



Racial Bias in Shot Lethality: Moving Beyond Reaction Time and Accuracy

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Introduction

Research has identified a robust pattern of racial bias in the decision to shoot on reaction time and error rates using a computer-based, first-person shooter task (FPS, e.g., Correll, Park, Judd, & Wittenbrink, 2002; Correll, Park, Judd, Wittenbrink, Sadler, & Keesee, 2007). Although studies using the FPS have provided critical insights into the effect that race can have on the decision to use lethal force, the paradigm is limited in two significant ways. First, the FPS is an impoverished simulation of the real-world shooting situation it seeks to emulate. Thus the FPS may not be able to accurately capture all of the processes at play in a real world decision to shoot. Second, it is limited in terms of the outcomes that can be assessed. Using the FPS, researchers can only investigate the decisions (shoot versus don't shoot) that participants make and the time it takes for them to do so. The current research improved upon the FPS on these two dimensions. Specifically, we employed a Firearms Training System (FATS, Meggitt Defense Systems) simulator to create a highly-immersive environment that also allowed us to assess additional dependent variables (e.g., trace of the gun, lethality of shots fired, time it takes to decide that a suspect is threatening, number of shots fired). In the present research, we investigated the lethality of shots fired at Black and White armed and unarmed targets.

Methods

Participants

Participants were 26 Caucasian undergraduates at The University of Chicago. The sample was comprised of both men and women. The average age was 19.2 ($s = .68$). The study spanned 1 hour and participants completed the experiment in exchange for monetary compensation.

Procedure

- **Firearms Training.** After providing written consent, participants were instructed how to aim and fire the weapon, a 9 mm Beretta handgun. The gun was boresighted for each participant until the participant reliably shot a cluster of three shots at the center of a crosshair.
- **Shoot/Don't Shoot Task.** Stimuli were adopted from previous studies investigating the decision to shoot (e.g., Correll, et al., 2002) and were projected onto a large white screen approximately 15 feet from participants. Participants were shown a random number of static scenes and periodically a male target would appear in the foreground. These images featured armed and unarmed Black and White male targets who appeared for 1000 ms. Participants were instructed to shoot all armed targets. 80 trials (i.e., 20 Black armed, 20 Black unarmed, 20 White armed, and 20 White unarmed) were administered.
- **Explicit Items.** After completing the shoot/don't shoot task, participants completed several demographic items and a battery of explicit attitude measures.

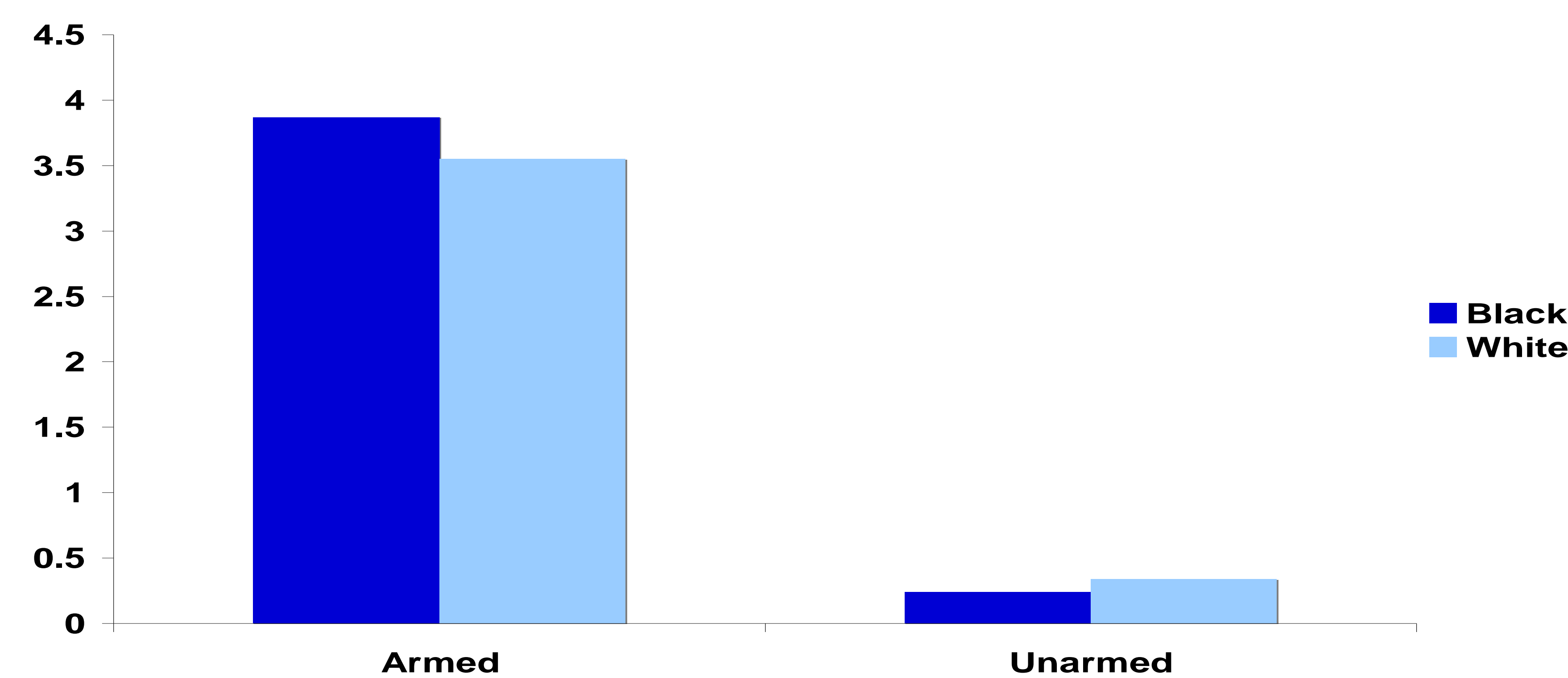
Coding

Coding was conducted by one individual. A second person reviewed these codes. Overall, there was very high agreement in coding. Discrepancies were reconciled between these two individuals.

Results

Mean-level shot lethality is reported in the figure below. Higher values correspond to a more lethal shot.

- **Race x Object.** Analysis failed to produce a significant Race x Object, $t(25) = 1.24, p = 0.23$. We therefore had no evidence to suggest that the lethality with which participants shot armed and unarmed targets depended on the race of the target.
- **Armed Targets.** Armed Black targets were shot significantly more lethally than armed White targets, $t(25) = 2.07, p < 0.05$.
- **Unarmed Targets.** Unarmed White targets were shot significantly more lethally than unarmed Black targets, $t(25) = -2.15, p < 0.05$.
- **Black Targets.** Armed Black targets were shot more lethally than unarmed Blacks, $t(25) = 20.05, p < 0.001$.
- **White Targets.** Armed White targets were shot more lethally than unarmed Whites, $t(25) = 16.68, p < 0.001$.



Shot Lethality by Target Type	<i>M</i>	<i>sd</i>
Armed Black	3.87**	0.90
Unarmed Black	0.24**	0.22
Armed White	3.55**	0.95
Unarmed White	0.34**	0.22

Conclusion

The primary goal of the current research was to explore a possible alternative index of racial bias in the decision to shoot. Specifically, past research has demonstrated that target race moderates the accuracy and speed with which people decide to make shoot/don't shoot decisions in response to armed and unarmed targets. The present study is the first to show that individuals are also racially biased in the lethality with which they shoot Black and White unarmed and armed suspects. Consistent with patterns observed in past research, participants in our study executed deadlier shots when armed targets were Black than White. Unexpectedly, our study also showed that people shot unarmed Whites more lethally than unarmed Blacks. While future research should test the reliability these effects, the current study indicates that simulated firearms technology can be an invaluable method for expanding our understanding of racial bias in the decision to shoot, as well as provide more realism to the extant research on this topic.

References

- Correll, J., Park, B., Judd, C. M., & Wittenbrink, B. (2002). The police officer's dilemma: Using ethnicity to disambiguate potentially threatening individuals. *Journal of Personality & Social Psychology*, 83, 1314–1329.
- Correll, J., Park, B., Judd, C. M., Wittenbrink, B., Sadler, M. S., & Keesee, T. (2007). Across the thin blue line: Police officers and racial bias in the decision to shoot. *Journal of Personality & Social Psychology*, 92, 1006–1023.

Sample Stimuli

