The Effects Of Racial Stereotypes On False Recall

Melissa Jane Loria

University of Mississippi

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THE EFFECTS OF RACIAL STEREOTYPES ON FALSE RECALL

A Dissertation
presented in partial fulfillment of requirements
for the degree of Doctor of Philosophy
in the Department of Psychology
The University of Mississippi

by

MELISSA J. LORIA

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ABSTRACT

Prejudiced behavior based on racial stereotypes has been found to negatively impact young, black offenders in the juvenile probation system. One issue that may contribute to this is the creation of false memories. In fact, false memories have been linked to many wrongful convictions in the U.S. legal system. It is well known that memories are malleable and are often reconstructed. As a result, it has been theorized that suggestive law enforcement interrogations can cause people to misremember events or even generate false memories. Such mistakes can lead to disastrous consequences, including incarceration of innocent people.

At present, there is a small, but important body of work that has analyzed the effects of gender stereotypes on false memory creation. However, the possible effects of racial stereotypes on false memory creation need to be identified. In the current studies, the stereotype of a “young, African-American man” or a “young, Caucasian man” was activated prior to utilizing the Deese-Roediger-McDermott (DRM) paradigm. Participants were more likely to falsely recall negatively valenced critical target words after explicitly or implicitly activating a stereotype of a “young, African-American man.”

These results begin to suggest that racial stereotypes may be playing a role in false memories and they could help to explain the racial disparities in the U.S. justice system. The results also highlight the need for further research in this area to better understand the level of influence these effects have.
DEDICATION

To Prytania and Larry
LIST OF ABBREVIATIONS AND SYMBOLS

DRM        Deese-Roediger-McDermott
ACKNOWLEDGEMENTS

Thank you to my committee members – Dr. Matthew Reysen, Dr. Mervin Matthew, Dr. Elicia Lair, and Dr. Joshua Magruder – for their support, feedback, and time. I am so appreciative of their careful attention and encouragement.

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CHAPTER I: INTRODUCTION
INTRODUCTION

Prejudiced behavior based on unconscious racial stereotypes has been found to negatively impact young, black offenders in the juvenile probation system (Graham & Lowery, 2004). In fact, a substantial body of research has investigated race and the justice system, demonstrating numerous, significant racial biases. One issue that may contribute to this disparity is the strong association between false memories and wrongful convictions in the U.S. legal system. Relevantly, many researchers have shown that memory is malleable and is often reconstructed prior to, or at the time of, event recall. As a result, it has been theorized that various mistakes made while communicating with eyewitnesses can lead individuals to misremember events or to completely construct false memories. Such mistakes can lead to disastrous consequences, up to and including incarceration of innocent people (Loftus, 2003; Connors, Lundregan, Miller, & McEwen, 1996).

At present, there is a small, important body of work that has analyzed the effects of stereotypes on false memory creation. One study revealed that both direct and indirect priming of gender stereotypes affects false memory creation (Lenton, Blair, & Hastie, 2001; Macrae, Schloerscheidt, Bodenhausen, & Milne, 2002). However, the potential effect of racial stereotypes on false recall has not received attention to date. The purpose of the present research is to begin to fill this gap in the literature. More specifically, the goal is to determine whether the activation of racial stereotypes associated with young, African-American men affects false recall rates.
Researchers have long understood perception as a process built on categorization. Any perceived stimuli will quickly be placed into categories to help the individual make sense of their situation. For example, if a person is poked, that stimulus could be placed into the “touch” category, among others. Categorization of information can range from simplistic to elaborate (Bruner, 1957). In cases where a stimulus is highly detailed and complicated, people tend to utilize mental shortcuts called heuristics, which serve to speed up problem solving and judgment making (Willingham, 2004). When it comes to judging frequency and probability of events, people tend to utilize the availability heuristic, which states that people judge frequency and probability based on how easily something comes to mind. If a class or event can be quickly and easily recalled, it is judged as being more frequent and more probable (Tversky & Kahneman, 1973; Goldstein, 2010).

While the availability heuristic can be helpful in speeding up judgment calls, use of it often leads to “systematic biases,” such as illusory correlations (Bruner, 1957; Tversky & Kahneman, 1973). These occur when an individual utilizes the availability heuristic and identifies a strong correlation between two things when, in reality, the correlation is weak or non-existent (Lickel & Hamilton, 2000). Expectations formed in response to illusory correlations can lead to stereotypic thinking (Hamilton & Gifford, 1976). People tend to pay closer attention to behaviors that reaffirm illusory correlations, in turn reaffirming stereotypes and perpetuating the cycle (Bodenhausen, 1988). Further, attention focused towards this type of reaffirmation can cause individuals to miss substantial correlations. Focusing selective attention on an illusory correlation leads to easier retrieval of the behavior, thus propagating the availability heuristic - illusory correlation - stereotype loop (Goldstein, 2010).
While stereotypes are formed as a result of an innocent process used to simplify stimuli and quickly evaluate social interactions, these biases can lead to unintended, but highly negative, consequences. For example, outgroup members are often evaluated more negatively by individuals after a stereotype has been activated (Graham & Lowery, 2004; Devine, 1989). Further, Bargh, Chen, and Burrows (1996) showed that when participants in their study were primed with images of African-American faces, they responded with higher levels of hostility to the experimenter. Even with self-awareness and a strong understanding of how stereotypes are generated and their negative implications, it is difficult to avoid using them. This bias does not start in adulthood and can be deeply engrained. In fact, a study looking at children’s understanding of stereotypes found that by age 10, “93% were able to infer an individual’s stereotype” (McKown & Weinstein, 2003).

Stereotypes not only have a negative impact on social situations; they also have the potential to be incredibly damaging in the United States legal system. Specifically, stereotyped beliefs about African-American men have been shown to have significant negative implications for African-American male defendants. A variety of studies have been conducted revealing these negative racial stereotypes. For example, Graham and Lowery (2004) looked at how unconscious racial stereotypes effect the evaluations of police officers and juvenile probation officers when analyzing short vignettes about adolescent offenders. Law enforcers were either subliminally primed through exposure to words related to the category “black” or to race-neutral words. This was followed by a seemingly unrelated task in which participants were instructed to read vignettes about adolescent criminals and then asked to rate the adolescents on a variety of traits. As the researchers hypothesized, “officers in the racial prime condition reported more negative
trait ratings, greater culpability, and expected recidivism, and they endorsed harsher punishment than did officers in the neutral condition,” (Graham & Lowery, 2004).

With results like these, it comes as no surprise that a 2010 publication looking at incarceration rates revealed a huge racial disparity; white men were incarcerated at a rate of 678 per 100,000, Hispanic/Latino men were incarcerated at a rate of 1,775 per 100,000, and black men were incarcerated at a rate of 4,347 per 100,000 (Glaze & Parks, 2011).

Psychologists have long discussed and studied the use of associationism, or the mental linking of events or ideas, in relation to memory formation and recollection. However, erroneous memories were very rarely studied scientifically because many researchers believed that false memories were likely due to guessing with the hopes of increasing task accuracy (Roediger, McDermott, Robinson, 1998). In the 1990s, researchers Roediger and McDermott began investigating these erroneous memories and rekindled interest in studying participants’ memories of events that had not occurred.

The paradigm that is most often used to study false memory was originally developed by Deese in 1959, but was largely ignored by researchers until Roediger and McDermott replicated and extended Deese’s results. Now coined the Deese-Roediger-McDermott (DRM) paradigm, it has been studied and utilized by many false memory researchers. When using the paradigm, researchers present participants with a list comprised of words that are clear associates of a critical word that is not presented. For example, one commonly utilized list includes words like bed, rest, awake, tired, dream (associates) but does not include the word sleep (critical target word). After exposure to the list, participants are asked to recall the words. In many cases, it is found that participants recall the critical target word even though it was not presented.
The DRM paradigm demonstrates the relative ease with which false memories can be implanted in laboratory settings. This raises an important concern regarding whether such inaccurate or false memories can lead to wrongful convictions and incarcerations. In their 1996 publication “Convicted by Juries, Exonerated by Science: Case Studies in the Use of DNA Evidence to Establish Innocence After Trial,” Connors, Lundregan, Miller, & McEwen scrutinized 28 cases in which defendants were wrongly convicted of crimes (all involving sexual assault) who served an average of 7 years in prison before exoneration. In each of the cases, excluding cases that were homicides, the victim of the crime identified the defendant as the assailant both prior to and during the trial. Several of the cases had additional eyewitnesses who claimed to have seen the defendants either near the crime scene or with the victim. Despite the memories of the victims and other eyewitnesses, scientific evidence (specifically DNA testing) led to the exoneration of all 28 men (Connors et al., 1996).

There has been much discussion in the academic community on factors that can increase the probability of inaccurate memory retrieval. As noted above, memory is understood to be malleable. As a result, in addition to worry centered on inaccuracies with eyewitness testimony and lineup identifications, there is also growing concern about how interrogations can influence a witness’s memory. Suggestive law enforcement interrogations can contribute to both misremembering and the creation of false memories. This can lead to mistakes whereby innocent civilians are incarcerated for crimes they did not commit while potentially dangerous criminals remain at large (Loftus, 2003).

Only a handful of studies have utilized versions of the DRM paradigm to identify how stereotypes can affect false memories. In their article “Illusions of Gender: Stereotypes Evoke False Memories,” Lenton et al. (2001) aimed to identify whether indirect stereotype associations
could increase false memory creation. In the first experiment, the researchers presented participants with a single list of 75 words. 60 of the words were from DRM lists and 15 were either stereotypically masculine or feminine roles (for example: soldier and secretary). After a distractor task, participants were asked to identify which words they had previously studied from a new 46-item list comprised of both old and new words. The researchers found that participants falsely remembered more words associated with roles stereotypically consistent with the list they were given (i.e., either masculine or feminine roles). Lenton et al. conducted a similar follow-up experiment verifying that participants were unaware of the gender theme and to better understand the differences previously found between role and trait lures.

In the experiments conducted by Lenton et al., the researchers put a great deal of emphasis on hiding the gender theme from participants to ensure that any associations were indirect. Study of these indirect associations is important; however, such an approach left the role of direct associations unexamined.

In 2002, Macrae et al. sought to evaluate the effects that category-based thinking can have on false memory. Like Lenton et al. (2001), the researchers worked with gender stereotypical occupations but they did not attempt to hide the gender theme. In their first experiment, participants were given male and female forenames paired with either mechanic or hairdresser and instructed to attempt to remember “who does what.” Following a distractor task, participants were shown forenames and were instructed to recall whether they had been introduced. If they believed the name had been introduced, they were asked to report which occupation had been linked to the name. It was found that participants were more likely to remember expectancy-inconsistent occupational pairings but when they falsely recognized names, they reported stereotype-consistent occupations (Macrae et al., 2002).
In a follow-up experiment, the researchers presented forenames and occupations in the same way but altered the recognition task. Participants were presented with “Forename – Occupation” and asked whether it was a combination that they had seen previously. If they reported that they’d seen it, they were asked to indicate how confident they were. The experimenters found that expectancy-consistent false memories were associated with higher levels of confidence (Macrae et al., 2002).

The findings from such studies reveal that activation of gender stereotypes, both directly and indirectly, can influence participants’ memories of events. What neither of these studies do, however, is examine the effects of racial stereotypes on false memories. The purpose of the current research is to determine whether activating African-American male stereotypes influences false memory rates.
CHAPTER II: EXPERIMENT ONE
EXPERIMENT ONE

Experimental Methods

One hundred and twenty undergraduate psychology students (34 males, 84 females, and 2 unreported, ages 18-37) received partial course credit in return for their participation.

A between-subjects design was employed in which participants were randomly assigned to one of three conditions. During the experiment, they were asked to evaluate words presented on a computer monitor and indicate how relevant each word was to either a young, African-American man, or young Caucasian man. In addition, a pleasantness control condition was included in which participants were asked to rate the pleasantness of each word.

In total, six, 12-item lists adapted from Roedeger, Watson, McDermott, & Gallo’s 2001 word norms were used in the study. Participants would rate the words in one list, complete a math distractor task, and then complete a recall test for the list. This process was repeated until each participant had rated and been tested over all six lists. The three lists of interest were comprised of negatively valenced critical words (i.e. thief, anger, and trouble). Additionally, three lists with neutral/slightly positively valenced critical words were included (doctor, sweet, beautiful). Each participant studied and recalled the same six lists in the same order and each neutral/slightly positive list was always followed by a negative list. The lists were created by selecting the first 12 items in each list.

Participants were told that they were taking part in a study investigating human memory and that they would be given a series of word lists and asked to rate the relevance of each word to a particular type of person. Each trial began as a participant entered the lab and was seated in
front of a personal computer. Following, this, the experimenter read the directions aloud to each participant.

As noted above, those instructions indicated that participants were tasked with reporting how strongly they identified the type of person described with each presented word (1 = very weak, 5 = very strong).

After listening to the instructions, participants were asked to rate each of the 12 words in the first list, one at a time. Each word in the list was presented for 5 seconds with a .5 second inter-stimulus interval. If the participant did not respond within the time allotted, the next word automatically appeared. After presentation of the words, participants solved single digit addition and subtraction problems for 60 seconds as a distractor task. Finally, the participants were asked to complete a self-paced recall test covering each list. Following this, participants were debriefed and thanked for their participation.

Results

The mean recall of negatively valenced critical words recalled as a function of instructional condition are displayed in Appendix B, Table 1. A strict scoring system was used in which only exact matches, not derivations of critical words, were counted. Frequency of critical words were submitted to a 2 (positive/neutral vs. negative valence) X 3 (encoding condition) mixed factorial ANOVA. This analysis revealed a significant valence x condition interaction effect, $F(2, 117) = 5.416$, $p = 0.006$. The observed power was 0.837.

Furthermore, no differences were observed between instructional conditions and correctly reported studied words. Consistent with these observations, a 2 (total positive/neutral vs. negatively valenced words correctly recalled) X 3 (encoding condition) mixed factorial ANOVA
revealed no significant interaction effect, $F(2,108) = 0.125, p = ns$. Additionally, no differences were observed between instructional conditions for intrusion words (incorrect responses other than the critical word). Consistent with these observations, a 2 (total positive/neutral vs. negatively valenced intrusion words) X 3 (encoding condition) mixed factorial ANOVA revealed no significant interaction effect, $F(2,108) = 1.339, p = ns$.

Discussion

Consistent with the hypothesis, the results of experiment 1 revealed that participants who were in the “young, African-American man” condition were more likely to remember the negatively valenced critical words than were participants in the “young, Caucasian man” or the pleasantness condition.

These results suggest that the DRM paradigm is sensitive to stereotypes. This sensitivity speaks to further generalizability of the DRM paradigm. However, the methodology used to explicitly activate stereotypes in this experiment is very forward and the nature of the experiment may have been obvious to participants. Thus, the methodology in experiment 2 is designed to implicitly activate stereotypes.
CHAPTER III: EXPERIMENT TWO
EXPERIMENT TWO

Experimental Methods

One hundred and fifty undergraduate psychology students (53 males and 97 females, ages 18-53) received partial course credit in return for their participation.

A between-subjects design was employed in which participants were randomly assigned to one of three conditions. Upon arriving to the laboratory, participants were exposed to a photograph of a young, Caucasian man or a young, African-American man for 30 seconds. The research assistant then picked up the photograph and apologized, saying it was for a different experiment. Participants under the control condition were not exposed to a photograph prior to testing.

The same, six, 12-item lists from Experiment 1 were used in Experiment 2. Participants viewed the words in one list, completed a math distractor task, and completed a recall test for the list. This process was repeated until each participant had rated and been tested over all six lists. The three lists of interest were comprised of negatively valenced critical words (i.e. thief, anger, and trouble). Additionally, three lists with neutral/slightly positively valenced critical words were included (doctor, sweet, beautiful). Each participant studied and recalled the same six lists in the same order and each neutral/slightly positive list was always followed by a negative list. The lists were created by selecting the first 12 items in each list.

Participants were told that they were taking part in a study investigating human memory and that they would be given a series of word lists and asked to remember as many words as they could. Each trial began as a participant entered the lab and was seated in front of a personal
computer. Participants in the experimental groups initially had a photograph of either a Caucasian man or an African-American man on the desk. This remained there for thirty seconds before the experimenter removed it, indicating that it was for a different experiment. Following, this, the experimenter read the directions aloud to each participant.

After listening to the instructions, participants were shown each of the 12 words in the list, one at a time. Each word in the list was presented for 2 seconds with a .5 second inter-stimulus interval. After presentation of the words, participants solved single digit addition and subtraction problems for 60 seconds as a distractor task. Finally, the participants were asked to complete a self-paced recall test covering each list. Following this, participants were debriefed and thanked for their participation.

Results

The proportions of negatively valenced critical words recalled as a function of condition are displayed in Appendix C, Table 2. A strict scoring system was used in which only exact matches, not derivations of critical words, were counted. Frequency of critical words were submitted to a 2 (positive/neutral vs. negative valence) X 3 (encoding condition) mixed factorial ANOVA. This analysis revealed a significant valence x condition interaction effect, $F(2, 147) = 4.251, p = 0.016$. The observed power was 0.736.

Furthermore, no differences were observed between instructional conditions and correctly reported studied words. Consistent with these observations, a 2 (total positive/neutral vs. negatively valenced words correctly recalled) X 3 (encoding condition) mixed factorial ANOVA revealed no significant interaction effect, $F(2,146) = 0.134, p = ns$. Additionally, no differences were observed between instructional conditions for intrusion words (incorrect responses other
than the critical word). Consistent with these observations, a 2 (total positive/neutral vs. negatively valenced intrusion words) X 3 (encoding condition) mixed factorial ANOVA revealed no significant interaction effect, $F(2,146) = 1.772, p = ns$.

Discussion

Consistent with the hypothesis and also the results of experiment one, these results revealed that participants who were in the group exposed to the photograph of the young African-American man were more likely to remember the negatively valenced critical target words than were participants in the other conditions.

These results further reveal that the DRM paradigm is sensitive to stereotypes, even in cases where the stereotype is very implicitly activated. Results from the first two experiments clearly reveal sensitivity to this false memory paradigm, thus suggesting that memory failure may likely be affected by stereotypes associated with young, African-American men. To further analyze this effect, methodology for experiment three was designed to better mirror memory failure in real-life scenarios.
CHAPTER IV: EXPERIMENT THREE
EXPERIMENT THREE

Experimental Methods

Seventy-five undergraduate psychology students (19 males and 56 females, ages 18-25) received partial course credit in return for their participation.

Participants were greeted by a research assistant and seated at a computer upon arriving to the laboratory. After inputting their age, race, and gender, participants were instructed that they would be shown photographs of individuals and told whether the individual depicted was employed or unemployed, and that their task was to try to remember each individual’s employment status.

After viewing the first 60 images (15 each employed/unemployed Caucasian/African-American men), participants completed a simple math distractor task. Finally, participants were informed that they would be shown a series of individuals, some of which they had previously seen, and some new. They were asked to first identify whether they had previously seen the individual depicted, and if so, to report whether the individual was listed as employed or unemployed.

Participants were told that they were taking part in a study investigating human memory and that they would be asked to remember the faces and employment status of a series of individuals. The test began as a participant entered the lab and was seated in front of a personal computer. Participants were asked to input their age, race, and gender. Participants were asked to read an instruction page prior to beginning the study. In this segment of the experiment, participants were shown 60 stimulus pairs: 15 employed Caucasian men, 15 unemployed
Caucasian men, 15 employed African-American men, and 15 unemployed African-American men. Each stimulus pair was on the screen for two seconds followed by two seconds of a blank screen interval. After presentation of the stimulus pairs, participants solved simple addition and subtraction problems as a distractor task.

After the stimulus pairs were presented and the distractor task was complete, participants were asked to execute a source memory task as seen in Macrae et al., 2002. Participants were shown a series of 120 images (60 Caucasian men and 60 African-American men, half of which had been presented earlier) and asked whether each individual depicted had been presented in the first half of the study. The participant could select “yes” or “no,” and the image remained on the screen until the participant responded. Anytime a participant indicated having seen the photograph earlier, they were asked whether the individual depicted was listed as “employed” or “unemployed.” After completion of this task, participants were debriefed and thanked for their participation.

Results

Analyses for these data were conducted in the same manner as the Macrae et al., 2002 experiments. Calculations of corrected recognition scores and false source memory scores are detailed in Appendix D.

As seen in Macrae et al., participants were better at correctly recalling faces that were previously paired with the expectancy-inconsistent employment status. Consistent with these observations, the corrected recognition scores were submitted to a single factor (expectancy-consistent versus expectancy-inconsistent employment) repeated measures ANOVA, which revealed a significant main effect for expectancy-consistent versus expectancy-inconsistent
correct responses, $F(1,47) = 8.266, p = 0.006$. However, no significant interaction effect was observed between corrected recognition scores and expectancy-consistent versus expectancy-inconsistent employment status, $F(26,47) = 1.466, p > 0.05$.

There was no effect of expectancy-consistent versus expectancy-inconsistent employment status observed when participants reported the employment status of falsely remembered faces. Consistent with these results, participants’ false source memory scores were submitted to a single factor (expectancy-consistent versus expectancy-inconsistent employment) repeated measures ANOVA, which revealed no significant main effect for expectancy-consistent versus expectancy-inconsistent correct responses, $F(1,39) = 0.39, p > 0.05$. There was also no interaction effect observed, $F(34,39) = 1.533, p > 0.05$.

Discussion

Limited research has been conducted on stereotypes and erroneous memory, however the effects of stereotypes on the DRM paradigm have not been studied. Experiments 1 and 2 were specifically designed to begin to address that gap in the literature. In experiment 3, the aim was to replicate a portion of Macrae et al.’s 2002 study, which utilized a novel approach to evaluate the effects of stereotypes on false memory creation. Their paradigm relied on pairing specific gender normative names and professions to later evoke false memories in their participants. The current study followed Macrae et al.’s methodology but, rather than names, photographs of African-American and Caucasian men were simply paired with employment status (i.e. employed or unemployed).

As found by Macrae et al., participants were better at correctly recalling faces that were previously paired with the expectancy-inconsistent employment status. However, when
participants falsely recalled seeing a new face, there were no differences seen between employment status assignments (i.e. expectancy-consistent versus expectancy-inconsistent).

These mixed results are interesting, but could be due to alterations made to the original methodology. Images were paired with employment status (i.e. employed or unemployed) rather than specific professions because of the significantly high African-American unemployment rate. Because the methodology revealed some sensitivity to stereotypes, future studies should be conducted evaluating specific professions, in addition to a selection of other relevant stereotypes.
CHAPTER V: CONCLUSION
CONCLUSION

General Discussion

Consistent with our hypotheses, the results of experiments one and two revealed that participants who were in the “young, African-American man” conditions were more likely to remember the negatively valenced critical words than were participants in the “young, Caucasian man” or the control conditions. There was no significant difference seen between experimental groups in recall of the positively valenced/neutral critical items. We also found no significant differences for correctly recalled words or intrusion words between conditions.

The results from the slight alteration of the DRM in experiment one, and their replication in experiment two, reveal the paradigm’s sensitivity to stereotypes. Having shown in these experiments that the paradigm is sensitive to this cultural and social issue may begin to speak further to the generalizability of the DRM to real-life scenarios. These findings are, however, somewhat concerning, as previous findings using the DRM may have unknowingly been altered by accidental stereotype activation in laboratories.

In addition to working towards potentially increasing generalizability, these data offer insight into the differences between test-induced priming and stereotype activation. A previous study evaluating the role of test-induced priming has found that test induced priming of the critical item did not actually have an effect on the DRM memory illusion (Marsh, McDermott, & Roediger, 2004). Because we did find a significant effect, it could be deduced that priming and stereotyping are the result of two different cognitive processes.

It is important to note that these studies were conducted at The University of Mississippi in a region of the country seen as having higher racial tension. While this could potentially be seen as a limitation, having access to collect data from this population is unique and important.
Future studies will incorporate participants from different regions of the country, thus allowing potential regional differences to be evaluated.

Despite limited research evaluating the effects of stereotypes on memory failure, the current work was able to build on the small, but strong body of literature available to better understand and address racial injustices in our society. In light of recent events, it is clear that efforts to gain a more thorough understanding of the effects of stereotypes on cognitive processes are necessitated.

There are many avenues that will be important to explore as these interactions are investigated in the future. The realization that the DRM may be sensitive to stereotypes is exciting, however new word lists should be developed and designed to appropriately assess the specific stereotypes in question. Additionally, because the DRM appears to be sensitive to stereotypes but not to priming, there is reason to explore the possibility of priming and stereotyping to be the results of two different cognitive processes.

While the third experiment revealing somewhat mixed results, it will be interesting to look at different stereotypes that might be more accessible to participants while continuing to use the same model developed by Macrae et al., 2002. In both types of studies, it will be important to look at many additional stereotypes to show that these effects can lead to unsettling consequences for stereotyped individuals.

It would be ideal to reach out and collaborate with experimental psychologists across the country to evaluate different locations and types of participant groups. Finally, as these realms are explored further and the body of literature evaluating false memory and stereotypes grows, it will be important to explore the possibility of reversing effects revealed by these investigations.
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LIST OF APPENDICES
APPENDIX A
Word Lists Used in Experiments One and Two

Negatively Valenced Word Lists

**Anger**
mad, fear, hate, rage, temper, fury, ire, wrath, happy, fight, hatred, mean

**Thief**
steal, robber, crook, burglar, money, cop, bad, rob, jail, gun, villain, crime

**Trouble**
bad, shooter, worry, danger, sorrow, fear, school, problem, police, fight, sad, difficulty

Positively Valenced Word Lists

**Doctor**
nurse, sick, lawyer, medicine, health, hospital, dentist, physician, ill, patient, office, stethoscope

**Beautiful**
ugly, pretty, girls, woman, homely, lovely, nice, picture, lady, mountain, snow, scene

**Sweet**
sour, candy, sugar, bitter, good, taste, tooth, nice, honey, soda, chocolate, heart
Table 1

Experiment 1: Recall Rates of Critical Target Words

<table>
<thead>
<tr>
<th>Condition</th>
<th>Positively Valenced</th>
<th>Negatively Valenced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pleasantness</td>
<td>0.3</td>
<td>0.275</td>
</tr>
<tr>
<td>Young, Caucasian man</td>
<td>0.7</td>
<td>0.2</td>
</tr>
<tr>
<td>Young, African American man</td>
<td>0.75</td>
<td>0.8</td>
</tr>
</tbody>
</table>
Table 2

*Experiment 2: Recall Rates of Positively and Negatively Valenced Critical Target Words*

<table>
<thead>
<tr>
<th>Condition</th>
<th>Positively Valenced</th>
<th>Negatively Valenced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Group</td>
<td>0.843</td>
<td>0.314</td>
</tr>
<tr>
<td>Young, Caucasian man</td>
<td>0.78</td>
<td>0.3</td>
</tr>
<tr>
<td>Young, African American man</td>
<td>0.694</td>
<td>0.592</td>
</tr>
</tbody>
</table>
APPENDIX D
Calculations of Analyzed Scores

Calculations of the corrected recognition scores followed the guidelines set by Macrae et al., 2002: “Corrected recognition scores were computed for each participant by subtracting the proportion of incorrect responses to new items (i.e., false alarms) from the proportion of correct responses to old items (i.e., hits).”

Similarly, calculations of false source memory scores followed guidelines set by Macrae et al, 2002: “False source memory scores were calculated by computing the proportion of incorrectly recognised forenames (i.e., false alarms) that were attributed to each of the response options (i.e., expectancy-consistent occupation, expectancy-inconsistent occupation, or don’t know).”
VITA

Melissa J. Loria

Peabody Hall
Department of Psychology
The University of Mississippi
University, MS 38677

mjloria@olemiss.edu
Tel: (662) 816-5720
Fax: (662) 915-5398

EDUCATION

Ph.D., Experimental Psychology (Cognitive Psychology)
The University of Mississippi
Graduation: August 2016
Dissertation: The effects of racial stereotypes on false recall

1/2012 – 8/2013
M.A., Experimental Psychology (Behavioral Neuroscience)
The University of Mississippi
Thesis: Evaluating preference-seeking and aversive qualities of Salvia divinorum and Mitragyna speciosa

9/2006 – 8/2010
B.A., Psychology and Gender Studies
Sally McDonnell Barksdale Honors College,
The University of Mississippi
Honors Thesis: The effects of α2 noradrenergic, µ-opioid, 5HT6, and 5HT7 receptors in mediating aaptamine’s anxiolytic effects in domestic fowl chicks

UNIVERSITY TEACHING EXPERIENCE

Spring 2016
Graduate Course Instructor, University of Mississippi
Brain and Behavior
Sensation and Perception
Adjunct Course Instructor, Lindsey Wilson College
Sensation and Perception (Online)

Fall 2015
Graduate Course Instructor, University of Mississippi
Brain and Behavior (traditional and distance sections)
Cognitive Psychology
Adjunct Course Instructor, Lindsey Wilson College
Physiological Psychology (Online)
Spring 2015  Graduate Course Instructor, University of Mississippi
           Introductory Psychology (60 students)
           Cognitive Psychology (25 students)

Fall 2014  Graduate Course Instructor, University of Mississippi
           Introductory Psychology (100 students)

TEACHING INTERESTS


RESEARCH EXPERIENCE AND FUNDING

8/2014 – Present  Psychology Department, The University of Mississippi
                   Graduate Dissertation Research

5/2012 – 8/2013  National Center for Natural Products Research and FDA
                   Graduate Research Assistant, Research Funding

8/2011 – 8/2013  Psychopharmacology Lab, The University of Mississippi
                   Graduate Research Assistant, Research Funding

8/2008 – 5/2010  Psychopharmacology Lab, The University of Mississippi
                   Undergraduate Research Assistant

PUBLISHED MANUSCRIPTS


**MANUSCRIPTS UNDER REVIEW, SUBMITTED, OR IN PREPARATION**

**Loria MJ**, Reysen MB (in preparation). The effects of racial stereotypes on false recall

**CONFERENCE PRESENTATIONS**


**CONFERENCE POSTER PRESENTATIONS**


RECENT AWARDS AND ACHIEVEMENTS

Fall 2015  
3MT Finalist  
The University of Mississippi, 3-Minute Thesis Competition

Spring 2015  
3rd Place at the Graduate Student Research Forum  
GSC and ORSP, The University of Mississippi

Spring 2015  
Graduate Research Achievement Award  
Department of Psychology, The University of Mississippi