

Interpreting Aggression: Does Race Priming Influence the  
Interpretation of Interpersonal Conflict?

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Abstract

In recent years, there has been substantial evidence found that priming participants with Black faces has an influence on implicit bias towards Black men, specifically regarding criminal activity. In this study, participants ( $N = 300$ ) were exposed to a prime (a picture of either White rioters or Black rioters) and then they watched a video, which depicted ambiguous cross-racial interaction; the participants then interpreted the video and took the Symbolic Racism scale. Independent-samples  $t$  tests showed that there were significant differences in video reactions between conditions. However, this difference was not the expected effect as hypothesized; the White server was accused of spilling the drink on purpose significantly more than the Black server. These results were not expected and may be attributed to the participants not fully paying attention or confounding variables (i.e., nonequivalent videos).

In recent years, the subject of racism has been a frequent topic of discussion in the news media and on social networking sites. Events have transpired, such as police shootings of unarmed Black Americans and the subsequent riots, to bring the country's focus to this subject. Due to this recent focus on the subject of racism, many people believed the situation to be new. However, history shows that racism had not ceased after the Civil Rights Movement and then resurfaced recently; rather, the idea of racism simply had a change in manifestation to a more modern form. This study examined the modern form racism that is most prevalent today.

Racism has been studied for decades and therefore the literature on the subject is extensive. According to Henry and Sears (2009), racism is crystallized in one's personality by voting age (18 years old) and increases throughout adulthood. There has been a shift from old-fashioned racism to symbolic racism. The majority of current racist behaviors are subtle and controlled mostly by the unconscious (Henry & Sears, 2002; McConahay & Hough, 1972; McConahay, Hardee, & Batts, 1981). This idea of symbolic racism has also been referred to as implicit bias, which is defined as, "bias in judgment and/or behavior that results from subtle cognitive processes that often operate at a level below conscious awareness and without intentional control" (Dovidio & Gaertner, 2000; Dovidio, Gaertner, Kawakami, & Hodson, 2002, p. 94). Discrimination against Blacks by police officers has been attributed to implicit bias caused by the stereotypes of young Black men that are prominent in the U.S. (Spencer, Charbonneau, & Glaser, 2016).

In addition to the implicit bias, the current study also examined the use of priming to influence implicit bias. Priming is defined as, "the implicit memory effect in which exposure to a stimulus influences response to a later stimulus" (Meyer & Schvaneveldt, 1971, p. 231). In other words, priming involves briefly exposing an individual to a stimulus (e.g. a picture, a sound, etc.)

and the stimulus unconsciously influences the individual's response to a later stimulus. The effect can be used to influence racial bias. For instance, one may show participants a picture of a Black man and then ask them to rate a neutral picture (e.g. a symbol, a letter) as good or bad. The expectation would be that the prime of the Black man would cause the participant to rate the neutral picture as bad. In a recent study, researchers found that the appearance of faces of Black men influenced the misidentification of weapons (Todd, Thiem, & Neel, 2016). Also, changing the facial expression of the prime affected the identification of the weapons; for example, a happy Black face diminished the stereotyping, while an angry Black face increased the stereotyping (Kubota & Ito, 2014).

Another example of priming influencing implicit bias involves showing angry Black faces and angry White faces; the results showed that individuals high in implicit bias would perceive the Black face as more threatening than the White face (Hugenberg & Bodenhausen, 2003). Also, seeing Black faces influences participants' ability to spontaneously identify degraded images of crime-relevant objects (Eberhardt, Goff, Purdie, & Davies, 2004). Priming participants with the appearance of a Black face, especially one expressing anger, appears to generally have an influence on the participants' tendency to show implicit bias and follow stereotypes. The appearance of an angry Black face garners an immediate fear response and causes the individual to consider the Black individual as a threat. This occurrence is attributed to the general stereotypes that regard Black individuals as aggressive and criminal. This effect is also being tested in this study by examining if exposure to Black or White people engaged in violent acts primes interpretation of a subsequent Black—White social interaction.

This research tested the use of priming to influence the misinterpretation of aggression. The study began with a prime that the participants viewed. The prime was a picture and

subsequent news story shown as fictional posts on the social media site Twitter.com; the picture depicted a group of young men standing on a police car and the text described the individuals as rioters. The participants saw one of two conditions: Black rioters or White rioters. Then, the participants viewed a video that depicted a social interaction for them to interpret. The video showed a server refilling a customer's water at a dinner table, but then the server accidentally spills the water and the customer accuses him of doing it on purpose. The participants were shown one of two videos: White server/Black customer or Black server/White customer. Then, participants interpreted the video and then completed the Symbolic Racism scale.

The purpose of this study was to expand the past findings that support the idea that implicit bias exists. The hypothesis of this study was that participants who viewed the Black prime, relative to the White prime, would be more likely to interpret the server's actions negatively. Another hypothesis of this study was that participants who interpreted the Black server's actions negatively would report higher scores on the Symbolic Racism scale.

## **Method**

### **Participants**

The participants in this study consisted of 423 consenting adults. Among the participants, 47.7% were males and 52.3% were females with ages ranging from 19 to 75 years old ( $M = 36.62$ ,  $SD = 11.92$ ). The ethnic frequencies were 75.7% White, 7.3% Asian, 7.0% African American/Black, 5.0% Latino/Hispanic, 2.7% Multiracial, 1.3% Native American/Alaskan Native, 1.0% Other.

The participants were recruited for this study on Amazon's Mechanical Turk website (mturk.com). The website is a marketplace in which people can complete small tasks, such as surveys, in exchange for payment with Amazon.com credit. This study was exclusive to

Mechanical Turk users in the U.S. and Canada. Participants who completed the research were rewarded with a small amount of Amazon.com credit (\$0.25). The target sample size was approximately 300 – 350 participants. The collection of data was stopped once the size exceeded 400 participants.

## **Materials and Procedure**

This experimental study was conducted through a survey on SurveyMonkey.com. First, the participants read and completed the Informed Consent form (the form required the participant to answer “yes” before continuing). Second, the participants viewed the prime and answered a few questions regarding the content of the prime. Third, the participants viewed a video and answered reaction questions to the video. Fourth, they completed an awareness check questionnaire. Fifth, the participants completed a racism scale, which was followed by demographic surveys. Finally, the participants saw a debriefing document, which supplied the participant with further information on the study and contact information of the researcher.

The prime was a picture depicting a violent riot. This picture was the first independent variable (IV) and the two conditions are White rioters and Black rioters. The picture featured a group of individuals standing on top of a police car appearing to violently riot. One picture included Black individuals and the other included White individuals. The pictures were roughly equivalent given that each one featured the subjects on top of a police car, as well as similar posture and apparent behaviors (e.g., aggressive, yelling). The pictures were followed by an identical string of short messages for each prime telling the fictional story of the riot shown in the pictures. The stories represented fictional posts on the social media website Twitter.com. An example of the prime can be found in the Appendix. The questionnaire for the primes included three open-ended questions about what the participant observed in the picture and story. Sample

items on the prime questionnaire included “What were the individuals in the picture doing?” and “Where did these events take place?” The purpose of these questions was to show that the participant had paid attention to the prime; this attention would ensure that the prime would have an effect.

After the prime, participants viewed a video depicting a server pouring a glass of water for a customer at a dinner table. This video was the second IV and the two conditions were White server/Black customer and Black server/White customer. The video showed the server appearing to accidentally spill water on the customer and the customer accusing the server of committing the act intentionally. The video was followed by a reaction scale. The items were scored on the same scale from 1 (*strongly disagree*) to 7 (*strongly agree*) with two yes/no questions, and each question was analyzed independently (Table 1). The two yes/no questions showed no significant trends and are not further discussed for the sake of streamlining the results. Sample items on the video reaction scale included “The customer misinterpreted the server’s actions” and “The server was at fault in this situation.”

The awareness check was a set of questions inserted after the video reaction scale to monitor whether the participant had become aware of the true purpose of the study. The questionnaire was seven open-ended items recommended for priming studies that asked about the participant’s suspicions of the study (Bargh, Chen, & Burrows, 1996). Sample items included “What do you think the purpose of this study was?” and “Did you suspect that the purpose of the experiment was different from what the experimenter had explained?” The responses to these statements were analyzed to determine whether participants’ responses would be included in the report. If the participant reported that they believed the study to be about race/racism or that their responses were affected by their suspicions, then the responses would be discarded. The purpose

of this awareness check was to confirm that the results only included natural responses to the study.

The Symbolic Racism Scale is currently the most widely used scale to measure racism (Fiske & North, 2013; Henry & Sears, 2002; Henry & Sears, 2009; McConahay & Hough, 1976). This scale consisted of eight questions that each focused on different aspects of racism. Some of the questions had different rating intervals, with most having a scale from 1 to 4 and one having a scale from 1 to 3. Sample items on the Symbolic Racism Scale included “How much discrimination against Blacks do you feel there is in the United States today, limiting their chances to get ahead?” and “Irish, Italian, Jewish, and many other minorities overcame prejudice and worked their way up. Blacks should do the same without any special favors.” For this study, the items on this scale produced a coefficient alpha of .89, which shows that the scale is reliable. These materials were followed by demographics (age, sex, ethnicity, etc.)

The total number of individuals who followed the Survey Monkey link was 423. However, before analysis, the researcher omitted participants for various reasons. First, 109 surveys were discarded because many of the questions were unanswered. Then, 12 surveys were discarded because the participants showed suspicion in the awareness check questionnaire. Finally, 2 surveys were discarded because they did not pass attention questions in the survey; in other words, there were questions that asked the participants to respond in a specific way. For instance, one item told the participants to select “Strongly Agree” for that item. These participants did not respond as directed and their surveys were discarded.

## **Results**

The hypothesis predicted that participants who viewed the Black prime would be more likely to interpret the server’s actions negatively than participants who viewed the White prime.

However, the prime did not have a significant effect on the interpretation of the video or on the racism scale scores. The results were tested using a factorial ANOVA, but none of the effects reached the cutoff for the statistical significance (all  $F$ s < 0.66, all  $p$ s > .416). Therefore, the hypothesis was not supported.

Although the prime did not have a significant effect, the next analysis continued to test the portion of the hypothesis predicting that the participants would interpret the Black server's actions negatively more often than the White server. The dependent variables were the individual item in the video reaction questionnaire (Table 1) and the total scores on the Symbolic Racism scale. Each variable was compared between conditions of the independent variable (White server or Black server). The variables were analyzed using independent-samples  $t$  tests. The full results of these tests can be found in Table 1. Three of items on the video reaction questionnaire showed significant differences in means. The first item, "The customer misinterpreted the server's actions," showed a significant difference in means between participants who viewed the Black server and participants who viewed the White server; the participants who viewed the Black server video agreed with this statement more than the participants who viewed the White server video. The second item, "The customer was at fault in this situation," showed a significant difference in means between participants who viewed the Black server and participants who viewed the White server; the participants who viewed the Black server video agreed with this statement more than the participants who viewed the White server video. The third item, "The server was at fault in this situation," showed a significant difference in means between participants who viewed the Black server and participants who viewed the White server; the participants who viewed the White server video agreed with this statement more than the participants who viewed the Black server video. Although each of these tests are significant, the



results do not support the hypothesis. There is a significant difference in means between groups for these questions, but the difference is the opposite of that which was hypothesized. Overall, the participants interpreted the White person's actions as more negative than the Black person's; therefore, the hypothesis was not supported.

Also, the researcher hypothesized that participants who interpreted the Black server's actions negatively would report higher scores on the Symbolic Racism scale.. Pearson's Correlation Coefficients were conducted to test the relationships between each item of video reaction questionnaire and the racism scores separately between the two conditions. The results of these tests can be found in Table 1. These correlations showed the opposite relationship than predicted because the individuals who accused the White server of spilling the drink on purpose scored higher on the Symbolic Racism scale than the individuals who accused the Black server of spilling the drink on purpose. Two items in the Black server condition illustrate this trend. The first, "The server spilled the drink on purpose" showed a significant correlation with the scores on the racism scale; the scores were negatively correlated. The second, "The serve spilled the drink by mistake," showed a significant correlation with the scores on the racism scale; the scores were positively correlated. These results do not support the hypothesis because the correlations show that participants who did not accuse the Black server of spilling the drink on purpose scored higher on the racism scale than individuals who did accuse the Black server of spilling the drink on purpose. Most of the significant correlations occurred within the Black server condition; therefore, race and/or racial attitudes do appear to have had an effect in that condition, but not the expected effect.

## Discussion

The purpose of this study was to show the effect of racial priming on interpretation of aggression in a cross-racial interaction. The results showed that the participants interpreted the White server's actions more negatively than the Black server. Also, the participants who interpreted the White server's actions negatively scored higher on the racism scale than the participants who interpreted the Black server's actions negatively. These results were the opposite of both hypotheses. Although the hypotheses were not supported, this study has implications that could help improve future research.

Past research has found that the priming of participants with images of Black individuals influences the misidentification of threatening stimuli (Eberhardt et al., 2004; Hugenberg & Bodenhausen, 2003; Kubota & Ito, 2014; Todd et al., 2016). Therefore, previous evidence would suggest that the participants would have accused the Black server of spilling the drink more than the White server, especially when the participants had been primed with the Black rioters. However, the results of this study were not consistent with the results of past studies. The primes had no effect on the interpretation of the video and the participants accused the White server of spilling the drink more than the Black server.

The main implication from this study is that race had a significant effect on the results; in other words, there was a significant difference in the means between the participants who saw the Black server video and the participants who saw the White server video. However, the effect was not in the expected direction. The expected direction would be that the Black server would be accused more than the White server. One explanation for this unexpected result could be social desirability, or the participant behaved in a way that would mark them as "good" in society. The participants may not have reacted naturally but acted in the way that makes them

look the best, instead. Also, another explanation could be that the recent events dealing with race (police shootings, riots, etc.) are fresh in the participants' minds; therefore, it may be difficult to present a study dealing with race to participants without them becoming aware of the true purpose. In addition, an explanation for the positive correlations with accusing the White server of spilling the drink on purpose and the score on the Symbolic Racism scale could be that the participants responded on the scale in the way that the researcher would want. At this point in the study, the purpose of the research is apparent and therefore the participants may respond as they feel they are expected to respond. Due to the recent events regarding race issues, this study could help educate individuals about implicit bias; this education could help bring these behaviors into the conscious mind and perhaps decrease these happenings.

There were several limitations to this study due the medium on which it was conducted. These limitations include: difficulty of conducting an online experiment, having a non-representative sample, and poor acting in the videos. The first limitation is perhaps the most important. This experimental study was completed entirely online through Survey Monkey and Mechanical Turk; therefore, the researcher was not observing the participants in a controlled environment. There could have been several additional factors that may have influenced the results due to this fact. For instance, the participants were not under the supervision of the researcher and may have not been fully paying attention to the study. Also, the participants could have been doing other activities that could influence their responses (listening to music, watching television, etc.). The researcher would have more control if the participants completed the experiment in a room with the researcher. Finally, the acting in the videos, primarily the acting of the White server, was very poor and did not adequately portray the fact that the incident was supposed to appear as an accident. It appeared as if the White server did spill the drink on

purpose. Therefore, this lack of production value is a confound and would explain the difference in ratings between the conditions, because the participants would be more likely to accuse the White server due to the lack of ambiguity (i.e., the Black server appeared to spill the drink on accident, while the White server appeared to spill the drink on purpose).

These limitations can easily be overcome in future research and this adjustment could produce more expected results. The first proposal is to repeat this study, but change the experiment from an online survey to an experiment conducted in person. The study would select participants that would be representative of the population. The participants would be placed into groups. Then, the researcher would gather the groups into rooms and show them the prime and video, followed by the questions. The researcher would have more control of the results in this situation and intervening variables would be minimal. Also, a similar study could be conducted but with a different scenario to interpret. For instance, instead of a server spilling a drink, the video could depict a male White police officer shooting an unarmed Black man and a male Black police officer shooting an unarmed White man. The participants would interpret whether the officer had just cause for his actions. This scenario would be consistent with the current issues facing the country and may have a larger effect.

### Conclusion

Research has shown that priming participants with pictures of Black individuals generally influences their misinterpretation of situations. The Black individuals depicted in the prime are typically identified as threatening or angry. This study examined this relationship by priming participants with a picture of Black rioters or White rioters and then asking the participants to interpret an ambiguous cross racial interaction. The prime did not have the same effect as in previous research. However, the subject of race had an effect in the study. It appeared as if the

participants were hesitant to accuse the Black server of spilling the drink due to their desire to be seen as “good” in our society. This study can be adjusted for future research and could produce results that are consistent with past findings.

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Table 1

Table 1

*Difference in Mean Scores of Interpretation of Aggression Between Conditions*

Item	Comparisons of experimental conditions				Racism correlations	
	Black server <i>M</i> ( <i>SD</i> )	White server <i>M</i> ( <i>SD</i> )	<i>t</i>	<i>p</i>	Black server	White server
The customer misinterpreted the server's actions.	5.89 (1.49)	5.48 (1.55)	2.39	.017	.29**	-.13
The server misinterpreted the customer's actions.	2.39 (1.57)	2.68 (1.55)	1.61	.108	-.05	.12
The server showed aggression.	1.81 (1.42)	1.92 (1.36)	0.71	.477	-.12	.03
The customer showed aggression.	5.11 (1.62)	4.78 (1.62)	1.82	.069	.09	-.09
The server spilled the drink on purpose.	2.01 (1.44)	2.33 (1.53)	1.93	.055	-.28**	.15
The server spilled the drink by mistake.	5.93 (1.36)	5.77 (1.52)	0.99	.320	.29***	-.09
The customer was at fault in this situation.	2.99 (1.83)	2.54 (1.77)	2.27	.024	.14	-.04
The server was at fault in this situation.	3.79 (1.90)	4.71 (1.90)	4.27	.000	-.12	.19*
I would react in a similar way to the customer in the situation.	2.45 (1.85)	2.86 (1.94)	1.93	.054	-.19*	-.01
I would react in a similar way to the server in the situation.	4.75 (2.08)	4.42 (2.01)	1.44	.152	.05	.11
Race total	21.98 (5.11)	22.49 (5.83)	0.80	.422		

*Note.* \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

*Appendix*

**Black Prime**



**Ashton Comer**  
@poketrainer67

It was so crazy today!! violent riots happened in DC today! I was there and it was so scary!



9:49 AM - 8 Aug 2016







**Ashton Comer**

@poketrainer67

A bunch of people came down the road yelling and throwing stuff! So scary!

9:47 AM - 8 Aug 2016



Reply to @poketrainer67



**Ashton Comer**

@poketrainer67

I couldn't believe what I was seeing! Cars were overturned, bottles and rocks were thrown at police officers

9:47 AM - 8 Aug 2016



Reply to @poketrainer67



**Ashton Comer**

@poketrainer67

Swat teams and all kinds of police showed up to stop the chaos but it just seemed to increase the violence!

9:48 AM - 8 Aug 2016



Reply to @poketrainer67



**Ashton Comer**

@poketrainer67

Finally, the police were able to take control by using smoke and riot control weapons to break the riots up and make several arrests.

9:48 AM - 8 Aug 2016



Reply to [@poketrainer67](#)