

Cross-Race Effect in Eyewitness Identifications Across Lineup Types

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Abstract

This experiment proposes to collect data to see if there is an effect of lineup type on the cross-race effect in eyewitness identifications. Three hundred men will participate in this experiment. Out of the 300 participants there will be a split of White ($N = 150$) and Black ($N = 150$) men. This experiment will use a $2 \times 2 \times 3$ between subjects design. Participants will be split into two groups so that 75 of participants see a video with a same-race suspect and 75 of the participants see a video with a cross-race suspect. All participants complete a distractor test. After that, the groups will be broken down again so that 25 participants from each group see a blank lineup, 25 see a simultaneous lineup, and 25 see a sequential lineup. Expected results from this experiment will show that cross-race effect present in all conditions. However, that the effect will be reduced for blank and sequential lineups but not for simultaneous lineups.

Keywords: cross-race effect, eyewitness identifications, lineup type

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Jennifer Thompson was raped one night when she was home alone in her apartment. (Thompson-Cannino, Cotton & Torneo, 2009). She survived the attack and during the course of the investigation she was asked to make a suspect identification. Thompson identified Ronald Cotton as her attacker from a simultaneous police lineup. This identification helped lead to Cotton's conviction. He subsequently spent 11 years in prison professing his innocence (Thompson-Cannino, Cotton & Torneo, 2009). Finally, a DNA test exonerated Cotton of any wrongdoing. A few years after he was released from jail, Cotton and Thompson met and formed an unlikely friendship. They now travel the country speaking about the fallibility of eyewitness identifications and wrote a New York Times Bestsellers book "Picking Cotton."

Although in the end Cotton was freed, he spent 11 years of his life in jail for a crime he did not commit. Unfortunately, Cotton's case is not an anomaly. According to the Innocence Project, over 70% of wrongful convictions are due to eyewitness misidentifications. The purpose of this experiment is to replicate and extend previous research regarding the cross-race effect in terms of eyewitness misidentifications. However, before discussing the proposed experiment, it is important to understand previous research in this field.

Smith, Lindsay, Pryke, & Dysart (2001) used college students to explore the cross-race effect for eyewitness identifications. For the purpose of their experiment, Smith et al. (2001) used three postdictors of accuracy: confidence, decision time, and relative vs. absolute judgment strategy to examine accuracy in own-race versus cross-race scenarios. The cross-race effect in terms of eyewitness identification is the idea that "eyewitnesses are less likely to misidentify someone of their own race than they are to misidentify someone of another race" (Wells & Olson, 2001, p. 230). A postdictor is a measurement taken after the lineup

selection, which may help explain the accuracy or inaccuracy of the participant's selection. Participants were Asian or White college students who witnessed a videotaped crime of a man rummaging through a woman's purse. Half of the videos showed a White suspect and half of the videos showed an Asian suspect. Participants then saw target-absent and target-present simultaneous photo lineups and were asked to identify the suspect. Participants were told, "as in a real police lineup, the criminal may or may not be in the lineup" (Smith et al., 2001, p. 158). The researchers found that confidence-accuracy, time, and judgment strategy are only useful in same-race conditions.

Another interesting experiment about the cross-race effect in eyewitness identifications comes from the paper, *Examining the Cross-Race Effect in Lineup Identification Using Caucasian and First Nations Samples*, by (Jackiw, Arbuthnott, Pfeifer, Marcon, & Meissner (2008). This study used college aged White and First Nations participants. Each of the participants was presented with six target faces for one race for three seconds each. Participants were then given a distractor task. After completing the distractor task, the participants were told they would see a series of simultaneous lineups and that they were to identify the six faces they saw at the beginning of the experiment.

The participants were presented with twelve lineups with six photographs each. They were asked to select a face they had seen earlier or to select "don't see face." They then repeated this part of the experiment with faces of the other race. Finally, participants were asked to complete a 13-item Social Experiences Questionnaire (SEQ) to assess the amount of contact they had with the other race. The results of this experiment indicate that participants were significantly more accurate when identifying faces of their own race. Interestingly, both White and First Nations participants showed a significantly more liberal response bias (more likely to make a selection from the lineup) for First Nations faces. The reason for this suggested in the discussion section of the paper is anthropological. Indeed the category First

Nations includes various different tribes such as the Cree and Blackfeet. Many of the First Nations participants reported being able to distinguish between these different tribes during the experiment.

A third study in the effect of own-race and cross-race identification comes from a field study done by Colin G. Tredoux at the University of Cape Town. Two hundred and one participants took part in this study from Cape Town and Bristol. Each of the participants (White or Black) was approached in a shopping center and asked to help find some lost jewelry. About two minutes later another experimenter would approach the participant, explain that they were studying memory, ask for consent, and, if given, ask the participant to attempt to identify the person who they had spoken to earlier. In some cases the earlier confederate was White and in some cases they were Black.

The participants were asked to identify this person from either a sequential or a simultaneous lineup. A sequential lineup is when the photos in a lineup are presented one at a time and with each photo the witness must indicate yes or no if that is the suspect. A simultaneous lineup is the traditional lineup style where the whole lineup is shown at once and the witness must pick out the suspect from the group. In general, the odds of participants making a correct identification were 1.50 times higher if the participant and the confederate were of the same race. Also when the participant and the confederate were of different races there were fewer accurate identifications than when they were of the same race for both the sequential and simultaneous lineups.

A paper by MacLin, MacLin, & Malpass (2001) looks at the cross-race effect for Hispanic and Black participants. This paper included two experiments. In the first experiment, 64 Hispanic college students were shown 60 male faces (30 Black and 30 Hispanic) from a database of digitized facial photos. Participants were randomly assigned to participate in one of four experimental conditions: (a) 0.5 second exposure, no delay; (b) 5

second exposure, no delay; (c) 0.5 second exposure, 30 minute delay; and (d) 5 second exposure, 30 minute delay. During the experiment, participants were asked to indicate if each face they saw was an old or a new face. Experiment one showed the cross-race effect $F(1, 60) = 30.09, p < .001$. In addition to the cross-race effect, the experiment showed that faces that were presented for 5 seconds were recognized better than faces that were presented for 0.5 seconds.

For experiment two the researchers looked at the effects of arousal, attention, delay and race when pairing faces with images from the International Affective Picture System, which is a database that contains photos of different affects. The procedure was the same as experiment one expect participants were asked to rate affect after every photo. Experiment two replicated evidence that supported the presence of the cross-race effect. In addition, identification for both Hispanic and Black faces was decreased as arousal increased. Therefore arousal can have a significant effect on recognition performance. The paper discusses the implications for increased arousal in terms of the criminal justice system. If arousal has an effect on ability of a witness to indentify, they it can be assumed that the high stress of a crime will automatically reduce the reliability of the eyewitness's identification.

The final paper is a meta-analysis of work that has been done on the impact of the cross-race effect in the criminal justice system (Wells & Olson, 2001). One experiment reviewed by this paper is Scheck, Neufeld, & Dwyer (2000) who indicate that in cases of misidentification, 35% were cases of White witnesses misidentifying Black suspects, whereas only 28% were cases of White victims misidentifying White suspects. This result is particularly important because most White victims are victimized by other White people.

This meta-analysis talks about the cognitive explanation for the cross-race effect. The cognitive viewpoint suggests that a person registers someone from their own race and someone from another race differently based on patterns and details of faces. One solution

this article proposes would be having expert testimony about how the cross-race effect can influence an eyewitness and their ability to correctly identify a suspect. Although this would be costly, it would allow the jury to be aware of the impact of the cross-race effect. However, a more cost-effective solution would be the suggested introduction of a blank lineup. A blank lineup would not contain the suspect at all. Therefore if the eyewitness were to select a person from that lineup, it would be clear that they were not correctly identifying a suspect but rather guessing based on comparisons.

These are the papers used to help inform the following experiment about the cross-race effect in eyewitness identification. I have drawn on many items from each of these experiments to help strengthen my own findings. The experiment explained below is designed to replicate and extend the previous work in this field. The purpose of this experiment is to test the hypothesis that when studying the cross-race effect for eyewitness identification there will be a significant difference in the number of incorrect identifications when comparing sequential, blank, and simultaneous lineups.

Method

Participants

This study will include 300 participants all of whom are male. Out of the 300 participants there will be a split of White ($N = 150$) and Black ($N = 150$) men. No women will be included in this experiment to remove the confounding effect that gender may have on eyewitness identification. Participants will self-report their health measured on a 4-point scale 1 (*poor*) to 4 (*excellent*). They will also be asked to fill out a survey after the experiment with questions from the SEQ meant to reveal how much exposure the participant has had with members of other ethnicities.

Design

This experiment will use a 2 x 2 x 3 between subjects design. There are three

independent variables: race of participant (Black or White), race of suspect (Black or White), and type of lineup (blank, sequential, or simultaneous). The dependent variable will be suspect identification (correct or incorrect).

Materials and Procedure

The materials for this experiment are critical to the accuracy of the data collection. There will be two different videos of a crime (mugging) being committed. In one video the suspect will be Black and in the other video the suspect will be White. In both videos the race of the victim will not be clear. There will also be three different types of lineups for presentation to participants: blank, sequential, and simultaneous. All will be represented through images on a computer screen and will all contain the same pool of faces.

See Figure 1 for a diagram of the procedure. The participants (half White and half Black) will be further split into two groups. Seventy-five of the Black participants will see the video in which the suspect is Black and 75 of the Black participants will see the video in which the suspect is White. For the White participants, 75 will see the video with the White suspect and 75 will see the video with the Black suspect. After every participant has viewed a video, they will be given a distractor test. For the purpose of this experiment, the distractor test will last for 15 minutes and will require the participant to recall via writing in detail a memory from their lives that occurred in the last three months.

After the distractor test the participants will see a lineup. Lineup type will be manipulated between participants. Every participant will see either a blank or a sequential or a simultaneous lineup. However, an even number of participants from each group will see each lineup type i.e. 25 of the White participants who saw a video with a Black suspect will see a blank lineup, 25 will see a sequential lineup, and 25 will see a simultaneous lineup. The participants will be asked to identify the suspect out of the lineup. Responses will be recorded.

After completing the identification, the participants will be asked to complete a form asking some general questions about their confidence in identification and how much they think they remember from the video. A second form will ask every participant questions about how much everyday contact he has with members of other ethnic groups. Finally, every participant will fill out a general form rating his health.

Expected Results

Figure 2 illustrates some of the expected experimental results. I predict that there will be no correlation between confidence and accuracy across all of the lineup types. Previous research has suggested that confidence is not a good predictor for eyewitness identification accuracy and it is likely that this experiment will replicate these findings. There is a predicted smaller correlation between a participants exposure to members of other ethnicities and correct/incorrect identification, however it is unlikely that these results will be significant.

It is likely that there will be the most incorrect identifications for cross-race trials (Black participant, White suspect or White participant, Black suspect) than for same race trials. This finding will replicate the previous research on the effect of the cross-race effect in terms of eyewitness misidentifications.

Also there may be significant results for amount accuracy across lineup types. There will be significantly more incorrect identifications for simultaneous lineups than for both blank and sequential lineups for both cross-race and same race trials. However, there will also likely be a larger difference in number of misidentifications for the cross-race trials than for the same race trials.

Discussion

I predict that the results from this experiment will replicate and extend the work that has been done on the cross-race effect in the number of eyewitness misidentifications. The

extension of this experiment will hopefully reveal that lineup type can work to exacerbate or minimize the cross-race effect for eyewitness identifications. If not, it will reveal that lineup type may not be a viable way to reduce the cross-race effect in eyewitness misidentifications.

Further research should be conducted to see if these results can be replicated when including female participants and if the results replicate across different racial and ethnic groups. Another important follow-up experiment would be to not use a DVD of a crime but a real-time simulation of a crime.

However, the impact of the cross-race effect on the legal justice system in the United States of America cannot be ignored. Hopefully this data will be used to reinforce the depth of this problem. This experiment will hopefully also point out the effect of different lineup types, which can have a huge impact on an eyewitness's odds of making an incorrect identification. Since our legal justice system relies heavily on simultaneous lineups these results may call into question the advisability of that system.

Ronald Cotton is by no means the only innocent man who has served time for a crime that he did not commit based on eyewitness misidentification. In cases such as this, the cross-race effect is undoubtedly a huge factor which increases the odds of an incorrect identification. Therefore, the prevalence of the cross-race effect is a huge issue that the criminal justice system must work to minimize. Perhaps the results from this experiment can suggest a starting point for these changes through lineup type.

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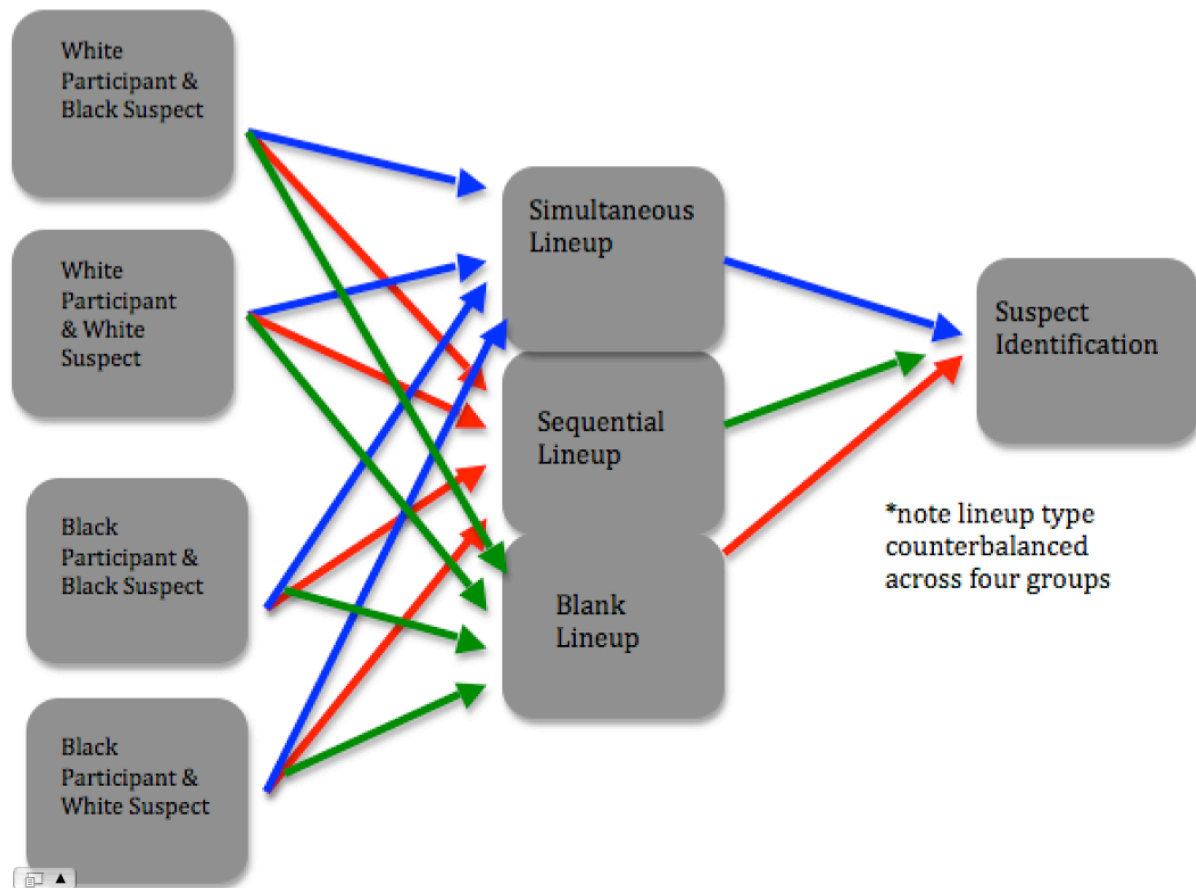


Figure 1. This figure is a diagram of the procedure for this experiment. The different colored arrows represent the different participants in each group who will receive a specific lineup. Green arrows are for the blank lineup, red arrows are for the sequential lineup, and blue arrows are for the simultaneous lineup.

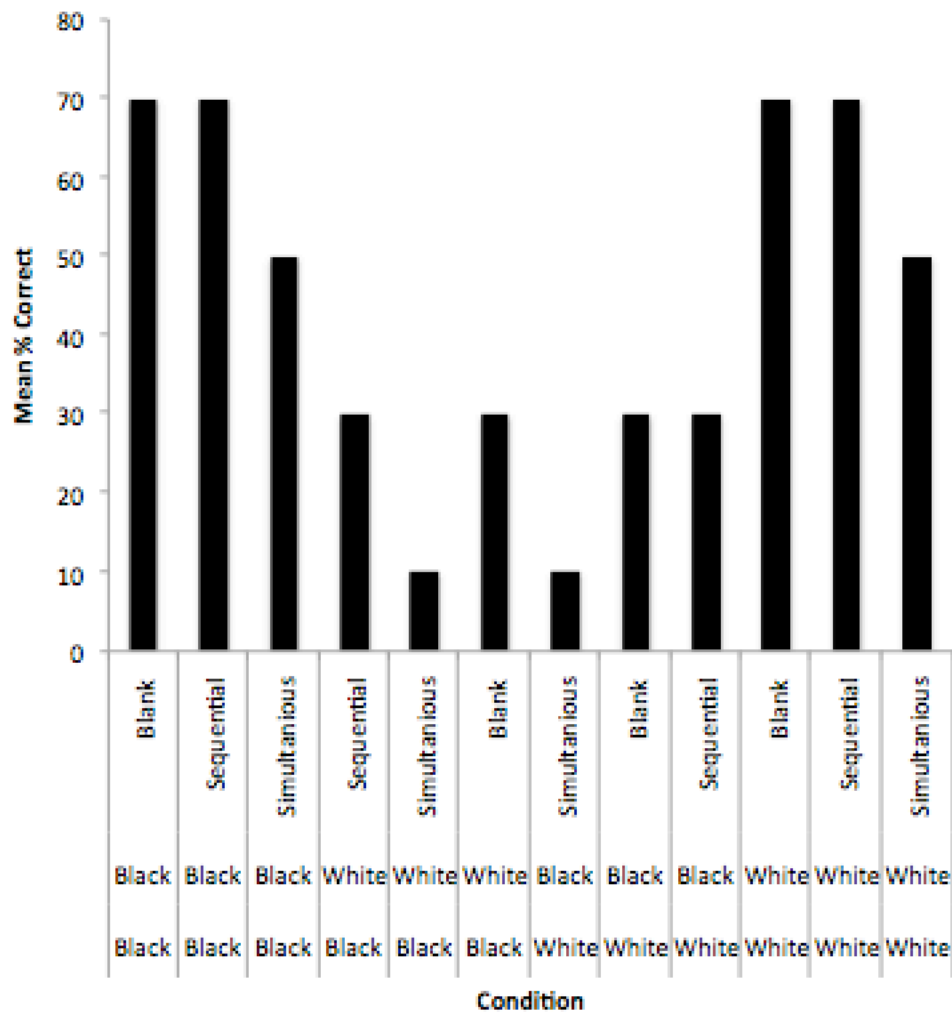


Figure 2. This figure represents the expected results for the experiment. The cross-race effect is present with same-race trials producing higher mean correct. Cross-race simultaneous lineups have the lowest mean correct for all the groups.

"On my honor I have neither given nor received unauthorized information regarding this work, I have followed and will continue to observe all regulations regarding it, and I am unaware of any violation of the Honor Code by others." Katherine Gomulkiewicz