud.net) and modified them to create four types of limericks: funny and taboo, funny and not taboo, not funny and taboo, and not funny and not taboo. For example, a funny-taboo limerick began, “There once was a man named Dave. He had a dead whore in a cave,” whereas its nonfunny-taboo equivalent would start, “There once was a corporate whore named Dave. His investment plan was brave.”

In order to assess whether the categories were valid (humorous limericks were actually humorous; taboo limericks were taboo), 16 first-year students at Lake Forest College rated how funny and how taboo each limerick was on a simple 4 point Likert-type scale (1 = funny/taboo, 4 = not funny/not taboo). From 16 limericks, we selected two funny (mean rating: 3.29, taboo: 3.26) and two not funny (mean rating: 1.17, taboo: 1.06) versions that were matched on humor and taboo ratings (see Table 1). The four limericks were coded 1F (1 Funny), 1NF (1 Not Funny), 2F, and 2NF and appear in Table 1.

<table>
<thead>
<tr>
<th>Limericks With Pilot Ratings</th>
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<tbody>
<tr>
<td><strong>1F (Funny rating: 3.39, original Taboo rating: 3.17)</strong></td>
</tr>
<tr>
<td>There once was a woman from Moher, Who felt like an old corporate whore. She had no idea Her older friend Mia Would hire her to cut meat at the store.</td>
</tr>
<tr>
<td><strong>1NF (Funny rating: 1.28, original Taboo rating: 1.06)</strong></td>
</tr>
<tr>
<td>There once was a woman from Moher, Who realized she could work no more. She took to the street, A guy flashed her his meat And decided to be a whore.</td>
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</table>

We found that limericks with taboo or inappropriate language were the only limericks rated as funny, so the second original intended manipulation (presence of possibly taboo words in the limerick) was instead held constant by using the same taboo words in both the funny and the not funny limericks. Due to limerick 1NF’s low rating on the taboo scale, the second line was changed from “Who realized she could work no more” to “Who felt like an old corporate whore” and the fifth line was changed from “Would give her a job at the store” to “Would hire her to cut meat at the store” to add the same taboo features as Limerick 1F. Due to limerick 2NF’s low rating on the taboo scale, the word “shit” was added to the fourth line to create the same taboo effect as Limerick 2F.

Two content passages were created: one passage discussing the Spanish economy and the other outlining the recent popularity of Hollywood celebrities to work as voice actors for large commercial campaigns (see Table 2). The subject matter was decided based on simplicity of the topics and potential relation to the limericks. Each was designed to relate to the subject matter of a different limerick. The “Woman from Moher” limericks (1F; 1NF) flowed with the Spanish economy passage because both discuss issues surrounding job availability, whereas the “Man named Dave” limericks (2F; 2NF) related to the money theme in the Hollywood celebrity endorsements passage. The relationships are purposefully weak so that limerick memory and passage memory could not be confused at test. Both passages were of similar length (73 and 80 words, 4 and 5 sentences, respectively).

Across participants, each limerick was paired equally often with each passage and was placed at the beginning, before the passage content. Four audio recordings were created for the experiment. Each recording contained one limerick and one passage read in the same voice with natural inflection; the same male speaker was used in each recording.

Each sentence in each passage was converted into a series of propositions—singular idea units with truth value—for the purposes of scoring participants’ recalls. Overall, each passage contained 12 idea units. The limericks were also separated into idea units to ensure consistent scoring.

We created a two-alternative, forced-choice recognition test for the limericks and passages. Distraction sentences were created for the recognition test. Small details were changed in each sentence that altered its meaning. For example, “Many unemployed citizens have turned to the Spanish under-market, taking jobs that are ‘off the books’
and are paid ‘under the table.’” was changed to “Many unemployed citizens have turned to the welfare system, refusing to take jobs where they would be paid under the table.”

The independent variable in this study was the humor status of the limerick: funny vs. nonfunny in a within-subjects design with the variable manipulated factorially across participants. The dependent variable, memory for passage and limerick content, was measured through a free recall period and a recognition test. To ensure that the experiment was completely automatized, the experiment was created using E-Prime and conducted on IBM-compatible computers.

Procedure. Participants entered the laboratory where they were greeted and seated at a computer and read specific instructions regarding the nature of the experiment on the screen. Before each trial, participants were shown the following orientation statement to give a sense of a real situation (outside the lab): “Imagine that you are at a conference on (international economics or marketing in television). You are sitting down to watch a speaker and you will hear the opening paragraph of his 15-minute speech.” On each trial, participants heard an audio recording of a limerick followed immediately by an informational passage. Each participant saw either 1F/2NF or 2F/1NF; passage order was counterbalanced and the condition selection was preset in a random order. After the passage, they completed a 3-minute digit-tracking distractor task in which random numbers between 1 and 9 appeared on the screen and the participant identified whether the number was odd or even with a button press (‘o’ or ‘e’). Following the distracting activity, each participant completed a free recall task of the content of the limerick and the passage. They were instructed to remember as much from the limerick and the passage as possible and write it on a blank sheet handed out upon entrance to the lab by the lab supervisor. A timer on the computer screen updated every 10 s for 2 min and sounded when the interval was over, at which time the presenter collected the sheet.

Immediately following the free recall test, participants completed a two-alternative, forced-choice recognition test on the computer. On each trial, two sentences were shown on the screen (one from the limerick or passage and one of the distractors detailed above), and the participant was asked to choose the one actually heard and seen in that trial. Participants finished by completing a short rating sheet regarding their answers to three questions on a 5-point Likert-type scale (5 = very much, 1 = not at all) by circling the appropriate number on the page. The three questions were as follows: How well did the limerick relate to the topic of the presentation, did the limerick increase your interest in the paragraph that followed, and did the presence of the limerick distract you from the paragraph that followed?

Data Analysis. A rater assessed recall performance by determining which of the propositions in each limerick/passage combination were accurately remembered. The rater used lenient scoring criteria in which participants were awarded credit if they recalled the general idea of the proposition. The rater discussed any uncertain cases with a fellow researcher until consensus was reached and kept a running list of “acceptable phrases” to ensure consistent scoring of propositions throughout the process. For analysis, the mean proportion of propositions correctly recalled was calculated for accurate comparison between limericks and passages and among the different limericks.

Results and Discussion
As seen in Figure 1, the mean proportions of the propositions accurately remembered in the free recall portion of the experiment for the funny and nonfunny limericks were .60 (SD = .32) and .43 (SD = .23), respectively. A paired-samples t test showed that the difference between the means was statistically significant, t(44) = 3.22, p < .002, Cohen’s $d$ = 0.61. The funny limericks, therefore, were remembered better than the nonfunny limericks. A separate paired-samples t test showed no significant difference between recall performance

<table>
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<th>TABLE 2</th>
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<td><strong>Passages for Experiments 1 and 2</strong></td>
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<tr>
<td><strong>Passage 1</strong></td>
</tr>
<tr>
<td>As a result of the economic downturn in Spain, small businesses have closed and large companies have laid off workers across the country. Many unemployed citizens have turned to the Spanish under-market, taking jobs that are ‘off the books’ and are paid ‘under the table.’ After a series of bank reforms, Spain appears poised to rise out of the recession. However, the growth of the under-market will likely slow the economic recovery process.</td>
</tr>
<tr>
<td><strong>Passage 2</strong></td>
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<tr>
<td>After the recent changes of the culture in Hollywood, many famous actors have felt no shame in doing large commercial campaigns for big corporations. The majority has gone to voice-over work, but a few actually appear in the commercials. Of course, they are paid more to appear than for voice-overs. Up until recently, it was viewed as “selling out” to take a paycheck for doing nothing more than using fame to sell a product. Nowadays, it’s viewed as good marketing.</td>
</tr>
</tbody>
</table>
for the passages, $t(44) = -0.97, p = .34$.

Figure 2 displays the recognition accuracy for the funny and nonfunny limericks and passages. Paired-samples $t$ tests found no significant differences between the proportions of sentences correctly recognized for limericks, $t(44) = -0.01, p = .99$, or passages; $t(44) = -0.35, p = .73$. Performance appeared to be near ceiling.

Although, overall, the type of limerick did not appear to influence recall or recognition of the passage, it is possible that the influence of the limerick might have been restricted to just the first few propositions of the passage. Figure 3 shows recall accuracy for the first three propositions following each type of limerick. A series of paired-samples $t$ tests showed no significant differences between any adjacent propositions, suggesting that the limerick (funny or nonfunny) had no influence on memory for the adjacent material, $t(44) = 0.65, p = .52$; $t(44) = 0.55, p = .60$; $t(44) = 0.53, p = .60$, for first three propositions after the limerick, respectively.

Participants were asked to rate the relationship between the limerick and passage, whether the limerick increased their interest in the passage, and whether the limerick distracted them from the passage on a 1–5 scale. None of the ratings differed significantly between funny and nonfunny conditions, $t(44) = 1.61, p = .12$; $t(44) = 0.18, p = .86$; $t(44) = 0.98, p = .33$, relation, interested, and distraction listed respectively.

In Experiment 1, we successfully replicated the standard humor benefit by showing that funny limericks were remembered via free recall significantly better than nonfunny limericks. Further, the humor of the limericks in this case had no visible effects on memory for the rest of the passages. Participants also did not answer the follow-up questions significantly different across humor conditions. The results, then, do not support the old adage that starting a speech with a joke will render the speech more memorable because the memory enhancement was restricted to the joke.

**Experiment 2**

Experiment 2 was designed to assess whether the effect of the humorous limerick depended on its location within the passage, and whether the primacy location was the only reason for the humor effect seen in Experiment 1. Experiment 2 followed the same basic format as Experiment 1 except that the limerick was presented at the end of the passage. Based on the first experiment’s results, we expected to see the same effects shown
in Experiment 2—that is, a humor benefit for limerick content only and no effects on adjacent material or any of the rest of the passage material.

Method

Participants. Thirty-seven (27 women, 10 men) undergraduates were recruited from an Introduction to Psychology course at Lake Forest College and were compensated with extra credit in the course. Participants were run in groups of one to four people and completed the task at separate computers.

Materials and Design. The same limericks and passages used in Experiment 1 were used for Experiment 2; they appear in Tables 1 and 2. The recordings from Experiment 1 were edited such that the limerick followed the passage rather than leading into it in both the audio recording and the visual display. The same proportions, free recall and recognition instructions, were used in Experiment 2 as well. To ensure that the experiment was completely automated, the experiment was created using E-Prime and conducted on IBM-compatible computers.

Procedure. The procedure used was the same as that in Experiment 1.

Data Analysis. A rater assessed recall performance by determining which of the propositions in each limerick/passage combination were accurately remembered. The rater used lenient scoring criteria in which participants were awarded credit if they recalled the general idea of the proposition. The rater discussed any uncertain cases with a fellow researcher until consensus was reached and kept a running list of “acceptable phrases” to ensure consistent scoring of propositions throughout the process. For analysis, the mean proportion of propositions correctly recalled was calculated for accurate comparison between limericks and passages and among the different limericks.

Results and Discussion

One participant’s data set was removed from the analysis because of a procedural mistake—the participant received only one level of the manipulation. Hence, all subsequent analyses were performed using 36 participants. As seen in Figure 4, the mean proportions of the propositions accurately remembered in the free recall portion of the experiment for the funny and nonfunny limericks were .51 (SD = .12) and .36 (SD = .14), respectively. A paired-samples t test showed that the difference between the means was statistically significant, t(35) = 2.59, p = .014, Cohen’s d = 1.15.

The funny limericks were again remembered better than the nonfunny limericks. A paired-samples t test showed no significant difference between the mean proportion correct for the passages, t(35) = -0.03, p = .98.

Figure 5 displays the recognition accuracy for the funny and not-funny limericks and passages. Consistent with Experiment 1, paired-samples t tests found no significant differences between the proportions of sentences correctly recognized for limericks, t(35) = -1.59, p = .12, or passages, t(35) = -1.19, p = .24.

Again, although the type of limerick did not appear to influence recall or recognition of the passage overall, it is possible that the influence of the limerick might be restricted to just the last few propositions of the passage in this condition. Figure 6 shows recall accuracy for the last three propositions preceding each type of limerick. A series of paired-samples t tests showed no significant differences between any adjacent propositions, suggesting that the limerick was the only part of the stimulus affected by its humor or lack thereof for the last 3 propositions, in order: t(35) = 0.00, p = 1.0; t(35) = -1.44, p = .15; t(35) = -0.77, p = .45.

Only the comparison between conditions of the question, “Did the limerick distract you from the passage that preceded it?” showed a significant difference, t(35) = 2.19, p = .04, Cohen’s d = 0.50. The limericks were rated as significantly more distracting in the funny condition (M = 4.22, SD = .84) than in the nonfunny condition (M = 3.69, SD = 1.25). None of the other ratings differ significantly between funny and nonfunny conditions, t(35) = -0.82, p = .42; t(35) = -1.07, p = .29.

In Experiment 2, the standard humor benefit was successfully replicated by showing that funny limericks were remembered via free recall significantly better than nonfunny limericks. Consistent with Experiment 1, the presence of humor had no visible effects on memory for the rest of the passages. Participants did not answer significantly different across humor conditions with answers to the follow-up questions, although they did report feeling that the funny limericks were significantly more distracting. The results, again, do not support the old adage that starting with a joke will enhance the memorability of the speech.

General Discussion

Experiment 1 revealed a significant positive effect of humor on memory only when free recall was tested. Any residual effects (positive or negative) of
humor on the rest of the passage were not statistically significant. The humor benefit was not evident with the recognition test, which likely occurred due to a ceiling on performance levels. Additionally, the presence of humor at the beginning of a speech did not influence participants’ interest in the passage and the presence of humor did not seem to distract participants. These results were replicated in Experiment 2, even when the location of the limerick was changed to the end of the speech.

These experiments demonstrate that the basic humor benefit is replicable and robust, even with a novel procedure and stimuli. Though there was no influence of humor on the passages themselves, they were not manipulated for humorous content. They are still, however, an important part of the stimulus, as the lack of difference between memory for the passages in the humorous and nonhumorous conditions adds interesting information to the presence of the effect in this study. Our results are consistent with those reported by Kaplan and Pascoe (1977), who showed a humor effect for humorous examples given within a lecture but only for those specific examples and not for the actual lecture material.

Some other strengths of the current study are that it used a less typical methodology in that participants learned intentionally (the memory test was not a surprise) and another more typical method in that the humor condition was manipulated within-subjects and produced the effect. The current study also used the propositional method of scoring data, which is a more objective and operationalized way to score recall data than by number of words within a sentence (Kintsch, 1974). Moreover, one could also argue that the nonfunny limericks were quite bizarre, and the lack of memory enhancement for them provides evidence of the strength of the humor effect over the bizarreness effect (and any taboo effects on memory due to the counterbalancing of taboo words across limerick type).

The results of this study provide a challenge to the encoding-based explanations of the humor benefit which seemed to predict that the extra attention (or rehearsal) paid to the humorous material would be at the expense of the immediately surrounding material (e.g., Schmidt, 2002; Takahashi & Inoue, 2009). The results, however, may be consistent with a retrieval-based explanation of the humor effect, although these theories do not directly address memory for surrounding information.

One possible weakness of this study is the
lack of a manipulation check on the humorous material for each participant. In other words, the study did not include a check to see whether each limerick was funny or nonfunny as intended for each participant. Such a check was avoided in order to keep the manipulation unknown to participants until after the experiment was over. However, the pilot study pretested the humor of the limericks, so the manipulation was nonetheless expected to work and did work, as a humor effect was shown.

Another potential limitation of the current study is the lack of a strong content relationship between the limerick and its passage. While leading with information couched in a joke might only help memory for basic concepts, such enhancement would be very helpful for the most critical information in a presentation or lecture situation, and so a more closely related limerick might improve general concept memory in the desired manner. Similarly, the use of a shorter joke might also make the nature of the experiment less obvious and add to the strength of the effect. The short length of the stimuli may also limit the generalizability of the study to presentations or lectures made in a classroom or at a convention. In such real-life situations, a speech would last much longer than one paragraph, so the manipulation necessary to show a humor effect might need to be stronger if it is even, in fact, possible for a joke to affect memory for content of a speech or paragraph in a different study or situation.

Further, the type of joke employed here could also have limited generalization, because limericks are a very specific and obvious type of joke. We chose limericks because of the ease of matching them to each other and the restrictions put on this study by time and resources. However, the length and type of the joke did not appear to be a major issue because the effect was produced twice. Finally, the taboo words, though repeated in all limericks, may not have maintained taboo meanings in different contexts (specifically in 2F/2NF) and were not retested for taboo status after the addition of new words. Despite these limitations, the content remembered in free recall, that the humor of the limerick, was the important manipulation in all conditions, not its content of taboo words.

Future Directions
The present experiments could potentially open up some new possibilities for the field of research on the humor benefit. First, it might be interesting to control for individual difference in humor perception by creating stimuli that are tailored to each individual’s sense of humor. Although difficult, such a study could add much information to our knowledge of the effect as researchers could be more sure that each participant would find the stimuli humorous. It would also address a potential limitation of the current study, which is that even though the stimuli were rated as funny, they were not rated as highly funny. Despite the possibility of a more robust effect (or an effect on the passage) with funnier stimuli, the current study did replicate the effect quite successfully.

Next, it would be nice to examine the effect of humor in more real world situations (e.g., Kaplan and Pascoe, 1977). If researchers are to answer the question of how to truly remember things better, they must first test the theories in situations like lectures and speeches. For instance, one might show participants videos of lectures or presentations. Indeed, initially this research began with a pilot test of a funny and a nonfunny video of a short speech, but the experiment never got past the piloting stage because the funny stimulus was not rated as sufficiently funny. However, future research using the recall methods here and the propositional method of scoring might lead to further validation of the effect and suggestions for ways to use it in the real world.

References
Prejudice is conceptualized as a negative evaluation of a person based on group membership, whereas discrimination is a negative action directed toward that individual (Crandall, Eshleman, & O’Brien, 2002). Though some discriminatory acts are obviously motivated by prejudice (e.g., racial slurs), many real life situations contain a certain amount of ambiguity regarding the motivation behind a behavior. Such instances are ambiguous because the motivation is unclear and details such as whether the behavior is typical of the person acting are unknown. These ambiguous situations may lead to different interpretations of the same act. For example, a hotel clerk may tell a customer via telephone that rooms are available for reservation that evening while, in the next moment, he informs a customer in person that there are no vacancies. One observer may think the clerk is unpleasant because of circumstance or personality, whereas another may see the behavior as prejudicial against the customer who inquired in person at the desk. Inman and Baron (1996) suggest that the degree to which individuals interpret a behavior as prejudicially motivated may depend on the extent to which they hold expectations regarding who will perpetrate and whom will be victimized. Such expectations develop as humans organize their experiences by comparing new events to existing mental ideals or schemas (Aosved, Long, & Voller, 2009; Baldwin, 1992; Cantor, Michel, & Swartz, 1982; Hayes-Roth & Hayes-Roth, 1977). These mental images of the “most likely” scenarios involving various types of intolerance—sexism, racism, religious intolerance, and ageism, for example—can be referred to as prototypes and may influence sensitivity in identifying discriminatory behavior perpetrated against a given group. These prototypes are most frequently used in situations that involve some ambiguity (Inman & Baron, 1996) and their use may lead to the inaccurate perception of a behavior as prejudicial or failing to recognize prejudice when prototypes are absent.

Researchers have identified the human tendency to categorize, or use stereotypes, as part of normal cognitive processing, and individuals most often use these stereotypes when they are unable to give full attention to a situation. For instance, people use stereotypes more often when they are
Prototype Use in Perceptions of Prejudice

In this view, onlookers have a preconception about who will be a perpetrator of prejudice but not who will be victimized; therefore, negative behavior is more likely to be perceived as discrimination if a certain type of person is the actor. A third explanation is the out-group discrimination model, in which people more often perceive prejudice when discrimination against a group originates from the member of an out-group (Rabbie & Horwitz, 1969; Tajfel, Billig, Bundy, & Flament, 1971). This explanation is largely based on Social Identity Theory (Tajfel, 1982; Tajfel & Turner, 1985), which states group members tend to evaluate the members of their in-group more favorably than their out-group, even within groups formed by arbitrary categorization (Wilder, 1986). The out-group discrimination model relies heavily on stereotypes of intergroup conflict and the assumption that intergroup conflict is generally more common than conflict within groups. This in-group bias may lead individuals to be more likely to perceive a negative act as prejudicial or discriminating when such conflict arises between two members of different in-groups.

To examine which of these three models of stereotypes are most often used in identifying prejudicial behavior, participants in the Inman and Baron (1996) study read and responded to 15 vignettes depicting social interactions between two actors. Eight of these vignettes were “critical” vignettes, depicting a situation of ambiguous discrimination; seven were “filler” vignettes that contained a friendly interaction. Of the critical vignettes, there were two of each possible racial composition, and pictures of the actors accompanied all vignettes to clearly show actor ethnicity. After each story, participants provided two to three words to describe the main actor and rated each the extent to which the actor fit the descriptors they provided (1 to 7 Likert-type scale). Raters coded words as prejudicial if they suggested that the negative behavior of the actor in the critical vignette was motivated by prejudice (e.g., prejudicial, unfair, biased, racist). The results of Inman and Baron (1996) indicated that the prototype view is the most accurate regarding racial discrimination scenarios occurring between Whites and Blacks because participants were most likely to label a potentially prejudiced act as prejudiced if a specific perpetrator and specific victim were involved—in their case a White perpetrator and a Black victim; however, it remains unclear whether people generally have a prototype for racial discrimination between other ethnic groups.

As mentioned, prototypes can be thought of as the mental constructs of the “most usual” examples by which new information is assimilated into our existing schemas (Aosved et al., 2009; Baldwin, 1992; Cantor et al., 1982; Hayes-Roth & Hayes-Roth, 1977), and the use of such prototypes can trigger held stereotypes (Fiske & Taylor, 1991). Inman and Baron (1996) applied this theoretical framework to the identification of prejudice, examining its applicability versus that of two other possible explanations of the process people use to identify discrimination in ambiguous situations. In the prototype model of stereotypes, the perception of prejudice is explained by how people judge situations against the most likely example in their experiences (e.g., Hayes-Roth & Hayes-Roth, 1977). For example, individuals have been found to be more likely to identify an act as prejudiced if it is a White person acting against a Black person or a man against a woman (Baron, Burgess, & Kao, 1991). Baron et al. (1991) argued that individuals were more likely to perceive prejudice when their expectations were met; that is, when their held stereotype about who should be prejudiced against whom was confirmed.

The other two categories of stereotypes include the traditional oppressor model, in which observers are more likely to identify a behavior as prejudicially motivated when the member of an historically dominant group (e.g., White, male, elite social class) acts with intolerance (e.g., Devine, 1989).
In 2010, 50.5 million individuals (16%) living in the United States identified themselves as Latino/Hispanic (U.S. Census Bureau, 2011), and estimates are that the Latino/Hispanic population in 2050 will be 29% of the U.S. population (Passel & Cohn, 2008). In fact, Latinos are the fastest growing population in the U.S. There is evidence that despite this growth, prejudicial attitudes toward Latinos remain (Deaux & Ethier, 1998) and although reports are mixed regarding what types of discrimination against Latinos are most frequent (Bottoms, Davis, & Epstein, 2004; Carvajal, 2004; Lee, 2007), Latinos remain at a social and economic disadvantage compared to individuals of European descent, and report differential treatment because of their ethnic heritage (Pérez, Fortuna, & Alegría, 2008). The present study examined the possibility that, in the same way that individuals use prototypes to judge whether behavior between Blacks and Whites is motivated by prejudice, they may use cognitive processes to judge prejudice between Latino and White individuals.

When it comes to judging the presence of prejudicial behavior, there are characteristics of the observer that may play a role. For instance, there is evidence that prejudice is generalized. Aosved and Long (2006) found that many forms of prejudicial feelings commonly thought of as being entirely distinct—such as racism and sexism—are interrelated. That is, a person who may be religiously intolerant is also likely to hold ageist and classist views (Crandall, 1994; Snyder & Ickes, 1985). Similarly, Akrami et al. (2011) concluded that people who discriminate against a given group exhibit a generalized tendency to hold prejudicial ideals and that this tendency is related to certain personality traits. Aosved et al. (2009) developed a scale to measure this generalized tendency to hold prejudice, the Intolerant Schema Measure (ISM). They used a number of previously established scales assessing specific forms of intolerance, including attitudes towards women, homosexuality, and socioeconomic status. There is also the expectation that certain types of people will be more intolerant than others (Devine, 1989; Duncan, 1976). Because an examination of the link between the tendency to discriminate against others or carry prejudicial thoughts and the tendency to detect such prejudice is limited, the ISM was included in the present study to investigate the association of generalized prejudice and specific interactions between Whites and Latinos.

Another factor in judging prejudicial actions may be the social status of the observer. Previous studies have shown that members of traditionally oppressed groups in a society (e.g., minority groups) are more likely to perceive prejudice in a given situation than are members of a majority group (Baron et al., 1991; Flournoy, Prentice-Dunn, & Klinger, 2002; Inman & Baron, 1996; Marti, Bobier, & Baron, 2000). Thus, women are more likely to identify an action as being prejudicially motivated than are men, and Blacks are more likely to do so than their White counterparts.

In the present study, we examined the generalizability of previous findings regarding the perception of prejudicial behavior. As mentioned, Inman and Baron (1996) established the presence of a prototype of discrimination between Blacks and Whites. In a partial replication of their study, rather than focusing on White/Black interactions, we investigated participants’ perceptions of interactions involving White and Latino individuals. We also examined the role of gender and intolerant beliefs in whether participants judged a behavior to be prejudicial. We had three hypotheses regarding the detection of prejudice in ambiguous situations: Hypothesis 1 (H1): Participants would be more likely to describe the White actor in the White/Latino interaction with words that suggested more prejudice, confirming the prototype explanation of the perception of prejudice. Hypothesis 2 (H2): Because women have historically been an oppressed group, women would perceive the presence of prejudice more often than men. Hypothesis 3 (H3): There would be a significant negative correlation between scores on the Intolerant Schema Measure (Aosved et al., 2009) and the total number of times the participants perceived prejudice in the ambiguous situations contained in the vignettes.

Method

Participants

Participants were 63 college students (20 men, 43 women) over 18 years of age (M = 20 years, SD = 1.5), recruited from a broad range of classes at a liberal arts college in Southwest Virginia. Participants were offered extra credit at the professors’ discretion. Most of the participants were first year students of traditional age (35.5%), 27.4% were sophomores, 14.5% were juniors, 19.4% were seniors, and 3.2% reported other (e.g., 5th year senior). Most students were White/non-Hispanic (81%), with the next largest ethnic group being...
Participant perceived the actor in the vignette to be expressing prejudice. The raters met with the researcher to discuss what types of words should be coded as prejudicial. Examples of words indicating prejudice were prejudiced, bigot, discriminating, and racist. Negative words, such as mean, unfair, hostile, and intrusive, were not counted because although they did suggest the principal actor was perceived negatively, they did not directly imply the perception of prejudice. Raters scored each participant’s responses to each vignette from 0 to 3, based on how many words the participant provided that indicated the perception of prejudice. Inter-rater agreement was 98%, indicating reliable scoring. We calculated an overall prejudice perception score by summing scores from each critical vignette. The mean score for the critical vignettes was .98 (SD = 1.18). Prejudice perception scores ranged from 0–2 for the White/White vignette, 0–3 for the White/Latino, 0–2 for the Latino/Latino, and 0–1 for Latino/White. This methodology and the coding of responses were based on similar research by Inman and Baron (1996).

Intolerant Schema Measure. Participants completed the Intolerant Schema Measure (ISM; Aosved et al., 2009), which consists of 54 items to which the participants responded using a 1 to 5 Likert-type scale describing how well each statement matched their beliefs, with 1 being strongly disagree and 5 being strongly agree. The ISM contains six 9-item subscales derived from previous measures of intolerance: (a) Sexual Prejudice (derived from the Modern Homophobia Scale Lesbian/Gay; Raja & Stokes, 1998); (b) Classism (derived from the Modified Economic Beliefs Scale; Stevenson & Medler, 1995); (c) Ageism (derived from the Fraboni Scale of Ageism; Fraboni, Salstone, & Hughes, 1990); (d) Sexism (derived from the Attitudes Towards Women and Neosexism Scales; Spence & Helmreich, & Stapp, 1973; Tougas Brown, Beaton, & Joly, 1995); (e) Racism (derived from the Modern and Old-Fashioned Racism Scale; McConahay, 1986); and (f) Religious Intolerance (derived from the Religious Intolerance Scale; Godfrey, Richman, & Withers, 2000). We calculated subscales scores by averaging the 9 items (resulting in a range from 1 to 5, with higher scores indicating higher intolerance). A total score was calculated by averaging all 54 items. Aosved et al. (2009) reported acceptable internal consistency and test-retest reliability for the measure as whole, as well as individual subscales.

Materials Vignettes. Participants read and responded to seven vignettes. Four of these were “critical” vignettes, with their basic content taken from Inman and Baron (1996), who had determined that the content for the critical vignettes was comparable and the situations were equally ambiguous. The critical vignette described a situation of ambiguous discrimination between Latinos and Whites (see Appendix). Three “filler” vignettes depicted amicable interactions. In an attempt to keep gender from confounding results, all actors in the present study were men. Using the methodology of Inman and Baron, participants provided two to three words to describe the principal actor in each vignette (designated by having his name in all capital letters) and to rate how well that word described the actor using a 1 to 7 Likert-type scale with 1 being slightly describes and 7 being perfectly describes. The Likert ratings were used to determine the intensity of perceived prejudice.

The order of the vignettes was randomized for placement in the survey but remained constant for all participants. In order to show actors’ ethnicities more clearly, we employed photographs of Latino and White men and used names suggestive of ethnicity. The photos of the ethnic groups were selected if they had similar skin tone and facial expressions. For the purpose of selecting photographs that were perceived of comparable likeability, participants in a pilot study (N=23) used a 1 to 10 Likert-type scale to rate the likeability of 20 men in photographs. We selected those photographs with likeability ratings closest to the mean for each ethnic group. To select names that clearly suggested ethnicity, participants in the same pilot study responded to a pool of possible names and wrote what ethnic group they associated with each name. Only names that respondents consistently identified as White or Latino were used. Photographs and names were then randomly assigned to the vignettes.

Participants provided a minimum of two words and a maximum of three words to describe the principal actor in each vignette. To obtain numerical data on the vignettes, two independent raters identified words that clearly indicated the
Procedure

Participants were recruited from a variety of psychology and sociology courses with permission of their professors. They were given extra credit at their professor’s discretion. Participants received an email with a link to an online survey. They read and acknowledged the statement of informed consent before continuing by clicking “I agree.” After providing demographic information, including their gender and year in college, participants read and responded to the seven vignettes. All participants received identical forms of the online survey. The order of the vignettes, along with their content and racial composition, was kept constant. After completing the vignette portion, participants completed the ISM. Finally, participants received a code to email to the researcher in order to receive extra credit when appropriate. Participation in the study took approximately 20 minutes.

Results

Primary Analyses

The standard alpha level of .05 was used to judge significance of results. We employed a repeated measures analysis of variance (ANOVA) with a Greenhouse-Geisser (Greenhouse & Geisser, 1959) correction to examine the effect of racial composition on the prejudice perception score. Analyses revealed a significant effect for actor ethnicity, $F(2.39, 147.97) = 7.05$, $p = .001$, $\eta^2_{\text{partial}} = .10$.

Figure 1 provides a comparison of the mean ratings (with standard deviations) of prejudice across each of the four critical vignettes. We used ad hoc pairwise comparisons and the Bonferroni correction to evaluate the differences among the means for the perception of prejudice. The level of prejudice perceived in the White/Latino interaction (prototypical vignette) was significantly higher than in the White/White ($p = .001$) or Latino/White interactions (nonprototypical, $p < .001$). There was no significant difference in participants’ perceptions of prejudice when comparing the White/Latino (prototypical) and Latino/Latino (nonprototypical) interactions ($p = .477$) or White/White (nonprototypical) and Latino/Latino (nonprototypical) interactions ($p = .708$). The perception of prejudice was similar among ratings of all nonprototypical vignettes (i.e., White/White, Latino/White, and Latino/Latino). The results generally confirmed $H_1$, that participants would employ a prototype of White perpetrator and Latino victim in the detection of prejudice.

The main effect for participant gender was not significant, $F(1, 61) = .705$, $p = .404$, indicating no gender difference in the overall detection of prejudice. Therefore, $H_2$ was not supported.

We did not analyze the participants’ Likert ratings of the degree to which they thought the words they reported described the principal actor because once we selected only those participants who perceived prejudice in the critical vignettes, the sample size was reduced to 31 (yielding low power).

Participants’ mean scores on the Intolerant Schema Measure ranged from 1.17 to 3.24 (possible range 1 to 5), with an overall mean of 2.06 ($SD = .53$). We used a Pearson $r$ bivariate correlation to test $H_3$, which predicted a significant negative correlation between overall ISM scores and the detection of prejudice. $H_3$ was not confirmed, $r(55) = -.03$, $p = .86$. The overall mean ISM score was significantly lower than that previously found by Aosved et al. (2009), $M = 2.43$, $SD = .53$, $t(576) = 4.92$, $p < .001$.

Discussion

Results generally supported the first hypothesis that individuals use the prototype of White perpetrator and Latino victim to judge whether a behavior is prejudicial. This supports the research of Inman and Baron (1996), who found that participants used the prototype of White perpetrator and Black victim to identify a behavior as prejudicial in an ambiguous interaction between members of
participants did find women to be more sensitive to incidents of prejudice—at least when compared to their observations of White/White or Latino/White interactions (both nonprototypical). The finding that there was no difference in levels of perceived prejudice between the White/Latino (prototypical) and the Latino/Latino (nonprototypical) interactions was unexpected because Inman and Baron (1996) found that participants perceived the White/Black (prototypical) interaction as more prejudiced than all three nonprototypical interactions (i.e., White/White, Black/White, and Black/Black) though the effect size was relatively small. One interpretation of this may be that participants were more likely to see a Latino as the victim of prejudice overall, regardless of perpetrator ethnicity; however, because there were no differences between ratings of the Latino/Latino and other non-prototypical interactions, this interpretation is considered with caution.

Our analyses revealed no significant gender difference in overall perceived prejudice. Thus, our second hypothesis, that women would detect prejudice more often than men, was unsupported. This contradicts previous findings suggesting that traditionally oppressed groups in our society, such as women and ethnic minorities, tend to identify prejudice more readily because they are more sensitive to incidents of prejudicial behavior (e.g., Baron et al., 1991; Inman & Baron, 1996; Marti et al., 2000). For example, women and Black participants have been more likely to detect prejudice than men and White participants. It may seem that the present findings related to gender were possibly influenced by the fact that all of the actors being judged were men; however, previous studies have found that even when participants are observing male/male interactions only, women and Blacks were more likely to detect prejudice in ambiguous situations. Another related issue is that there were twice as many women as men in the present study; however, the number of men was not too small to make a meaningful comparison. It may be that because the mean age of the women in the sample was 20, their experience with sexism was limited or unacknowledged; therefore, the sensitization that comes with actual experience of prejudice did not exist, though earlier studies using college-aged participants did find women to be more sensitive to prejudice than men (e.g., Baron et al., 1991). It is certainly possible that the women in the sample simply did not have significant experience with intolerance, which could account for the lack of sensitization. We did not examine the role of participant ethnicity due to the ethnically homogeneous nature of demographics of the location in which the study was conducted (primarily White). It is clear that further research should address how participant characteristics (e.g., gender, ethnicity, religion) may influence the perception of prejudice.

Also contrary to expectations, there was no significant negative correlation between participants’ total score on the Intolerant Schema Measure (ISM) and their detection of prejudice; therefore, results did not support the third hypothesis which predicted those who were less prejudiced would be more likely to perceive prejudice in the interactions than those who indicated greater intolerance (more prejudice). Previous research has indicated that there may be individual characteristics that predict intolerance and prejudice (Allport, 1954; Devine, 1989; Duncan, 1976; Sidanius et al., 2004; Akrami et al., 2011). In the present study, no relationship was found between intolerance and the perception of prejudice. It must be noted that, overall, there was very little variability in scores as participants did not report extremely high levels of intolerance. Means on the overall ISM were all below the midpoint on the 5-point Likert-type scale used to assess intolerance. In fact, the mean was significantly lower than that found by Aosved et al. (2009).

In contemplating the unexpected finding that there was no difference between participants’ reactions to the White/Latino and Latino/Latino interactions, we examined our methodology for a possible explanation. In the present study, we used story content from Inman and Baron (1996), who had raters judge actors’ behaviors in eight critical vignettes as comparably ambiguous. Due to the sample size required in using eight critical vignettes, two of each race permutation, we randomly chose four critical vignettes for our study; therefore, all participants responded to the same four critical vignettes. Though we believed we had controlled for the effect of the story content by using vignettes judged as comparable, it could be possible that if participants considered the actor in a particular vignette to be extremely offensive because of a certain behavior, responses to that particular vignette could be negative regarding actor, regardless of perpetrator and victim ethnicity.
After we reexamined the vignettes, we realized that the Latino/Latino interaction was the only one that included a verbal insult or a physical assault; the other incidents included instances that could be considered more subtle prejudice (e.g., a police officer pulling over and choosing to search a vehicle, telling a customer in a restaurant there is no table available because they are closing due to lack of business while telling a friend they have been incredibly busy all night). This may be the reason there was no difference between the White/Latino interaction and the Latino/Latino interaction. Participants may have reacted to the actor in the Latino/Latino interaction more negatively than those in the other non-prototypical interactions and were more likely to describe him in prejudiced terms because of the verbal insult and physical assault. Still, the actor’s behavior in the Latino/Latino permutation was not perceived as so prejudicial that it differed significantly from the other nonprototypical vignettes. It would be useful to examine this further and determine whether the specific action of the actor (e.g., verbal insult, physical attack) affects results and whether the combination of the ethnicity of the perpetrator and victim is important or if it is simply the ethnicity of the victim that matters.

Conclusions
The present study confirms previous research that individuals may use prototypes to identify prejudice in some observed interactions because they were most likely to see a negative behavior as prejudicial when it was enacted by a specific perpetrator and a specific victim: in this case, a White perpetrator and a Latino victim. These prototypes may lead onlookers to recognize prejudice in typical circumstances and ignore prejudicial behavior when the prototype is not present. This may be particularly applicable to prejudice that exists between members of the same ethnicity or gender, as well as discrimination that takes place outside of the expectations of the typical perpetrator and most likely victim. The use of prototypes may also contribute to inaccurate judgments of others, such as viewing a prototypical victim as inferior and a prototypical perpetrator as dominant, or failing to recognize prejudicially motivated behavior that occurs between minority groups. The use of prototypes in identifying prejudicial behavior puts such groups at a disadvantage because discriminatory behaviors due to an identifying trait may go undetected. Prototype use in the detection of prejudice also may lead to the misperception of majority members as prejudiced, which could negatively influence interracial/ethnic interactions. The awareness of the use of prototypes in judging a behavior as prejudicial is essential to accurately interpreting situations that may appear ambiguous to some observers.

The current findings provide support for the idea that individuals use prototypes in their identification of prejudice. Results do not support the out-group discrimination model, suggesting that people are more likely to identify behavior as prejudiced when they observe an interaction between individuals who clearly belong to different groups, whether it be due to ethnicity, gender, religious affiliation, social class, or geographic region. If results had supported this model, then participants would have perceived significantly more prejudice in all interactions between Whites and Latinos, regardless of the ethnicity of the actor.

On the other hand, when considering findings from the present study and those of previous research, the traditional oppressor model may be somewhat accurate, particularly in observations of White/Latino and White/Black interactions. The traditional oppressor model holds that the behaviors of group members who have traditionally held power in a society are more likely to be perceived as prejudicial, when compared to the behaviors of lower status groups. Though the current study supported the idea that prejudice is most often perceived when a negative behavior is enacted by a White individual, it is difficult to separate the effect of the actor’s social status from that of the victim. Future research should involve an examination of the prototype theory with additional ethnicities as well as other traits that may contribute to the rigid use of prototypes in the identification of prejudicial behavior. Future studies could also investigate whether observers see the actor as prejudiced because he or she is interacting with a minority group (with lower status), the perpetrator and victim fit a given prototype, or if it is an interaction of both variables. Perhaps the traditional oppressor model leads to the use of prototypes.

To reduce instances of prejudice and inter-group conflict, it is important to accurately identify the motivations behind negative behaviors. Because individuals may hold expectations regarding who will perpetrate and whom will be victimized, “false positives” and “misses” in terms of prejudice identification will likely result. According to Devine (1989), when cognitive biases are recognized, they are more likely to be overcome;
thus, by knowing that prototypes may play a role in a person determining whether a behavior is prejudicial, individuals can attempt to consciously force objectivity in assessing whether prejudicial behavior has actually occurred. It is important for diversity awareness programs to include information regarding how the perception of prejudice may be influenced by the use of prototypes so that individuals can consider how these stereotypes may lead to inaccurate interpretations of behavior. Understanding the origins of such prototypes can also enhance intergroup relationships in society generally but more specifically in the workplace, schools, organizations, and in situations where ethnicity or race may become salient and identified as a motive for discrimination.

References


Appendix

Critical Vignette Content
Basic Content Taken From Inman & Baron (1996)

| 1. White/White | While out driving with some friends one afternoon, Will notices a police car coming up behind him with its lights flashing. Despite feeling certain that he had done nothing to break the law, he pulls over. OFFICER MULLINS questions the group thoroughly about where they had been and their plans for the day while looking around inside the car for anything suspicious. |
| 2. White/Latino | Before his business trip, Pedro calls in a reservation to a hotel. When he arrives in town, he finds the hotel and carries his luggage into the hotel lobby. When Pedro attempts to check in to his room, ALLEN, the front desk clerk, tells Pedro that the hotel has no vacancies and that his reservation must have been a mistake. |
| 3. Latino/Latino | Julio is watching his favorite band in concert. He is enjoying the music until suddenly the man in the row behind him, JUAN, jabs Julio in the back with his feet. Julio glances back at him and then tries to go on enjoying the show. A moment later, he hears JUAN mutter, “Why would they let scum like him in here, anyway?” |
| 2. Latino/White | At around 9 on a Tuesday night, John and his wife decide to go to dinner at their favorite local restaurant, La Taqueria. When John asks for a table, the host, a man named JORGE, informs him that the restaurant will be closing early due to a lack of business. As the couple turns towards the door, JORGE answers his cell phone and tells the person on the other end that he has been swamped all night and cannot wait to leave work. |
Depression in children and adolescents has become a topic of great concern in Scotland and the United Kingdom in recent years. According to Scottish Public Health Records in 2009, 17,500 people between the ages of 15 and 24 were treated for depression. By adulthood and midlife, thousands more were being treated. These statistics have brought about concern and a movement for more research and information on mental health in Scotland. There has also been an increase in questions about the roots and causes of depression in adolescents and young adults in Scotland. Many organizations in Scotland, such as the Depression Alliance of Scotland and Action on Depression, have been investigating depression in more depth, and there is a demand for academic research ("Depression Alliance of Scotland," 2009). Questions are being raised about what risk factors may be involved in the development of depression. Are the risk factors the same for Scottish young adults as they are for Scottish children and adolescents? Research examining depression in Scotland has focused on children and early adolescents (Sweeting et al., 2006). This research project seeks to examine the transition between adolescence and adulthood, examining issues associated with the development of depression in young adulthood. The current study focuses on common risk factors, including low self-esteem and aggression, and examines if these predict depression in Scottish young adults.

**Risk Factor: Low Self-Esteem**

Much research has been conducted to examine some of the roots of depression in an attempt to prevent this problem before it begins (McKnew, Cytryn, & Yahraes, 1983). Low self-esteem is an important risk factor that has been heavily researched in relation to depression (Orth & Robins, 2008). Low self-esteem, as well as low self-perceived competence, is shown to be strongly correlated with depressive symptoms and behaviors in children, adolescents, and young adults in the...
Depression In Scottish Young Adults

United States (Orth & Robins, 2008; Bandura et al., 1999). A study by Orth and Robins (2008) examined the predictive nature of low self-esteem on depression in youth using a longitudinal design. Data showed that low self-esteem had a strong relationship with depression. With this longitudinal data, researchers were also able to conclude that low self-esteem may predict levels of depression later in adulthood as well. This research supports the vulnerability model, which suggests that low self-esteem “serves as a risk factor for depression, especially in the face of major life stresses” (Orth & Robins, 2008, p. 695).

Low self-esteem is also associated with low self-efficacy (Bandura et al., 1999). Self-efficacy is defined as a person’s beliefs in his or her abilities or capabilities to accomplish a desired goal (Bandura et al., 1999). If a person does not believe that he or she is able to accomplish or achieve this task, he or she may have little incentive or perseverance to continue the task, resulting in low self-efficacy (Bandura et al., 1999). Research by Miller (1998) has shown that low self-esteem and low self-efficacy are correlated with the development of adolescent depression within a United States school setting. According to this research, disturbances in academia and social situations are prone to develop as a result of peer victimization, leading the individual to feel worthless and incompetent. When adolescents are socially isolated or feel academically inefficient, it may be very hard for these individuals to overcome obstacles following discouragement (Miller, 1998). This lack of friendship and social ties is closely linked with depression and depressive feelings (Miller, 1998).

Research by Kistner, Zieger, Castro, and Robertson (2001) also suggests that low self-esteem and low self-efficacy are correlated with self-devaluation and eventually depression in some individuals. This research within the United States found strong correlations between children and adolescents low in self-efficacy and later symptoms associated with depression, as well as a negative sense of worth. Feelings of helplessness were found to be linked to negative implications for psychological adjustment. Therefore, low self-esteem and low self-efficacy to fulfill standards in areas of academics, athletics, and friendships are strongly correlated with depression and depressive symptoms. Bandura and colleagues (1999) reported how low self-esteem and low self-efficacy can be seen as potential “pathways” to depression. Data collected from an Italian sample showed that academic inefficacy, social inefficacy, lack of prosocial behavior, low academic achievement and problem behaviors are all significantly correlated to depression and signs of depression. These results indicate that several personal inefficacies are correlated to clinical forms of depression as well as less severe forms of depression.

The relationship between low self-esteem and depression has been consistently found in research studies in both the United States and other European countries (Orth & Robins, 2008; Bandura et al., 1999; Kistner et al., 2001).

As with all correlational research, the relationship between depression and low self-esteem may also be understood in the inverse, that is, that low self-esteem is a predictor of depression.

Risk Factor: Aggression

Aggression is also correlated with an adolescent’s depressive symptomatology (Bolvin et al., 1995; Sweeting et al., 2006). In adolescence, aggression is commonly seen in forms of bullying or peer victimization (Bolvin et al., 1995). Bolvin and colleagues (1995) reasoned that victimized or rejected individuals are often seen to be at a great risk for both externalizing and internalizing difficulties. Individuals may externalize difficulties with acts of aggression and delinquency or they may withdraw and show internalizing difficulties such as depressive symptoms or loneliness. Adolescents who are the victims of aggression or bullying also may experience feelings of rejection with social isolation (Bolvin et al., 1995). By the time Scottish children are in primary school, socially withdrawn children may experience problems with rejection or issues with self-perception, distress, and self-esteem (Bolvin et al., 1995). These problems can potentially lead to forms of depression in socially withdrawn children and adolescents (Bolvin et al., 1995). Research by Bolvin et al. (1995) indicated that such negative peer relationships may be correlated with the development of depression in Canadian children and adolescents. The results of their research showed that withdrawn and rejected individuals displayed a poorer self-concept, lower social satisfaction, expressed more feelings of loneliness, and also experienced a stronger depressed mood than those who had not been rejected. Therefore, a child’s lack of peer relationships and negative peer experiences are shown to be linked with depressive symptoms. Further evidence was found by Sweeting et al. (2006), who conducted a primary school-based survey in Glasgow, Scotland. Researchers asked Scottish children to recall social
problems they were experiencing at school. Results indicated that victimization by peers is strongly associated with the development of depression in these Scottish children. Thus, peer victimization and aggression are shown to be correlated with feelings of aggression, loneliness, low self-esteem, sadness, and depression.

Bradshaw and Hazan (2006) found that, in general, aggressive individuals have unfavorable views of themselves. As shown previously, children may become aggressive from bullying and peer victimization, and this is linked to feelings of sadness from the rejection (Bolvin et al., 1995). However, most aggressive individuals (victimized or not) typically have negative or unstable views of self as well as low self-esteem (Bolvin et al., 1995). Bradshaw and Hazan (2006) suggested that American children and adolescents may become aggressive due to not only their own low self-image but also from their peers’ negative views. Bullying and peer victimization may intensify feelings of aggression and rejection in some individuals. Results indicated that individuals who had lower self-image, reported higher levels of covert aggression (e.g., hostility and anger), whereas overt aggression (e.g., verbal and physical) was not found to be significantly correlated with low self-esteem.

Panak and Garber (1992) provided more evidence in support of the relationship between aggression and depression. Results indicated that there were significant correlations between increases in aggression and increases in depression over a one-year period in American middle school children. Panak and Garber (1992) hypothesized from this data that individuals with increased peer rejection and victimization were at the most risk for aggressive behaviors, and this increase in aggressive behavior may be correlated with a greater risk for developing depressive symptoms. Research by Morrow et al. (2006) suggests that, while aggressive individuals display higher levels of anger and hostility, they are also often quite sad or depressed. In their study of 57 children, the authors found that peer rejection mediated the relationship between aggression and depression. Therefore, aggression and low self-esteem are seen as major risk and predictive factors for child and adolescent depression.

Current Study
The present study is unique in three ways. First, there has been little research correlating the common risk factors of aggression and low self-esteem specifically with Scottish young adults, as most of the research has been conducted with younger Scottish children. Statistics from the Scottish government show that individuals are being diagnosed with depression at increasing rates when they are in late adolescence or young adulthood (“Scottish Public Health Records,” 2009–2010). The present study specifically examines depression with an age group that has not been as heavily researched in Scotland, as there is a lack of evidence or support for these risk factors in the next stage of development: young adulthood.

In addition, this research study was conducted in Scotland, a country that is currently investing a great deal of time, effort, and money into investigating the rise in depression diagnoses. Aggression and low self-esteem have been correlated with depression in other countries numerous times. However, with the recent increases in diagnoses, one cannot help but wonder if there is something unique about Scotland. Will these common risk factors also be seen as predictors for Scottish young adults? Finally, this study is distinctive as it seeks to examine the role of low self-esteem and aggression together in understanding depression in Scottish young adults.

Therefore, this current study seeks to contribute research to this topic of concern in Scotland, to specifically examine an age group that has faced a large increase in depression cases in recent years, and to see how these common risk factors predict depression. In this particular study, two major and common risk factors—low self-esteem and aggression—were measured to examine if they are predictors of depression in young adults. Research has shown that low self-esteem is correlated with the development of depression (Bandura et al., 1999; Kistner et al., 2001; Orth & Robins, 2008). Aggression has been shown to be correlated to depression (Bolvin et al., 1995; Morrow et al., 2006; Panak & Garber, 1992). Also, aggression and low self-esteem are shown to be correlated (Bradshaw & Hazan, 2006). Therefore, the question remains: Are these common risk factors related to the development of depression in Scottish young adults? It was also hypothesized that covert aggression and low self-esteem are significant predictors of depressive symptoms or behaviors within this sample.

Method
Participants
The group of Scottish young adults was composed of 63 college students (17 men, 46 women) in a 100-level introductory psychology class
enrolled at a large university in Glasgow, Scotland. Ages ranged from 17 to 25 years ($M = 20.36, SD = 2.01$). All students identified themselves as being of Scottish descent. Students gave written consent for participation, and they participated in this study for a research credit for their introductory psychology class.

**Measures**

Participants completed a demographic questionnaire where they were asked to identify their age, gender, and national origin. In addition, measures of depression, self-esteem, and aggression were administered.

**Depression.** To measure symptoms and behaviors of depression, participants completed the Beck Depression Inventory-II (BDI-II; Beck, Beck, & Jolly, 2003). The BDI-II is a 21-item self-report scale that assesses depressive symptoms present within the past two weeks. The questionnaire measures depressive symptoms using current diagnostic criteria. Scores range from 0–63, and higher scores indicate more symptoms of depression. Studies have found good internal consistency with this measure, and it is commonly used to assess depression in adolescents and adults (Uhrlass & Gibb, 2007). Good reliability and convergent and discriminant validity has been found using the BDI-II, and research has found the BDI-II to more accurately categorize participants than other measures of depression (Titov, Dear, McMillan, Anderson, Zou, & Sunderland, 2011). Cronbach’s alpha for the current sample was 0.89.

**Self-Esteem.** The Rosenberg Self-Esteem Scale (Rosenberg, 1965) was used to evaluate self-esteem. This is the most commonly used measure for global self-esteem with well-validated results (Orth & Robins, 2008). Participants rated 10 statements (e.g., “I take a positive attitude towards myself”) on how well these statements describe themselves. Answers on the questionnaires range from 1 (strongly agree) to 4 (strongly disagree) and has a total score range of 10 to 40. Researchers have called this measure the most commonly used measure of self-esteem, and it is used successfully for most age groups (Robins, Hendin, & Trzesniewski, 2001). Cronbach’s alpha for the current sample was 0.85.

**Aggression.** The Aggression Questionnaire (Buss & Perry, 1992) was used to assess the four forms of aggression: anger, hostility, verbal aggression, and physical aggression. Participants examined 29 statements (e.g., “Some of my friends think I am a hothead” or “Given enough provocation, I may hit another person”) and rated from 1 (extremely uncharacteristic of me) to 5 (extremely characteristic of me) and has a total score range of 29 to 145. Good validity and reliability have been consistently found, making the Aggression Questionnaire widely and commonly used to measure aggression (Gerevich, Bacskai, & Czobor, 2007). Cronbach’s alpha for the current sample was 0.91.

**Procedure**

Questionnaires were given during scheduled data collection times. Participants completed the questionnaires alone, either in a classroom, at study tables in the library, or in study sections of the Psychology Department office. Each participant had space and privacy so that they were not influenced by other participants around them. Participants provided written consent prior to participation. Ethical procedures from this Scottish university stated that parental consent was not required unless participants were under the age of 16 (“University Handbook,” 2011). Participants then filled out an anonymous eight-page questionnaire packet, with questionnaires given in the same order. After completion, students received a written document providing general information about the research study and getting help with depression. These resources were provided so that any individuals who felt depressed could seek further information or help if needed.

The BDI-II is used to measure symptoms over the past two weeks; therefore, it should be noted that participants were given the questionnaires well into the term, but not during any exam periods. This was to make sure that negative/depressive feelings of exams were not contributing to their evaluation of mood. Questionnaires were given during weeks eight and nine of a 13-week semester.

**Results**

Analysis of the BDI-II indicated that of the 63 participants, 16% were classified with mild depression, 10% with moderate depression, and 5% of the participants were classified with severe depression. Sixty-nine percent showed minimal signs of depression. Women had a slightly higher average BDI-II score ($M = 12.13, SD = 9.16$) than men ($M = 11.82, SD = 7.19$), $t(62) = -0.14$, $ns$. Although this was not a statistically significant difference, it may be of clinical interest to note that 17 women showed mild to severe symptoms of depression, while only three men showed these symptoms. In contrast, men had a statistically significantly higher average aggression
score ($M = 83.29, SD = 15.71$) than women ($M = 67.04, SD = 15.61$), $t(62) = 3.64, p < .01$. Lastly, men had significantly higher self-esteem scores ($M = 30.76, SD = 3.29$) than women ($M = 28.43, SD = 3.54$), $t(62) = 2.45, p < .05$.

Pearson correlations were computed to see if high levels of aggression and low self-esteem were related to depression in Scottish adolescents (Table 1). Lower self-esteem scores were significantly correlated with depressive symptoms and behaviors ($r = -.63, p < .01$). Four different types of aggressive behaviors were measured in this study: angry, hostile, physical and verbal. Angry aggressive behaviors were significantly correlated with depression ($r = .31, p < .05$), as were hostility aggressive behaviors ($r = .57, p < .01$). However, physical and verbal aggressive behaviors were not correlated with BDI scores. Consistent with the hypothesis, low self-esteem and high levels of covert aggressive behaviors were significantly correlated with depressive symptoms and behaviors in Scottish adolescents. Total combined aggression scores were also significantly correlated with depressive symptoms and behaviors ($r = .38, p < .01$). The risk factors were also correlated, as lower self-esteem scores were significantly correlated with hostility aggression ($r = -.66, p < .01$).

Next, low self-esteem and covert aggression were entered into a regression model to predict depression (Table 2). Low self-esteem scores and hostility and anger aggressive scores explained a significant proportion of variance in depression scores, $R^2 = 0.417, F(3,62) = 13.84, p < .01$. The analysis indicated that low self-esteem scores and high hostility and anger aggressive scores significantly predicted depressive behaviors ($\beta = .58, p < .01; \beta = .57, p < .01; \beta = .31, p < .01$; respectively). All variables entered into the model contributed significantly (see Table 2). Findings supported the hypothesis that, taken together, covert aggression and low self-esteem are significant predictors in the development of depression in Scottish young adults.

**Discussion**

This study investigated the effects of aggression and low self-esteem as predictors of depression in Scottish young adults. The results of this study provide supporting evidence for the hypothesis that low self-esteem and high levels of aggression are associated with depressive symptoms or behaviors in Scottish adolescents. These findings are consonant with the published literature and extend the generalizability of findings to a sample of Scottish youths. The findings also extended generalizability to older adolescents and young adults from similar findings with children and early adolescent samples (Bandura et al., 1999; Orth & Robins, 2008).

The results of the current study show a negative correlation between low self-esteem and depression. The results also indicate that low self-esteem is a significant predictor of depressive symptoms and behaviors. This means that as a person’s self-esteem gets lower, he or she is more likely to experience feelings or symptoms of depression. Both of these results provide support for previous literature indicating that a lack of self-esteem is a significant predictor of the development of depression (Bandura et al., 1999; Orth & Robins, 2008).

The current research also provides evidence for the link between aggression and depression in young adulthood. Previous research by Bradshaw and Hazan (2006) and Morrow and colleagues (2006) found that covert aggression (i.e., hostility and anger) was significantly correlated with depression, while overt aggression (i.e., verbal and physical) was not. The current research also found similar results with covert aggression. Additional analysis showed that covert aggression was shown to predict depressive behaviors and symptoms.

Low self-esteem was a significant predictor of

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<td>1. Depressive Symptoms</td>
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<td>2. Self-Esteem</td>
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<td>3. Aggression</td>
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<td>4. Hostile Aggression</td>
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<td>5. Anger Aggression</td>
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<td>.886&lt;sup&gt;†&lt;/sup&gt;</td>
<td>.367&lt;sup&gt;†&lt;/sup&gt;</td>
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<td>6. Physical Aggression</td>
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<td>7. Verbal Aggression</td>
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*p < .05, †p < .01
hostile aggression in this study. Links between these two variables were highlighted in previous research (Bradshaw & Hazan, 2006). Therefore, the current research suggests that low self-esteem and covert aggression are not only correlated with depressive symptoms and behaviors, but that they are also predictors of depression. The present research provides further support for the idea that covert aggression and low self-esteem are predictors of depression in young Scottish adults as well.

The current study focused on two commonly studied risk factors for depression, but examined a less-researched age group in Scotland. Research had found links between aggression, low self-esteem, and depression previously in adolescents and young adults in other countries, and this research was able to extend generalizability to Scottish young adults. This is an important research study for Scotland as they are seeking answers for the increases seen in depression of young adults.

Limitations
Due to time constraints, an important limitation was that sampling was limited to students at a large urban university in an introductory psychology class. This is not a representative sample of all Scottish young adults as there is great variability in settings (urban, rural) and educational attainment in Scottish young adults. Therefore, the focus of this research was limited to young adults who were academically oriented in an urban area of Scotland, making it unreasonable to generalize the results of this study to all Scottish young adults.

Additionally, the questionnaires used did not allow for clinical conclusions of depression. Rates found in this study were somewhat comparable to Scotland national statistics. An estimated 5.8% of men and 9.5% of women in Scotland will experience a depressive episode within a year (“Scottish Public Health Records,” 2009). Within this sample of 63, 26% of the women and 4% of the men indicated on the BDI-II that they will likely experience a depressive episode. The results from this study illustrate that depression is more likely experienced or reported by women, which is comparable to national statistics. Using self-report measures for these risk factors and for depression were also limitations in this research. It may be suggested that future research use more reliable means of measures to reduce the biases found in self-report methodology. However, despite these limitations, the present research was able to contribute and strengthen evidence for previous literature, significantly linking these risk factors to depression while also providing evidence for these factors in young Scottish adults.

Future Directions
In order to establish a causal link between self-esteem, aggression, and depression, longitudinal research is needed. It would be particularly powerful to investigate these correlations in one’s childhood, early adolescence, late adolescence, and adulthood. Are these common risk factors significant throughout the individual’s lifetime? Or are these correlations something that only emerge in adolescence and young adulthood? Longitudinal analyses would be useful because they would show consistencies in the data. Scotland mental health needs to continue research in all areas of development, as depression rates continue to increase. This research found evidence suggesting that low self-esteem and covert aggressive behaviors are significant predictors of depression in Scottish youth. These links have been found in children as well, but Scotland needs to continue finding evidence throughout a person’s entire lifespan to see how these factors influence the development of depression within the country. Obtaining more research-based evidence for contributing factors of depression may be valuable and useful for various interventions and treatments for Scottish youth.

References
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Reactions to Homelessness: Social, Cultural, and Psychological Sources of Discrimination

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ABSTRACT. This study examined social, cultural, and psychological sources of prejudice toward homeless people. Six potential predictor variables were taken into consideration: belief in a just world, individualistic orientation, collectivistic orientation, and causal attributions made toward homelessness (including locus, stability, and controllability). The outcome variable was attitudes toward homeless people. In terms of zero-order correlations, belief in a just world, collectivism orientation, locus, and controllability were all significantly correlated with attitudes toward homeless people. A simultaneous multiple regression also revealed that the six variables (minus the causal attribution of stability due to its low internal consistency) accounted for 28.7% of the variance in attitudes toward homeless people, with the causal attribution of locus emerging as a significant predictor.

The issue of homelessness creates division and provokes a wide array of responses. For some, the suffering of the poor evokes compassion and sympathy, leading them to a life of service and care of those in need, whereas others have a tendency to blame the poor and even go as far as rebuking government support for creating dependence (Flanagan & Tucker, 1999; Sidel, 1996). The current study set out to explore the forces that influence how one responds to homeless people. To understand the underlying factors that influence one’s response to homelessness, it is important to review the findings of past research. Past literature has identified a number of social, cultural, and psychological factors that shed light on the conflicting responses to homeless people.

Social Factors
There are many social and systemic forces that foster a negative response toward the poor. It should be briefly noted that any mention of “the system” or “systemic forces” throughout this article is referring to the political agencies which create policies and laws to regulate society. Sidel (1996) analyzed the rhetoric of political leaders who were attempting to dismantle the federal welfare system and discovered a tendency to blame and demonize women who were poor to divert attention from the persistence of poverty as a fundamental aspect of society. Sidel proposed that leaders refuse to admit societal and systemic causes of poverty because of their desire to maintain the status quo and the fear of invalidating the current political system. These results suggest that political leaders are fully aware that if the poor cannot be blamed for their own suffering, then the system itself would come under question and calls for reform would be made.

Sidel’s findings are supported by a study conducted by Flanagan and Tucker (1999). In latter study, adolescents (ages 12–18) were presented with a number of open-ended questions about unemployment, poverty, and homelessness. After responding to these questions, participants were asked to answer a number of questions about the American system of government. Trained scorers (who were unaware of the research hypotheses) coded the answers to the first set of questions for references to internal and external causes. Flanagan and Tucker found significant positive correlations between participants’ tendencies to endorse internal causes of unemployment, poverty, and homelessness and their likelihood to believe that the American system offered equal opportunities to all citizens. Participants who endorsed internal...
causes were also more likely to rebuke government support for causing dependence amongst the poor. These findings suggest that individuals who place more faith in the American system also have a tendency to attribute poverty to the internal characteristics of the poor themselves.

Harper, Wagstaff, Newton, and Harrison (1990) sought to explore the relationship between belief in equal opportunity and concern for the poor on a larger scale. Instead of measuring participants’ faith in a national system, Harper et al. examined the relationship between the belief in a fair and just world and views of poverty in Third World countries. The researchers found that there was a significant positive correlation between belief in a just world and the tendency to blame the poor for poverty.

**Cultural Factors**
In addition to social factors, the current study also sought to investigate how cultural factors influence views of homeless people. Past research has shown that individuals from more collectivistic cultures, such as those in East Asia, tend to make situational attributions for behavior as compared to those from more individualistic cultures, who tend to make dispositional attributions. Morris and Peng (1994) examined the different attributions made by American and Chinese journalists when reporting similar stories. The researchers analyzed two similar news stories where a man (who felt mistreated by his supervisor) had shot and killed his supervisor and several bystanders. In the American account, speculations were made about the murderer’s mental instability, while the Chinese account speculated about the situational and societal factors that may have played a role in the shooting. These findings suggest that people in individualistic cultures focus more on dispositional factors when interpreting behavior, whereas those in collectivistic cultures focus more on situational factors.

However, the assumption that all members of individualistic cultures make dispositional attributions about behavior seems to be an overgeneralization. Triandis, Leung, Villareal, and Clack (1985) found that just as cultural groups differ in their levels of individualism and collectivism, so do individuals. Triandis et al. developed a 29-item scale to measure differences in individualism and collectivism orientation at the individual level. Using this scale, the researchers examined the impact of individualism and collectivism orientation on the importance assigned to common values.

Among other things, the researchers found that participants who scored higher on individualism were more likely to emphasize values of competition, whereas participants who scored higher on collectivism were more likely to emphasize values of cooperation.

**Psychological Factors**
While some researchers have investigated social and cultural factors that influence one’s response to poverty, the majority of the empirical literature has focused on individual and psychological factors that shape these responses. To create a framework to help organize and explain how interpretations are made about behaviors and situations, social psychologists have developed attribution theory. Attribution theory is founded on the notion that individuals have a tendency to attribute causes to behavior in order to make sense of their surroundings. Past research has shown that perceived causes about success and failure share three common properties: locus, stability, and controllability (Weiner, 1985). Causes can be internal or external to the actor (i.e., locus), varying or unvarying over time (i.e., stability), and controllable or uncontrollable by the actor (i.e., controllability). Past research has shown that all three of these causal dimensions have a unique impact on the interpretation of success and failure (Harel & Hess, 2008). The three dimensions of attribution theory were addressed separately in the current study.

**Locus.** When interpreting specific behaviors, causes can be attributed to internal factors (e.g., the disposition of the actor) or external factors (e.g., the restraints of the situation). In terms of homelessness, it seems logical that individuals who attribute homelessness to internal factors would be more likely to blame the homeless for their plight, whereas individuals who attribute homelessness to external factors would be more likely to blame the system in general. As a result, individuals will be more sympathetic and compassionate toward homeless people if they attribute homelessness to external circumstances. However, the fundamental attribution error (FAE) distorts an individual’s ability to objectively interpret the locus of behavior. The FAE is the tendency of an observer to attribute another person’s behavior to internal and personal characteristics, while ignoring external and situational restraints (Gute, Eshbaugh, & Wiersma, 2008). For example, Tal-Or and Papirman (2007) found that participants who viewed a clip from a film tended to attribute the actions of characters
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in the film to the personality characteristics of the actors who played the characters as opposed to the external restraints of the script the actors were reading. In another study, Cowley (2005) found that observers of service encounters have a tendency to commit the FAE by attributing outcomes of encounters to dispositions of the service providers as opposed to situational restraints (such as a computer crash or a rush of customers). Dunwoody (2006) has even made the claim that the entire field of cognitive psychology is guilty of the FAE because of its asymmetric-organismic focus and disregard of the environment in explaining behavior.

In terms of the current research topic, one of the most applicable studies involving the FAE was conducted by Weigel, Langdon, Collins, and O’Brien (2006). In this study, staff members in a learning disability treatment center were asked to fill out attributional questionnaires about a client who displayed challenging behaviors (e.g., screaming, throwing objects, excessive hand-washing) and a client who did not display challenging behaviors. The study revealed that staff members were significantly more likely to attribute behavior to internal characteristics for the client who displayed challenging behaviors. There was also a significant positive relationship between internal attributions and critical comments made about clients. These results are relevant to the current study because homeless individuals often display challenging behaviors themselves, such as stealing, begging, and sleeping in public. As a result, observers may be even more likely to commit the FAE (attribute homelessness to internal causes) when dealing with homeless people.

Stability. Another causal dimension that influences the interpretation of behavior is the stability of observed traits and characteristics. People are less likely to offer aid or support to an individual if they believe that attitudes and situations are stable and unlikely to change (Karafantis & Levy, 2004). Interestingly, the common conception of attitudes as enduring evaluative tendencies, stable across both time and situation, creates a fixed view of human traits. As a result, the potential for growth, change, and betterment is reduced and restricted. In contrast to this view, Schwarz (2007) advocates construal models that treat attitudes as evaluative decisions made on the spot and based on situational and contextual factors.

If individuals view attitudes and human traits as malleable and capable of change, it seems likely that there would be a greater motivation to invest time and resources to provide support for those in need. Karafantis and Levy (2004) sought to test this hypothesis by recruiting 244 fifth- and sixth-grade students to complete questionnaires about the malleability of human traits and their attitudes toward homeless children. The results revealed a significant correlation between belief in the malleability of human traits and positive attitudes toward homeless children. Children who held a malleable (and less stable) view of human traits also held a more positive attitude toward homeless children. Furthermore, children with a malleable view of human traits also expressed a greater desire to help and interact with homeless children.

Controllability. The third causal dimension that influences the interpretation of behavior is the controllability of the actor. Negative behavior that is viewed as controllable by the actor is more likely to evoke blame and less likely to encourage compassion. Hegarty and Golden (2008) found that participants possessing prejudices toward a stigmatized group produced a number of causal thoughts that implied the controllability of the stigmatized trait. For example, if participants possessed a prejudice toward alcoholics, they were more likely to produce causal thoughts that implied that alcoholism was a controllable trait. In this way, participants tried to justify their prejudices by making their expression seem less offensive.

Sometimes attributions about the controllability of poverty are not overtly spoken but implied. Karniol (1985) found that children in elementary school often believe that becoming rich is a choice and, therefore, a controllable characteristic. However, this tendency to view wealth attainment as a choice can indirectly foster a derogation of the poor. If becoming wealthy is seen as a choice, then the assumption is made that the poor have simply chosen not to become rich, thus making them undeserving of sympathy or support.

Overview of the Current Study and Hypotheses
Past researchers have identified social (i.e., belief in a just world), cultural (i.e., individualism and collectivism orientation), and psychological (i.e., causal dimensions of locus, stability, and controllability) sources of prejudice toward disadvantaged individuals. Despite the extensive research conducted in these areas, there were a number of opportunities for past findings to be applied in a new context. While much attention has been paid to the broader issue of poverty, the goal of the current study was to investigate factors...
that influence attitudes toward homeless people specifically. To better understand the relevance and significance of the current study, it is important to expand upon the gaps in past literature.

Harper et al. (1990) found that belief in a just world was positively correlated with a tendency to blame the poor for poverty in Third World countries. However, their finding has not been replicated to see if belief in a just world is significantly correlated with negative attitudes toward homeless people in one’s own country. Belief in a just world hypothesis: Participants with a stronger belief in a just world would have more negative attitudes toward homeless people.

Past research has shown that people from individualistic cultures are more likely to refer to dispositional traits when explaining behaviors, whereas people from collectivistic cultures are more likely to focus on situational factors (Morris & Peng, 1994). As a result, people from individualistic cultures are more likely to blame the individual, whereas people from collectivistic cultures are more likely to blame the system. From these findings, it seems reasonable to predict that people who score higher on individualism would be more likely to blame homeless people for their situation, whereas people who score higher on collectivism would be more likely to blame the system for creating homelessness. It should be noted that, while individualism and collectivism are related, they are still independent measurements and not opposing ends of a single spectrum. Individualism hypothesis: Participants’ individualism scores would positively correlate with negative attitudes toward homeless people. Collectivism hypothesis: Participants’ collectivism scores would negatively correlate with negative attitudes toward homeless people.

As a whole, there has been a great deal of research conducted on attribution theory and its many applications. However, no study has addressed the unique impact that each of the three causal dimensions of locus, stability, and controllability has on attitudes toward homeless people. In terms of locus, past research has shed light on the prevalence of the FAE across situations and scenarios, but researchers have yet to address how the FAE influences attitudes toward homeless people specifically. However, Weigel et al. (2006) found that staff members who made more internal attributions about clients with learning disabilities were more likely to make critical comments toward their clients. These results suggest that individuals who make more internal attributions about homelessness would be more likely to hold negative attitudes toward homeless people in general. Locus hypothesis: Participants who make more internal attributions about the causes of homelessness would have more negative attitudes toward homeless people.

In terms of stability, Karafantis and Levy (2004) found that children who held more malleable views about human traits expressed more positive attitudes toward homeless children. In other words, individuals who believed that human traits were stable (implying that people were unlikely to change) were more likely to have negative attitudes toward homeless people. However, the result of that study still needs to be replicated with an adult sample. Stability hypothesis: Participants who make more stable attributions about the causes of homelessness would have more negative attitudes toward homeless people.

Individuals often make causal attributions about the controllability of stigmatized traits to justify prejudices toward stigmatized groups (Hegarty & Golden, 2008). However, past research has not explored the relationship between controllable causal attributions and prejudice toward homeless people specifically. It seems reasonable to predict that causal attributions about the controllability of homelessness could be used to justify prejudice toward homeless people. Controllability hypothesis: Participants who make more controllable attributions about the cause of homelessness would have more negative attitudes toward homeless people.

Method

Participants
The sample consisted of 100 undergraduates (74 women, 26 men) from a conservative, Christian university in Southern California. All of the participants were enrolled in introductory level psychology courses and received one hour of research credit for their participation. This level of credit fulfilled 25% of their required research hours. The average age of participants was 18.8 years (SD = 1.04), and the racial breakdown of the sample was 73.6% White American, 16.5% Asian American, 5.5% African American, 2.2% American Indian/Alaska Native, and 2.2% Native Hawaiian or Other Pacific Islander.

Materials
Demographic questionnaire. All participants completed a demographic questionnaire about their biological sex, age, race, and ethnicity.
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Global Belief in a Just World Scale. The Global Belief in a Just World Scale (Lipkus, 1991) is a 6-item, 6-point Likert-type measure where 1 = strongly disagree and 6 = strongly agree. Participants were asked to rate their level of agreement or disagreement with items such as “I feel that people get what they are entitled to have” and “I basically feel the world is a just place.” A meta-analysis conducted by Hellman, Muijenburg-Trevino, and Worley (2008) found that the Global Belief in a Just World Scale had a mean reliability coefficient of .81 for the 20 studies that reported internal consistency. The internal consistency was .84 for the current study. The raw scores for this measure were averaged and converted to mean scores to make the scores easier to interpret and understand.

Individualism-Collectivism Scale. The Individualism-Collectivism Scale (Singelis, Triandis, Bhawuk, & Gelfand, 1995) was used to measure individualism and collectivism orientation. The Individualism-Collectivism Scale is a 32-item, 9-point Likert-type measure where 1 = strongly disagree and 9 = strongly agree. The scale is divided into two subscales, with 16 items measuring individualism (e.g., “It annoys me when other people perform better than I do”) and 16 items measuring collectivism (e.g., “I usually sacrifice my self-interests for the benefit of my group”). Robert, Lee, and Chan (2006) performed a cross-cultural analysis of the Individualism-Collectivism Scale with participants from the United States, Singapore, and Korea and found reliability coefficients ranging from the .60s to the .80s. The current study confirmed these results by producing a Cronbach’s alpha of .82 for the individualism subscale and a Cronbach’s alpha of .78 for the collectivism subscale. Raw scores for this measure were averaged and converted to mean scores to make the scores easier to interpret and understand.

Revised Causal Dimension Scale. Locus, stability, and controllability were all measured using the Revised Causal Dimension Scale (McAuley, Duncan, & Russell, 1992). The original measure consists of four subscales: locus, stability, personal controllability, and external controllability. However, because the scale was applied to the behavior of homeless people instead of personal behavior, the external controllability subscale was not included in the present study. As a result, the Revised Causal Dimension Scale consisted of nine items, with three items measuring locus, three measuring stability, and three measuring personal controllability. McAuley et al. conducted four studies using the Revised Causal Dimension Scale and found adequate levels of internal consistencies across the three subscales: locus = .67, stability = .67, and personal controllability = .79. The current study found internal consistencies of .74 for locus, .50 for stability, and .90 for personal controllability. Given the poor internal consistency for stability, this subscale was dropped from subsequent analyses. The raw scores for the subscales of locus and personal controllability were averaged and converted to mean scores to make the scores easier to interpret and understand.

Attitudes Toward Homelessness Inventory. The Attitudes Toward Homelessness Inventory (Kingree & Daves, 1997) is an 11-item, 6-point Likert-type measure where 1 = strongly agree and 6 = strongly disagree. Higher scores on this measure represent more positive attitudes toward homelessness. Sample items include “I feel uneasy when I meet homeless people” and “Most homeless persons are substance abusers.” The measure consists of four subscales: belief that homelessness has societal causes, belief that homelessness is a solvable problem, willingness to affiliate with people who are homeless, and belief that homelessness is caused by personal characteristics. However, past research has combined scores on all four subscales to create an overall measure of attitudes toward homelessness (Buchanan, Rohr, Kehoe, Glick, & Jain, 2004). The present study followed this precedent and used the combined score of the four subscales to serve as the outcome variable. Kingree and Daves (1997) found a Cronbach’s alpha of .72 for the overall measure. The current study found a Cronbach’s alpha of .62 for the overall measure; although this value was not excellent, it was neither poor nor unacceptable (see George & Mallery, 2003), so it was kept in subsequent analyses. The raw scores for this measure were averaged and converted to mean scores to make the scores easier to interpret and understand.

Procedure

The five surveys were posted online using the Sona Systems, and participants completed the surveys at a time of their choosing. The surveys were available online over a two-week period. Once 100 participants had completed the study, the surveys were removed from the Sona System. The surveys were presented in the order described in the Materials section: Demographic questionnaire, Global Belief in a Just World Scale, Individualism-Collectivism Scale, Revised Causal Dimension Scale, and lastly,
Attitudes Toward Homelessness Inventory. This order was chosen to avoid priming participants for the topic of homelessness as they completed items on the surveys measuring the predictor variables. Additionally, to avoid social desirability effects that the topic of homelessness might have induced, participants were not allowed to go back to previous questionnaires or change past responses.

**Results**

Of the total of 100 participants, one was dropped from analyses for failure to respond to the Revised Causal Dimension Scale. All analyses were conducted using IBM® SPSS® v. 19.

A correlation matrix was generated to evaluate the zero-order correlations between each of the five included predictor variables and the outcome variable. As shown in Table 1, attitudes toward homeless people was significantly correlated with collectivism, \( r(97) = .18, p = .04 \); belief in a just world, \( r(97) = -.30, p = .001 \); locus, \( r(97) = -.43, p < .001 \); and controllability, \( r(97) = -.36, p < .001 \). Higher scores on belief in a just world, locus, and controllability were correlated with more negative attitudes toward homeless people, whereas higher scores on collectivism predicted more positive attitudes toward homeless people.

Next, a simultaneous multiple regression analysis was conducted using 28.7% of the variance in attitudes toward homeless people, \( F(5, 93) = 7.41, p < .001 \), with locus emerging as a significant predictor, \( b = -.08, t(93) = -2.96, p = .004, 95\%\) CI [-.14, -.03] (see Table 2). These results suggest that, controlling for the other four entered variables, individuals who make more internal attributions about the causes of homelessness have more negative attitudes toward homeless people.

**Discussion**

This study investigated several social, cultural, and psychological sources of prejudice toward homeless people. It was hypothesized that participants who scored higher on belief in a just world, individualism, locus, stability, and controllability would have more negative attitudes toward homeless people, and participants who scored higher on collectivism would have more positive attitudes toward homeless people.

The current study provided support for four of the six hypotheses. The belief in a just world hypothesis was supported, as participants with stronger beliefs in a just world had more negative attitudes toward homeless people. This result is consistent with the research of Harper et al. (1990), who found that individual’s belief in a just world was significantly correlated with a tendency to blame the poor for poverty in Third World countries. It seems that individuals who view the world as fair are more likely to believe that people generally get what they deserve. As a result, people feel less sympathy toward homeless individuals because they believe the homeless are deserving of their situation.

The collectivism hypothesis was also supported, as participants who scored higher on collectivism had more positive attitudes toward homeless people. This is consistent with the findings that individuals from collectivistic cultures are likely to make situational attributions and blame the system in general (Morris & Peng, 1994). The current results suggest that individuals who score higher on collectivism are more likely to take into account the situational factors that influence homelessness. Because of this situational perspective, individuals are less likely to blame homeless people and more likely to display compassion and concern.

Similarly, the current study found support for the locus hypothesis, as participants who offered more internal causal attributions about homelessness expressed more negative attitudes toward homeless people. This result is consistent with the research of Weigel et al. (2006), who found that staff members who made more internal causal attributions

<table>
<thead>
<tr>
<th>TABLE 1</th>
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<tbody>
<tr>
<td><strong>Ranges, Means, Standard Deviations, and Correlations of Predictor and Outcome Variables</strong></td>
</tr>
<tr>
<td><strong>Variable</strong></td>
</tr>
<tr>
<td><strong>Predictor Variables</strong></td>
</tr>
<tr>
<td>Collectivism</td>
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<tr>
<td>Individualism</td>
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<tr>
<td>Belief in a Just World</td>
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<tr>
<td>Locus</td>
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<td>Controllability</td>
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<tr>
<td><strong>Outcome Variable</strong></td>
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<tr>
<td>Attitudes Toward Homelessness</td>
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\( p < .05, \* p < .01 \)
regarding clients with learning disabilities offered more critical comments about their clients. The current results suggest that people who fail to appreciate the influence of outside factors tend to focus primarily on the individual when evaluating the cause of homelessness.

The controllability hypothesis was also supported, as participants who made more controllable attributions about the cause of homelessness expressed more negative attitudes toward homeless people. This result is consistent with the tendency of individuals to make controllable causal attributions to justify their prejudices toward stigmatized groups (Hegarty & Golden, 2008). The current results suggest that individuals who hold the belief that homelessness is a controllable behavior are less inclined to sympathize with homeless people.

A simultaneous multiple regression revealed that the overall model, consisting of five predictor variables, accounted for 28.7% of the variance in attitudes toward homeless people. The causal dimension of locus emerged as a significant predictor of attitudes toward homeless people. This result suggests that, controlling for the other four variables, participants who made more internal attributions about the cause of homelessness were more likely to express negative attitudes toward homeless people. This finding is consistent with past research and the locus hypothesis for this study.

Although the current study found support for four hypotheses, it failed to find support for the remaining two hypotheses. To begin with, the individualism hypothesis was not supported, as participants who scored higher on individualism did not have more negative attitudes toward homeless people. Inspection of the Individualism-Collectivism

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>Unstandardized Coefficients (b)</th>
<th>Standardized Coefficients (β)</th>
<th>95% Confidence Interval for b</th>
<th>Significance Level</th>
<th>Lower bound</th>
<th>Upper bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collectivism</td>
<td>.13</td>
<td>.17</td>
<td>.068</td>
<td>.01</td>
<td>.26</td>
<td></td>
</tr>
<tr>
<td>Individualism</td>
<td>-.07</td>
<td>-.10</td>
<td>.268</td>
<td>-.19</td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>Belief in a Just World</td>
<td>-.11</td>
<td>-.16</td>
<td>.101</td>
<td>-.24</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>Locus</td>
<td>-.08</td>
<td>-.31</td>
<td>.004</td>
<td>-.14</td>
<td>-.03</td>
<td></td>
</tr>
<tr>
<td>Controllability</td>
<td>-.04</td>
<td>-.18</td>
<td>.105</td>
<td>-.09</td>
<td>.01</td>
<td></td>
</tr>
</tbody>
</table>

A few limitations are worth mentioning. A natural limitation of most research conducted with college students is the nonrepresentational sample from which participants are drawn. Participants were limited to undergraduate students (enrolled in lower division psychology courses) at a conservative, Christian university in Southern California. The homogeneity of the given sample could have resulted in a lack of variation in responses, more commonly known as a problem in restriction of range of values for study variables. This lack of variation would have made it especially difficult to detect a relationship between variables if a relationship did in fact exist. Nonetheless, the current study found several significant results.

A third limitation of the current study was its reliance and dependence on self-report measures. Oftentimes, self-report measures can be susceptible to potential social desirability effects. Because helping those less fortunate is a socially desirable characteristic, participants might have responded in a manner that did not truly reflect their thoughts and attitudes toward homeless people. Interestingly, despite the fact that participants were selected from a Christian university that actively promotes service to those in need, participants in the current study had lower scores (M = 3.72) on the Attitudes Toward Homelessness Inventory than those reported in past research (M = 4.13), reflecting more negative attitudes toward homeless people (Buchanan et al., 2004).

Future Research
A few suggestions can be made for future research.
Although the current study examined social, cultural, and psychological sources of prejudice toward homeless people, it would be interesting to see how these factors influence actual behavior (e.g., discrimination) toward the homeless. Similarly, it would be beneficial to explore the relationship between expressed attitudes and willingness to help homeless people. One possible way to explore this relationship would be to design a study that measures both participants’ attitudes toward homeless people and their treatment of homeless people in a real-world situation. To accomplish this objective, researchers could administer the same four surveys used in the current study and also include an experimental aspect by staging an encounter with a homeless person (in reality a confederate hired by the researcher) and coding participants’ behavior for things like helpfulness and willingness to provide aid. This type of study would allow researchers to measure the influence that social, cultural, and psychological factors have on the actual treatment of homeless people. Furthermore, it would also shed light on the relationship between expressed attitudes toward homeless people and willingness to help homeless people in real-world situations.

Conclusion

There are a number of practical implications and real-world applications from the current study. First of all, the current study helped identify a number of factors that relate to attitudes toward homeless people. By bringing these factors to light, one can begin to understand some of the basic sources of prejudice toward homeless people. Similarly, these findings can be used to construct and implement programs that promote willingness to help homeless people.

An example of the potential benefit that such programs can have on attitudes toward homeless people is highlighted in the work of Buchanan et al. (2004). In their study, a group of medical professionals designed a two-week course aimed at improving medical students’ attitudes toward homeless people. The course informed participants about the origins of homelessness and the numerous health complications that homeless individuals often face. The course also gave participants the opportunity to interact with homeless individuals and hear their personal narratives. At the conclusion of the course, researchers found that participants expressed more positive attitudes toward homeless people and a greater desire to volunteer to help homeless people in the future. The findings of the current study could be used to supplement such a course by providing insight about specific factors that influence attitudes toward homeless people.

The current study is unique because it connects and integrates separate findings of past research. In its attempt to explore reactions to homeless people from a more comprehensive perspective, the current study sheds light on the interplay between factors that jointly relate to attitudes toward homeless people. Another contribution of the current study is its focus on the issue of homelessness. Many researchers have explored the influence of belief in a just world, individualism and collectivism orientation, and the causal attributions of locus, stability, and controllability on poverty in general, but the current study expands upon past research by examining the influence of such factors on attitudes toward homeless people specifically.

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As a communal species, the role of relationships formed by humans is important for social development. An element of relationships considered imperative to achieve is intimacy (Collins & Sroufe, 1999). The development of intimacy is reliant on the experiences in which one engages and the choices one makes. Collins and Sroufe (1999) argued that in order to obtain intimacy, individuals must value closeness and be able to tolerate and express strong emotions within the context of the relationship. Close relationships give the individual the opportunity to learn what kinds of expectations they should have with regard to interpersonal communication, as well as to learn to accept feedback from others (Collins & Sroufe, 1999). Attachment theory provides a compelling framework for understanding the development of capacity for intimacy and for generating hypotheses about continuity and change in intimacy experiences over time (Ainsworth, 1989). Many individuals encounter hardships in their close relationships. Some face social victimization (e.g., bullying) while others are betrayed by their friends or romantic partners. How individuals perceive these events can affect the course of that relationship (Finchman, 2001).

Since these perceptions affect the relationship itself, it could also generalize into other types of relationships or to attachments developed in the future. In this study, negative past relationship events were examined in relation to attachment experiences in both close friendships and romantic relationships.

Hazan and Shaver (1987) first applied the tenets of attachment theory to adult romantic relationships. They theorized that the emotional bond developed between adult romantic partners shares a similar motivational system to the emotional bond between infants and their caregivers. Some parallels between adult and infant attachment include (a) both feel safe when the attachment figure is present and responsive, (b) both engage in close, intimate bodily contact, and (c) both feel insecure when the other person is not available. Hazan and Shaver (1994) assessed attachment experiences among adult participants via self-report measures and observed that adult romantic representations could be adequately captured with the same attachment categories observed in parent-child attachment relationships: (a) secure; (b) dismissing or avoidant; and (c) preoccupied or ambivalent.
Further, attachment styles in adult participants were observed in similar proportions to those reported in the parent-child attachment literature with samples in the United States; roughly 60% of participants were categorized as secure, 25% as avoidant or dismissing, and 15% as anxious or preoccupied (Hazan & Shaver, 1994). Finally, attachment representations in adult participants were linked to relationship experiences and relationship expectations in theoretically defensible ways.

Relational Views
Many researchers have suggested that relationships with friends, romantic partners, and family provide overlapping, but distinct, attachment-related functions, such as the provision of a secure base from which to explore the world and support during distressing situations (Furman & Buhrmester, 1992; Furman & Wehner, 1994; Laursen & Collins, 1994; Savin-Williams & Berndt, 1990). Furman and Wehner (1994) coined the term “views” to describe attachment-related belief systems about important relationships with family, friends, and romantic partners. They defined views as the unconscious and conscious perceptions individuals hold about themselves, their relationship partners, and the relationship. Furman and Wehner (1994) suggested that views are formed through both the interactions and experiences of the current relationship and experiences from previous relationships.

Although views of a particular type of relationship (e.g., friendships) are theorized to be influenced by other types of relationships (e.g., parent-child relationships or romantic relationships), views of different relationships are not expected to be identical because they are influenced strongly by experiences in different contexts. People enter into relationships with expectations for the relationship based on past experiences in similar relationships and in other types of connections they have had (Furman & Wehner, 1994). These preconceptions shape how individuals act and may lead to fulfilling their expectations (Snyder, Tanke, & Berscheid, 1977). If these expectations are not met, they may gradually be altered (Furman & Wehner, 1994). Past romantic relationship experiences and relationships with others are likely to impact the quality of emerging romantic relationship views. Thus, although views of different types of relationships might be expected to be similar, based on the cumulative relational experiences the individual has had, distinctions may emerge in the attachment views of different types of relationships (e.g., friendships vs. romantic relationships; Furman & Wehner, 1994).

Developmental Change and Convergence vs. Divergence
The transition into adulthood may be characterized by insecurity and anxiety about the changes that individuals are facing (Arnett, 2004). Despite the importance of forming close relationships in adolescence, it has been indicated that while in the high school setting, the presence of parents helps students handle stressful life events (Erickson, 1963; Greenberg, Siegel, & Leitch, 1983). However, as these students enter university, peer relationships may become even more central for managing stressors and emotions, and adjusting successfully to the college environment (Swenson, Nordstrom, & Heister, 2008). Research has suggested that not only can peer relationships influence how students develop, but these relationships may also affect the student’s ability to concentrate on academics (Swenson et al., 2008). At times, romantic relationships formed during transition to adulthood may alter the original attachment style to which someone adheres (Mikulincer & Shaver, 2003, 2007). In Dinero, Conger, Shaver, Widaman, and Larsen-Rife’s (2011) study, it was found that a person’s romantic relationships do influence the person’s general attachment style. Thus, emerging adulthood may be a critical developmental stage for understanding continuity and discontinuity in attachment experiences across different close relationship types.

There has been speculation as to why attachment style may not be convergent across different important relationships. Furman and Wehner (1998) theorized that experience differentially affects attachment style in different types of relationships. They said that individuals’ views in their relationships are open to change depending on their experiences. Expectations also play a role in the development of certain views about a relationship. If individuals’ expectations differ from what actually occurs in a relationship, this can change their view of that particular type of relationship (Furman & Wehner, 1998). Kirkpatrick and Hazan (1994) suggested that perhaps one’s romantic attachment style might alter due to a change in the functioning of the relationship, but Baldwin and Fehr (1995) found that attachment style did not necessarily change with romantic relationship.
status. In sum, the available literature suggests that attachment style is modestly stable across developmental transitions, but is amenable to influence by relationship experiences across relationship types.

**Maladaptive Peer and Romantic Experiences**

Research has shown that relationship quality with peers can influence later romantic relationships (Linder, Crick, & Collins, 2002). Poor peer relations have been repeatedly linked to psychological and physical victimization among women later in life, even marital violence (O’Leary, Malone, & Tyree, 1994; Sharpe & Taylor, 1999). In distressed couples, members with insecure attachment styles tended to view the other person’s behavior in a way that enhanced distress (Johnson, Makinen, & Millikin, 2001). Insecure members of the relationship may also take minor disappointments in the current relationship and turn them into something bigger, often attributing the little things as a reflection of past wrongs that had happened to them. This negative view of their relationship eventually could lead to only remembering the negative aspects of the relationship. Combining the elements of adhering to a negative schema about their relationship and escalating small issues into a major problem due to past experience, it has been suggested that future actions engaged in by either individual could lead to the other feeling like a hostage in their relationship (Johnson et al., 2001). Additionally, when betrayal occurs in a relationship, individuals who adhere to an avoidant attachment style tend to further distance themselves from their partner; whereas, anxious individuals may obsess over the betrayal act and react emotionally (Shaver & Mikulincer, 2006). Ledly et al. (2006) found that children who were victimized in elementary school were at greater risk for later social intimacy difficulties. Specifically, individuals with victimization histories grew up to be less comfortable with intimacy and trusting others, more likely to fear abandonment, and more likely to suffer from a low self-esteem. Thus, it seems reasonable to hypothesize that negative relationship events (e.g., victimization, rejection, or betrayal) would be linked to more negative or insecure views of close relationships (Johnson et al., 2001).

**Summary and Research Questions**

The current study examined attachment related views, as defined by Furman and Wehner (1994), and the concordance and discordance between close friendships and romantic relationships. As has been suggested, attachment views across relationships may overlap, and past relationships affect emerging ones. Thus, this study examined associations between attachment styles across friendships and romantic relationships and peer-victimization and relationship betrayal. The views of close friendships and romantic relationships are likely differentially associated with relationship specific histories of victimization and betrayal. The following research questions were addressed:

1. What are the patterns of friendship and romantic relationship attachment views among college students? To what extent are attachment views for friendship and romantic relationships convergent and divergent?

   Based on the available literature, we hypothesized that the majority of emerging adults would hold secure views of both close friendships and romantic partners, and that modest overlap across relationship types would exist. Further, recent data (Del Giudice, 2011) indicate that attachment experiences in adult romantic relationships demonstrate systematic gender differences. As the applicability of these gender differences to friendship attachment is unknown, all analyses were conducted separately for men and women.

2. How are reported negative experiences in past peer and romantic relationship contexts related to attachment representations in friendships and romantic relationships?

   We expected that histories of betrayal and victimization would be linked to less secure attachment views, and that links within relationship type (i.e., betrayal in romantic relationships and attachment views of romantic relationships) would be stronger than links across relationship types (e.g., betrayal in romantic relationships and attachment views of close friendships).

**Methods**

**Participants**

Participants were 381 undergraduate student volunteers, ages 17 to 26 (M = 19.92, SD = 2.16), enrolled in both introductory and advanced psychology courses at Utah State University. Women represented 67% of the sample. Of the sample, 90.3% of participants were White and 82.9% were members of the Church of Jesus Christ of Latter-day Saints. Approximately half (50.4%) of participants were first year students, and over 50% of participants...
were either 18 or 19 (35.2% were 18, and 21.3% were 19); 36.2% of participants were single, 28.3% were casually dating, 22.3% reported being in a serious relationship, 3.7% were engaged, 10.2% were married, and 0.3% were divorced.

**Measures**

**Behavioral Systems Questionnaire.** The Behavioral Systems Questionnaire (BSQ; Wehner & Furman, 2000) is a 65-item measure assessing attachment, caregiving, affiliation experiences, and physical/sexual behavior. All four scales are relevant for assessment of romantic relationship views, but only the attachment, caregiving, and affiliation scales are administered to assess views of friendships or parent-child relationships. For the purpose of this study, only the 15-item attachment scale was used to assess attachment views with romantic partners and friends. Scores were calculated for secure, dismissing, and preoccupied attachment styles. Sample items in this portion of the BSQ include “I seek my romantic partner/friend when something bad happens,” “I do not ask my romantic partner/friend to comfort me,” and “My romantic partner/friend acts as if they count on them too much,” for secure, dismissing, and preoccupied styles, respectively. Scoring is based on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Items within a subscale are summed to create a total score. For the attachment, caregiving, and affiliation scales, a mean alpha = .89 (range = .84 to .94) was found in previous research (Flanagan & Furman, 2000). In this study, secure romantic attachment yielded an alpha of .87, dismissing views demonstrated an alpha of .84, and preoccupied yielded an alpha of .83. Alphas for secure, dismissing, and preoccupied styles in close friendships were .87, .84, and .85, respectively.

**Self-Report of Aggression and Social Behavior Measure.** The Self-Report Measure of Aggression and Victimization (Linder et al., 2002; Morales & Crick, 1998) is a 56-item questionnaire with subscales for relational aggression, physical aggression, relational victimization, physical victimization, exclusivity, and prosocial behavior. Within each domain, separate scores are calculated for experiences in peer relationships and experiences in romantic relationships. Respondents use a 7-point Likert scale from 1 (not at all true) to 7 (very true). Previous research using subscales from this measure have obtained reliability coefficients above .70 (Linder et al., 2002; Morales & Crick, 1998). With the current data, separate alphas were calculated for the relational victimization, physical victimization, and exclusivity scales representing experiences for both friendship and romantic relationships. Romantic and friendship relational victimization scales yielded alphas of .82 and .74, respectively. Physical victimization scales resulted in an alpha of .63 for romantic relationships and .69 for platonic relationships. Romantic exclusivity showed an alpha of .79, and friendship exclusivity yielded .67. General prosocial behaviors yielded an alpha of .83. Estimates of internal consistency for some scales were relatively low; however, all scales were retained for analyses, with awareness that lower reliability may have reduced the likelihood of detecting significant associations among the variables of interest.

**Betrayal Questionnaire.** The Betrayal Questionnaire is a 24-item measure designed for the purpose of this study. Items were developed to assess betrayal experiences with friends and romantic partners. Eleven items tap common experiences of feeling betrayed by a friend (e.g., “has your friend ever put you down?”). Thirteen items assess experiences of betrayal in romantic relationships (e.g., “has your romantic partner ever cheated on you with another romantic partner?”). Items are rated on a 5-point Likert scale with 1 (never) and 5 (many times/often). Alphas were .88 for friendship betrayal and .91 for romantic relationship betrayal.

**Procedure**

Once Institutional Review Board approval was obtained for this study, students were informed of the opportunity to participate through announcements in their psychology courses and notices posted on the class websites. Participation in this study was used by the students as one of many ways they could receive course credit for lab requirements. Participants completed the survey online at their convenience. Before being allowed to complete the survey, participants were directed to an informed consent page. Participants were told that some survey items addressed personal issues and potentially emotion-triggering relational experiences. Participants who consented to participate clicked a button labeled “continue” to be forwarded to the survey. For sections of the survey which inquired about romantic relationship experiences, students who had never been in a relationship skipped those parts of the measure. All data were encrypted for secure transmission. Upon completion, participants were prompted to close the page so third party individuals would
not see their information. There was a link to a separate survey where participants submitted their names and instructors’ names to receive credit for participating.

**Results**

**Descriptive Statistics and Patterns of Attachment Representation**

Table 1 presents means and standard deviations for men and women for all study variables. Generally, both men and women reported relatively low scores on measures of victimization and betrayal (i.e., means below the mid-point of the scales), and average scores on the measures of attachment views were consistent with attachment theory predictions (i.e., lower scores for preoccupied and dismissing views, relative to secure). Two mixed two-way analyses of variance (ANOVAs) were calculated. In the first ANOVA, scores on the secure, dismissing, and preoccupied scales for romantic relationships were used as a repeated measure (each participant obtained a score for each of the three attachment styles, thus violating the assumption of independence for an independent samples ANOVA), and biological sex was used as a between-subjects factor. There was a significant main effect for attachment style, $F(2, 738) = 182.42, p < .001, \eta^2 = .33$. Overall, participants reported (a) higher secure attachment scores than dismissing scores, and (b) higher dismissing scores than preoccupied scores. All Bonferroni pairwise comparisons were significant. Additionally, although there was no significant main effect for biological sex, $F(1, 369) = 1.68, p = .203, \eta^2 = .004$, there was a significant interaction between biological sex and attachment style, $F(2, 738) = 25.53, p < .001, \eta^2 = .07$ (see Figure 1). Men demonstrated higher dismissing attachment scores than women, $t(369) = 5.46, p < .001$, while women demonstrated higher secure attachment scores than men, $t(369) = -5.67, p < .001$.

Similarly, for the second ANOVA, the repeated factor was comprised of secure, dismissing, and preoccupied scores within the friendship context, and biological sex was the between-subjects factor. Results showed no significant main effect for biological sex, $F(1,371) = .63, p = .429, \eta^2 = .002$; however, a significant main effect for attachment style was observed, $F(2,742) = 177.67, p < .001, \eta^2 = .32$, and the pattern of Bonferroni pairwise comparisons was the same as the main effect for romantic attachment style. Finally, a significant interaction was observed between biological sex and attachment style, $F(2,742) = 26.92, p < .001, \eta^2 = .07$ (see Figure 2). The pattern of interaction for friend attachment scores was the same as the pattern for romantic attachment scores. Men demonstrated higher dismissing attachment scores than women, $t(371) = 5.19, p < .001$, while women demonstrated higher secure attachment scores than men, $t(371) = -5.81, p < .001$.

**Convergence and Divergence in Attachment Representations**

Participants were categorized either as dismissing, preoccupied, or secure in both friendship and romantic relationship contexts, based on...
the highest score achieved on the three BSQ attachment domains. Undifferentiated individuals were those who had two or more scores which were equivalent. Convergence and divergence in attachment style between friendship and romantic relationships was examined via a chi square analysis that summarizes the frequency of converging and diverging patterns of attachment (see Table 2). Several cells in this crosstabs matrix did not meet the assumption of at least five expected observations in each cell necessary for Chi-square test of independence; however, a cautiously interpreted Chi-square analysis did demonstrate a significant relationship between friendship and romantic attachment styles, \( \chi^2(9, N = 369) = 75.18, p < .001, V = .26 \). Of the participants, 225 (61% of the sample) were convergent in their attachment styles, with 48% of the sample being convergent secure. Of those who were divergent, the majority were secure in their friendships or their romantic relationships and dismissing or undifferentiated in the other relationship type.

**Links Between Relationship Experiences and Attachment Representations**

Tables 3 and 4 report correlations between relational experiences and attachment styles for both the romantic relationships and friendships of men and women. The pattern of significant correlations among men appears to be rather diffused, showing that negative experiences in friend and romantic relationships are linked to attachment scores in both relationship types. The majority of peer and romantic experiences of victimization and betrayal (i.e., romantic and friend relational victimization, romantic and friend exclusivity, and friend betrayal), however, appear to be strongly related to men’s preoccupied attachment style in both romantic relationships and friendships (see Table 3).

Significant correlations for women were shown to be concentrated in three ways (see Table 4). First, negative romantic experiences and romantic exclusivity were significantly associated with the three romantic attachment styles for women in theoretically consistent directions. Second, similar to men, women who reported higher levels of either romantic or friend preoccupied attachment style engagement had a greater number of significant correlations with both romantic and platonic negative relational experiences and betrayal. Third, scores for women on all of the romantic and friend attachment scales were significantly correlated with the pro-social scale. Secure attachment was positively linked to pro-social behaviors and dismissing and preoccupied attachment were negatively linked to pro-social behaviors.

**Discussion**

The purpose of this study was to explore links between romantic and friend attachment representations and experiences of victimization and betrayal. Research questions investigated patterns of relationship attachment among college students, levels of convergence and divergence in friend and romantic attachment styles, and associations between attachment styles and experiences of betrayal and victimization. Results from the current study indicate that amongst both men and women, the dominant attachment style that was reported was secure. A significant interaction was observed between biological sex and attachment styles, suggesting that men were more likely to engage in an avoidant attachment style than women whereas women were more likely to have a secure attachment style than men. When evaluating the convergence and divergence of the attachment styles engaged in by young adults in their close friendships and romantic relationships, the current study suggests that 60% of the sample were convergent in their attachment style adherence with 47% of the convergent group being securely attached. Amongst the divergent attachment style population, the majority of participants were secure in one relationship type and distant/anxious in the other.
Results also suggested that, for men, adhering to an anxious attachment style is correlated broadly with negative relationship experiences associated with both close friendships and relationships, including victimization, friend betrayal, and friend and relationship exclusivity. Women demonstrated a correlation between negative romantic relationship experiences across all of the attachment styles showing less prominence among secure attachment individuals and higher levels among the women who adhered to dismissing or anxious attachment styles.

**Overall Attachment Patterns in Romantic and Close Friendship Relationships**

Similar to the findings of Hazan and Shaver (1994), data from this study suggest that the majority of participants reported being secure in their romantic relationships. Many studies over the years have explored attachment styles in romantic relationships, but the literature comparing romantic attachment styles with platonic relationship attachment styles is less developed. Research has shown the importance of friendships early in life for the development of intimacy with others, and platonic peers have been posited to serve as primary attachment figures during adolescence and the transition to adulthood (Furman & Wehner, 1994; Shulman, Elicker, & Sroufe, 1994). It is not surprising that these friendships may continue to play a prominent attachment role into adulthood. Friendship relationships may always have the capacity to serve as a learning context for people to gain better insight as to how to interact and bond with others. This study offers a foundation for exploring the friendship attachment experiences of adults.

There were some interesting sex differences observed in this study. Women reported being predominantly secure in attachment style, whereas men reported higher dismissing attachment styles than women. Men and women’s scores did not particularly differ on preoccupied scores. This is consistent with the results of a recent meta-analysis reporting higher avoidant attachment in men across 100 studies (Del Giudice, 2011). Sex differences in romantic attachment experiences can be understood from an evolutionary perspective (Del Giudice, 2011); a short-term mating strategy, observed predominantly among males, is more amenable to an avoidant attachment style than a secure style. However, the similar patterns observed among men’s friendship attachment styles in this study indicate that the gender differences may be more complex.

**Convergence and Divergence**

Although 70% of the sample reported having a secure romantic attachment, and 60% reported having a secure friendship attachment, only 47% reported being convergent secure (i.e., secure in both types of relationship). Although the number of individuals who identified as secure in both relationship types was substantial, the majority (53%) of participants had at least one insecure attachment style in regards to their relationships with friends or romantic partners. Future research may benefit from examining factors linked to greater likelihood of confidence and ease in connecting with individuals in either or both relationship contexts. This is important because of the implications of having an insecure attachment style on future health and

![Table 2](image)

**TABLE 2**

Patterns of Attachment Categories in Friendships and Romantic Relationships (N = 386)

<table>
<thead>
<tr>
<th>Friend Attachment Category</th>
<th>Secure</th>
<th>Dismissing</th>
<th>Preoccupied</th>
<th>Undifferentiated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure</td>
<td>177</td>
<td>61</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>Dismissing</td>
<td>19</td>
<td>40</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Preoccupied</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Undifferentiated</td>
<td>19</td>
<td>8</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

![Table 3](image)

**TABLE 3**

Bivariate Correlations Between Attachment Scores and Relationship Experiences for Men

<table>
<thead>
<tr>
<th>Secure Romantic</th>
<th>Secure Preoccupied</th>
<th>Dismissing Romantic</th>
<th>Dismissing Preoccupied</th>
<th>Preoccupied Physical Victimization</th>
<th>Preoccupied Betrayal</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.04</td>
<td>-0.01</td>
<td>0.02</td>
<td>-0.01</td>
<td>0.26**</td>
<td>0.15</td>
</tr>
<tr>
<td>-0.20*</td>
<td>-0.14</td>
<td>-0.02</td>
<td>0.04</td>
<td>0.14</td>
<td>0.22*</td>
</tr>
<tr>
<td>0.16</td>
<td>-0.08</td>
<td>-0.18</td>
<td>0.11</td>
<td>0.43**</td>
<td>0.17</td>
</tr>
<tr>
<td>0.05</td>
<td>0.13</td>
<td>-0.07</td>
<td>-0.05</td>
<td>0.22*</td>
<td>0.19*</td>
</tr>
<tr>
<td>-0.15</td>
<td>0.14</td>
<td>0.07</td>
<td>-0.06</td>
<td>0.26**</td>
<td>0.25**</td>
</tr>
<tr>
<td>-0.27**</td>
<td>0.07</td>
<td>0.18</td>
<td>-0.05</td>
<td>0.04</td>
<td>0.10</td>
</tr>
<tr>
<td>0.06</td>
<td>0.14</td>
<td>-0.11</td>
<td>-0.10</td>
<td>0.46**</td>
<td>0.40**</td>
</tr>
<tr>
<td>-0.08</td>
<td>0.18</td>
<td>0.00</td>
<td>-0.12</td>
<td>0.24*</td>
<td>0.34**</td>
</tr>
<tr>
<td>0.10</td>
<td>0.21**</td>
<td>0.07</td>
<td>0.00</td>
<td>-0.13</td>
<td>-0.19**</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01*
relationship experiences. For instance, in one study it was found that women who adhered to an insecure attachment style reported more physical symptoms when going to a doctor than those with a secure attachment style, and individuals who are anxiously attached have the highest medical costs and number of visits to a health care facility when compared to those who adhere to a secure or dismissing attachment style (Giechanowski, Walker, Katon, & Russo, 2002). Research has also suggested that individuals with secure attachment styles are more likely to engage in preventative health behaviors (i.e., exercising or watching their diet) and have a higher self-esteem than those with insecure attachment styles (Huntsinger & Luecken, 2004). Additionally, insecure attachment styles have been linked to less-restrictive sexual beliefs and, those with an avoidant attachment style are more likely to engage in unwanted but consensual sexual activity (Gentzler & Kerns, 2004). Marital satisfaction has been suggested to be negatively influenced if members of a dyad adhere to an insecure attachment style, affecting both individual and partner happiness with the relationship (Banse, 2004). Specifically, men who have a preoccupied attachment style and women who are either preoccupied or avoidant in their attachment style have the most impact on marital satisfaction of their partners.

It would also be of interest to determine how other variables, such as personality and culture, influence the divergent attachment styles experienced by 40% of our participants. Studies in the future will need to evaluate how cultural scripts for interacting and bonding with romantic partners differ from scripts for peer-interaction. This is important since the description of an insecure relationship and a secure relationship may differ among cultures. For instance traits that are consistent with Western cultures’ anxious insecure attachment style are considered to be adaptive and favorable in Japan (Rothbaum, Weisz, Pott, Miyake, & Morelli, 2000). Personality easily could also influence how a person attaches to another. For instance, some individuals may have a tendency to be avoidant by nature and are content with more distant relationships.

### Attachment Styles and Relationship Experiences

The findings from this study support attachment theory. For example, the exclusivity score assesses the level of dependence individuals felt towards their significant other (e.g., close friend or romantic partner). Scores on preoccupied attachment demonstrated the strongest positive correlation with exclusivity among the three styles. This is not surprising because this attachment style is often characterized by individuals’ dependence on their partner or friend for happiness.

Correlation results also have interesting implications for both general attachment style research and gender socialization research. Supporting the classic definitions of attachment styles, individuals who reported the highest levels of secure attachment had scores associated with lower negative relational experiences and higher engagement in pro-social behaviors. This result is consistent with Collins and Sroufe (1999) who said that children who displayed a secure attachment style were neither the bully nor the victim. Instead, children who are predominantly secure report more self-reliance and better peer relationships.

In the current study, the more diffuse pattern of significant correlations shown in men’s relationship experiences and attachment scores may also be portraying ambiguity in their friendships; however, it is hard to be certain why exactly significant correlations across relationship type (e.g., negative romantic experiences linked to friend attachment style) emerged as frequently as within relationship type. In this study, participants were not asked if they were thinking of a male or female friend while answering the attachment questions. In the future, it would be important to investigate if there

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**TABLE 4**

| Bivariate Correlations Between Attachment Scores and Relationship Experiences for Women |
|---------------------------------|---------------------------------|-------------------------------|-------------------------------|-----------------|-----------------|
| -0.18 | -0.03 | 0.16 | 0.00 | 0.27 | 0.21 |
| Romantic Physical Victimization | -0.12 | -0.09 | 0.07 | 0.08 | 0.18 | 0.08 |
| Romantic Exclusivity | 0.17 | -0.07 | -0.16 | 0.08 | 0.27 | 0.03 |
| Romantic Betrayal | -0.06 | -0.06 | 0.03 | 0.04 | 0.26 | 0.14 |
| Friend Relational Victimization | -0.01 | 0.01 | 0.03 | 0.05 | 0.07 | 0.14 |
| Friend Physical Victimization | -0.06 | 0.02 | 0.03 | 0.00 | 0.11 | 0.10 |
| Friend Exclusivity | -0.11 | -0.07 | 0.10 | 0.06 | 0.25 | 0.28 |
| Friend Betrayal | -0.01 | 0.01 | 0.03 | 0.04 | 0.17 | 0.25 |
| Prosocial Behaviors | 0.19 | -0.17 | -0.15 | -0.13 | -0.16 | -0.16 |

*p < .05, **p < .01*
are differences in participants’ views of same- and cross-sex peers and how those compare to views of romantic partners.

Conclusions

Results from this study suggest that many negative relationship experiences are significantly linked to the way men and women represent attachment in important relationships. This was especially clear for individuals who were high on preoccupied attachment, who showed the most significant correlations with negative experiences. It is curious that these relationship events were so strongly linked to preoccupied attachment representations. Although they experienced the strongest correlations between attachment style and experiences, does this really mean that they had any more or fewer occurrences of victimization and betrayal than secure and dismissing individuals? Or is it affected by how they perceive and apply their experiences?

Longitudinal studies will need to assess individuals’ childhood experiences of peer victimization and betrayal and compare those to their scores in adolescence and adulthood. Examining scores over a longer span of time will allow us to examine if there are differing levels of victimization and betrayal reported at these developmental stages.

References


**Author Note.** Victoria VanUitert, Charlottesville, VA; Renee V. Galliher, Department of Psychology, Utah State University. This project was funded by an Undergraduate Research/Creative Opportunities (URCO) grant from Utah State University awarded to Victoria VanUitert.
## PSI CHI AWARDS

Psi Chi sponsors a variety of award competitions each year. Listed below is a brief overview. For more information, please visit [www.psichi.org/Awards](http://www.psichi.org/Awards)

<table>
<thead>
<tr>
<th>Name of Award</th>
<th>Submission Deadline</th>
<th>Who Can Apply</th>
<th>Award Amount / Prize</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regional Research Awards</strong></td>
<td>Deadlines Vary, Fall/Winter</td>
<td>- Graduate</td>
<td>- $300 each (number varies)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Undergraduate</td>
<td></td>
</tr>
<tr>
<td><strong>Denmark Faculty Advisor Award</strong></td>
<td>December 1</td>
<td>- Faculty Advisor (chapter nomination)</td>
<td>- Travel expense to APA + Plaque</td>
</tr>
<tr>
<td><strong>Society Annual Convention Research Awards</strong></td>
<td>December 1</td>
<td>- Graduate</td>
<td>- $500 graduate (number varies)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Undergraduate</td>
<td>- $300 undergraduate (number varies)</td>
</tr>
<tr>
<td><strong>Regional Chapter Awards</strong></td>
<td>December 1</td>
<td>- Chapter</td>
<td>- Six $500 awards + Plaque</td>
</tr>
<tr>
<td><strong>Regional Faculty Advisor Awards</strong></td>
<td>December 1</td>
<td>- Faculty Advisor (chapter nomination)</td>
<td>- Six $500 awards + Plaque</td>
</tr>
<tr>
<td><strong>Bandura Graduate Research Award</strong></td>
<td>February 1</td>
<td>- Graduate</td>
<td>- Travel expense to APS + Plaque + 3yr APS membership</td>
</tr>
<tr>
<td><strong>Cousins Chapter Award</strong></td>
<td>February 1</td>
<td>- Chapter</td>
<td>- One $5,500 award + Travel to APA + Plaque</td>
</tr>
<tr>
<td><strong>Newman Graduate Research Award</strong></td>
<td>February 1</td>
<td>- Graduate</td>
<td>- Travel expense to APA + Plaque + 3yr journal subscription</td>
</tr>
<tr>
<td><strong>Kay Wilson Leadership Award</strong></td>
<td>April 1</td>
<td>- Chapter President (chapter nomination)</td>
<td>- One $500 award + Travel to APA + Plaque</td>
</tr>
<tr>
<td><strong>Kay Wilson Officer Team Leadership Award</strong></td>
<td>December 1</td>
<td>- Chapter</td>
<td>- $2,000 award ($1,000 for chapter + $1,000 for officers)</td>
</tr>
<tr>
<td><strong>Allyn &amp; Bacon Psychology Awards</strong></td>
<td>May 1</td>
<td>- Undergraduate</td>
<td>- 1st place—$1,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- 2nd place—$650</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- 3rd place—$350</td>
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<tr>
<td><strong>Guilford Undergraduate Research Awards</strong></td>
<td>May 1</td>
<td>- Undergraduate</td>
<td>- 1st place—$1,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- 2nd place—$650</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- 3rd place—$350</td>
</tr>
<tr>
<td><strong>Model Chapter Awards</strong></td>
<td>June 30</td>
<td>- Chapters</td>
<td>- $100 each chapter</td>
</tr>
<tr>
<td><strong>Building Bonds Awards</strong></td>
<td>June 1</td>
<td>- Chapter</td>
<td>- $100 award + Plaque</td>
</tr>
<tr>
<td><strong>Diversity Article Awards</strong></td>
<td>July 1</td>
<td>- Graduate</td>
<td>- Four $300 awards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Undergraduate</td>
<td></td>
</tr>
</tbody>
</table>
RESEARCH AWARDS

Regional Research Awards | Deadlines Vary
All Psi Chi members (undergraduate and graduate) are eligible to submit their research for the Regional Research Awards. Up to 78 cash awards of $300 each are presented to students submitting the best research papers to Psi Chi sessions at regional conventions. Award monies are distributed at the conventions following the presentations. Deadlines for submissions vary according to region and sometimes from year to year; check the Psi Chi website for details.

Bandura Award | Feb 1
All psychology graduate students who are Psi Chi members and graduate student affiliates of the Association for Psychological Science (APS) are eligible to submit their research for the Albert Bandura Graduate Research Award. The winner receives the following: (1) travel expenses to attend the APS National Convention to receive the award, (2) a three-year membership in APS, including subscriptions to all APS journals, and (3) two engraved plaques, one for the winner and one for the winner’s psychology department as a permanent honor to the winner. This award is presented during the APS opening ceremony at the APS National Convention.

Newman Award | Feb 1
All psychology graduate students are eligible to submit their research for the Edwin B. Newman Graduate Research Award. The winner receives the following: (1) travel expenses to attend the APA/Psi Chi Society Convention to receive the award, (2) a three-year membership in APS, including subscriptions to all APS journals, and (3) two engraved plaques, one for the winner and one for the winner’s psychology department as a permanent honor to the winner. This award is presented during the APS opening ceremony at the APA/Psi Chi Society Convention in August.

Allyn & Bacon Awards | May 1
The Allyn & Bacon Psychology Awards, cosponsored by Allyn & Bacon Publishers, are open to all undergraduate Psi Chi members and are awarded to those who submit the best overall empirical research papers. The awards are $1,000 for first place, $650 for second place, and $350 for third place.

Guilford Awards | May 1
All Psi Chi undergraduate members are eligible to submit their research for the J. P. Guilford Undergraduate Research Awards. Cash awards are $1,000 for first place, $650 for second place, and $350 for third place.

Diversity Article Awards | July 1
Four awards of $300 each are available for the best Eye on Psi Chi articles published by student authors on diversity issues, including but not limited to ethnic minority, GLBT, gender, and physical disability. The submission cannot contain faculty primary authors or coauthors. Both graduate and undergraduate Psi Chi members are eligible for the award.

CHAPTER AND ADVISOR AWARDS

Denmark Award | Dec 1
The Florence L. Denmark Faculty Advisor Award is presented annually to the one Psi Chi faculty advisor who best achieves Psi Chi’s purpose. The award includes (1) travel expenses to attend the APA/Psi Chi Society Annual Convention to receive the award and (2) an engraved plaque. The award is intended to recognize Psi Chi faculty advisors for their outstanding service to the chapter and to Psi Chi.

Regional Chapter Awards | Dec 1
The Regional Chapter Awards provide annual recognition for one chapter in each region that best achieves Psi Chi’s purpose. Each winning chapter receives a check for $500 and a plaque to display in the winning chapter’s department. The awards are intended to perpetuate the chapters, to identify chapters as role models for others, and to promote the purposes of Psi Chi.

Regional Faculty Advisor Awards | Dec 1
This award is presented annually to one Psi Chi faculty advisor from each region who best achieves Psi Chi’s purpose. The award is to recognize and reward actively involved chapter advisors. The winning faculty advisor from each region will receive $500 and a plaque.

Cousins Chapter Award | Feb 1
The Ruth Hubbard Cousins Chapter Award is presented annually to the one chapter that best achieves Psi Chi’s purpose. The winning chapter receives (1) a check for $3,500, (2) travel expenses for one chapter officer to attend the APA/Psi Chi Society Annual Convention to receive the award, and (3) an engraved plaque commemorating the award.

Kay Wilson Leadership Award | April 1
The Kay Wilson Leadership Award for Outstanding Chapter Presidents is presented annually to the one chapter president who demonstrates excellence in leadership of the local chapter. The winning Psi Chi chapter officer receives: (1) a $500 cash award, (2) travel expenses for the chapter president to attend and make a short presentation at the APA/Psi Chi Society Annual Convention to receive the award, and (3) an engraved plaque to display in the winning chapter’s department.

Kay Wilson Officer Team Leadership Award | December 1
The Kay Wilson Officer Team Leadership Award is presented annually to the best chapter officer team who demonstrates excellence as a group. The winning chapter receives $500 and a plaque.

Kay Wilson Leadership Award for Outstanding Chapter Faculty Advisor | Jan 1
The Kay Wilson Leadership Award for Outstanding Chapter Faculty Advisor is presented annually to the one faculty advisor who best achieves Psi Chi’s purpose. The award includes (1) travel expenses to attend the APA/Psi Chi Society Annual Convention to receive the award and (2) an engraved plaque to display in the winning chapter’s department.

Model Chapter Awards | June 30
Model Chapter Awards of $100 each are presented annually to recognize and reward Psi Chi chapters that consistently maintain outstanding records of membership inductions, chapter correspondence, service projects, and other criteria associated with being an outstanding chapter. All chapters submitting evidence of meeting these criteria are designated as winners.

Building Bonds Awards | June 1
Building Bonds Awards of $100 each and a plaque are presented annually to recognize collaborative activity by a Psi Chi and a Psi Beta chapter.
## PSI Chi Research Grants

Psi Chi sponsors a variety of grants each year. Listed below is a brief overview. For more information, please visit [www.psichi.org/Awards/completelist_awards.aspx](http://www.psichi.org/Awards/completelist_awards.aspx)

<table>
<thead>
<tr>
<th>Name of Grant / Brief Description</th>
<th>Submission Deadline</th>
<th>Who Can Apply?</th>
<th>Award Amount / Prize</th>
</tr>
</thead>
<tbody>
<tr>
<td>SuperLab Research Grants Two awards for conducting the best computer-based research</td>
<td>October 1</td>
<td>Graduate, Undergraduate</td>
<td>SuperLab software, Repsonse pad</td>
</tr>
<tr>
<td>Thelma Hunt Research Grants Enables members to complete empirical research on a question directly related to Psi Chi</td>
<td>October 1</td>
<td>Faculty, Graduate, Undergraduate</td>
<td>Two grants up to $3,000 each</td>
</tr>
<tr>
<td>Undergraduate Psychology Research Conference Grants To support local/regional undergraduate psychology conferences Total grant money available is $10,000</td>
<td>October 1</td>
<td>Sponsor(s) of local and regional conference</td>
<td>Up to $1,000 each (number varies)</td>
</tr>
<tr>
<td>Graduate Research Grants To provide funds for graduate students to conduct a research project Total grant money available is $20,000</td>
<td>November 1, February 1</td>
<td>Graduate, Undergraduate, Sponsor of local and regional conference</td>
<td>Up to $1,500 each (number varies)</td>
</tr>
<tr>
<td>Mamie Phipps Clark Research Grants Enables members to conduct a research project focusing on ethnic minorities Total grant money available is $10,000</td>
<td>November 1, February 1</td>
<td>Faculty, Graduate, Undergraduate</td>
<td>Up to $1,500 each (number varies)</td>
</tr>
<tr>
<td>Undergraduate Research Grants Funding to defray the cost of conducting a research project Total grant money available is $35,000</td>
<td>November 1, February 1</td>
<td>Undergraduate</td>
<td>Up to $1,500 each (number varies)</td>
</tr>
<tr>
<td>Graduate Assistantship Grants Provides funding for teaching and research assistantships during any academic semester</td>
<td>January 1</td>
<td>Graduate</td>
<td>Eight assistantships of $3,000</td>
</tr>
<tr>
<td>FBI NCAVC Internship Grants Living expenses for a 14-week unpaid FBI NCAVC internship to conduct research</td>
<td>February 1, June 1</td>
<td>Graduate, Undergraduate</td>
<td>Two grants, up to $7,000 each</td>
</tr>
<tr>
<td>APS Summer Research Grants Provides opportunities to conduct research during the summer with sponsors who are APS members</td>
<td>March 1</td>
<td>Graduate, Undergraduate</td>
<td>Six $5,000 grants ($3,500 student + $1,500 sponsor)</td>
</tr>
<tr>
<td>CUR Summer Research Grants Provides opportunities to conduct research during the summer with sponsors who are CUR members</td>
<td>March 1</td>
<td>Undergraduate</td>
<td>Two $5,000 grants ($3,500 student + $1,500 sponsor)</td>
</tr>
<tr>
<td>SRCD Summer Research Grants Provides opportunities to conduct research during the summer with sponsors who are SRCD members</td>
<td>March 1</td>
<td>Undergraduate</td>
<td>Two $5,000 grants ($3,500 student + $1,500 sponsor)</td>
</tr>
<tr>
<td>Summer Research Grants Provides opportunities to conduct research during the summer at recognized research institutions</td>
<td>March 1</td>
<td>Undergraduate</td>
<td>Fourteen $5,000 grants ($3,500 student + $1,500 sponsor)</td>
</tr>
<tr>
<td>Faculty Advisor Research Grants To support faculty advisors’ empirical research by funding the direct costs of a project</td>
<td>June 1</td>
<td>Faculty Advisor</td>
<td>Twelve grants, up to $2,000 each</td>
</tr>
<tr>
<td>STP Assessment Resource Grants Supports projects to develop assessment tests, instruments, and processes for the APA Guidelines for the Undergraduate Psychology Major</td>
<td>June 1</td>
<td>Psi Chi Faculty Members</td>
<td>Three $2,000 grants</td>
</tr>
<tr>
<td>Regional Travel Grants Provides $3,000 per region to assist students with travel expenses to a regional convention</td>
<td>Deadlines Vary, Winter/Spring</td>
<td>Graduate, Undergraduate</td>
<td>Up to $300 each (number varies)</td>
</tr>
<tr>
<td>Collaboration Grants Provides funds for a Psi Chi chapter and a Psi Beta chapter to collaborate on a shared activity</td>
<td>January 1, June 1</td>
<td>Chapter</td>
<td>Four $500 grants</td>
</tr>
<tr>
<td>APAGS/Psi Chi Junior Scientist Fellowships Provides funding for a 1-year or 2-year graduate-level project</td>
<td>June 30</td>
<td>Psi Chi Members, APAGS Members</td>
<td>Four fellowships, $1,000 each</td>
</tr>
</tbody>
</table>
**RESEARCH GRANTS**

**SuperLab Research Grants | Oct 1**
All undergraduate and graduate Psi Chi members are eligible to apply for these research grants. Grant winners receive a copy of SuperLab experimental lab software and a response pad from Cedrus®.

**Thelma Hunt Research Grants | Oct 1**
All Psi Chi student and faculty members are eligible to apply for a Thelma Hunt Research Grant. Up to two grants of up to $3,000 each are presented annually to enable members to complete empirical research that addresses a question directly related to Psi Chi.

**Undergraduate Psychology Research Conference Grants | Oct 1**
The purpose of this program is to provide funds for local/regional undergraduate psychology research conferences. Funding is intended for conferences that will invite student research presenters from at least three schools in the area and will notify all Psi Chi chapters in the geographic area of the conference. The maximum grant for each conference is $1,000.

**Graduate Research Grants | November 1 & February 1**
The purpose of this program is to provide funds for graduate student members to defray the cost of conducting a research project. Applicants may request up to $1,500 for each project. A total of $20,000 has been allotted for this student grant program.

**Mamie Phipps Clark Research Grant | November 1 & February 1**
All Psi Chi members (faculty, graduate and undergraduate students) are eligible for the Mamie Phipps Clark Research Grant. Each grant offers up to $1,500 to defray the costs of conducting a research project focusing on ethnic minorities. Total funding available is $10,000 per year, and the program begins in 2012.

**Undergraduate Research Grants | November 1 & February 1**
The purpose of this program is to provide funds for undergraduate student members to defray the cost of conducting a research project. Applicants may request up to $1,500 for each project. A total of $30,000 has been allotted for this student grant program.

**Graduate Assistantship Grants | January 1**
This grant provides funding for four teaching and four research graduate assistantships during any academic semester. Each grant recipient will receive $3,000. Applicants must be a graduate student who has yet to graduate and a Psi Chi member to be eligible for the program.

**FBI NCAVC Internship Grants | February 1 & June 1**
All undergraduate and graduate Psi Chi members who are accepted as FBI NCAVC interns are eligible to apply for this internship grant. Two grants up to $7,000 will be awarded annually for the 12-week unpaid position that allows the intern to conduct research at the FBI NCAVC.

**APS Summer Research Grants | March 1**
All undergraduate Psi Chi members are eligible to apply for these grants (research must be conducted while still an undergraduate, not after graduation). The purpose of the program is to allow students to conduct research during the summer with a faculty sponsor who is a member of APS. Psi Chi awards six $5,000 grants (a stipend of $3,500 to the student plus $1,500 to the faculty sponsor).

**CUR Summer Research Grants | March 1**
All undergraduate Psi Chi members are eligible to apply for these grants (research must be conducted while still an undergraduate, not after graduation). The purpose of the program is to allow students to conduct research during the summer with a faculty sponsor who is a member of CUR. Psi Chi awards two $5,000 grants (a stipend of $3,500 to the student plus $1,500 to the faculty sponsor).

**SRCD Research Grants | March 1**
All undergraduate Psi Chi members are eligible to apply for these grants (research must be conducted while still an undergraduate, not after graduation). The purpose of the program is to allow students to conduct research during the summer with a faculty sponsor who is a member of SRCD. Psi Chi awards two $5,000 grants (a stipend of $3,500 to the student plus $1,500 to the faculty sponsor).

**Summer Research Grants | March 1**
All undergraduate Psi Chi members are eligible to apply for these grants (research must be conducted while still an undergraduate, not after graduation). The purpose of the program is to provide funds for members to conduct summer research at recognized research institutions. Psi Chi will award 14 grants of $5,000 (a stipend of $3,500 to the Psi Chi student plus $1,500 to the sponsoring faculty member at the research institution each year).

**Faculty Advisor Research Grants | June 1**
All current faculty advisors and coadvisors who have served an active Psi Chi chapter for at least one year are eligible to apply for these faculty advisor research grants. The purpose of this program is to provide funds for advisors to defray the direct costs of conducting a research project (no stipends included). Twelve grants of up to $2,000 are available annually.

**STP Assessment Resource Grants | June 1**
All Psi Chi faculty members are eligible for these grants, which support projects to develop assessment tests, instruments, and processes. Psi Chi will award three $2,000 grants.

**APAGS Junior Scientist Fellowships | June 30**
All Psi Chi and APAGS members entering their first or second year of graduate school are eligible for these fellowships that provide funding for direct costs of psychological science research projects. Applicants must be a member of both organizations at the time of submission to be eligible.

**Regional Travel Grants | Deadlines Vary**
All graduate and undergraduate Psi Chi members are eligible for these regional travel grants that provide funding to assist students with travel expenses to a regional convention. Each grant offers up to $300 each; $3000 is available per region.

**Collaboration Grants | January 20 & June 1**
All Psi Chi and Psi Beta chapters are eligible for these collaboration grants that provide funding for a Psi Chi chapter and a Psi Beta chapter to collaborate on a shared activity. Psi Chi will award four $500 grants.
Psi Chi Journal of Undergraduate Research Broadens Its Scope

The Board of Directors recently made a significant change to the Psi Chi Journal of Undergraduate Research, Psi Chi’s peer-reviewed journal founded in 1995. This change will better serve all Psi Chi members, and increase submissions, readership, and the overall prestige of the Journal.

- The name has changed to Psi Chi Journal of Psychological Research now that Psi Chi accepts submissions from undergraduate first authors as well as graduate students and faculty Psi Chi members.

- Undergraduate work will not compete against the work of graduate students and faculty for a place in the Journal. Each piece will be reviewed based on education level.

- The Journal will continue to be peer-reviewed by doctoral-level psychology faculty and uphold the tradition of mentoring all Psi Chi authors through the review, revision, and publication processes.

We invite all Psi Chi undergraduates, graduate students, and faculty to submit their research to the new Psi Chi Journal of Psychological Research at http://www.psichi.org/pubs/journal/submissions.aspx.