BIAS IN VIDEO EVIDENCE: IMPLICATIONS FOR POLICE BODY CAMERAS

Ashley Kalle
Georgina Hammock
Augusta University

Camera perspective bias demonstrates that videos of police interrogations focusing on the suspect yield higher ratings of guilt. This bias may generalize to police body camera videos that also focus on the suspect, particularly when observers with strong implicit racial attitudes watch a video with a racial minority suspect. We tested whether focusing on the citizen, police officer, or both influenced perception of a filmed police encounter. Compared to those who watched the officer or both individuals, those who focused on the citizen rated the citizen more negatively and the officer more positively. Participants' implicit racial attitudes significantly predicted judgments of the officer and citizen for all measures.

Keywords: implicit attitudes, camera perspective bias, implicit racial bias, police body cameras, video evidence

Recent cell phone videos of police officers shooting unarmed Black men and non-indictments of police officers for excessive force ignited protests to increase police officer accountability. Particularly, when Darren Wilson, a White police officer, was not indicted for shooting and killing Michael Brown, an unarmed Black teenager, many called for police officers to wear body cameras to provide definitive proof of what transpires in police encounters. After this case, there was great endorsement of police body cameras, including rare support from Republicans (79%) and Democrats (90%) as well as Whites (93%) and Blacks (93%) (N.Y. Times & CBS News, 2015; Pew Research Center, 2014). Subsequently in late 2014, former President Barack Obama implemented a $75 million program equipping police officers with body cameras. Since this program was passed, initial evidence demonstrates that police who wear body cameras use less force (Ariel, Farrar, & Sutherland, 2015; Jennings, Lynch, & Fridell, 2014; Ready & Young, 2015). In addition to reducing police use of force, proponents of police body cameras argue that video can provide an unambiguous, unbiased, and accurate record of police encounters in court cases. The belief that video provides objective evidence may lead to further bias (Granot, Balcetis, Feigenson, & Tyler, 2018). The following research literature about implicit racial bias and video perspective bias suggests that varying levels of bias and the camera angle may polarize interpretations of police encounters even when the events are videotaped.

Author note: Ashley Kalle, Augusta University, ashley.kalle@gmail.com; Georgina Hammock, Augusta University, ghammock@augusta.edu

Racial Bias

Aversive racism theory contends that most individuals are not explicitly racist, do not want to appear racist, and desire to be egalitarian (Dovidio & Gaertner, 1986). Aversive racism theory indicates that racial bias activates usually in ambiguous situations (Aberson & Ettlin, 2004; Levinson, 2010; Richardson & Goff, 2013; Ugwuegbu, 1979). In a meta-analysis of 31 articles assessing aversive racism, White participants treated Blacks worse than Whites in ambiguous situations, but this did not occur in unambiguous situations (Aberson & Ettlin, 2004). Bias occurs when situations are ambiguous, because individuals can recognize that they would appear racist when the information is straightforward and unambiguous. Detecting bias in oneself is easier in unambiguous situations, because less cognitive work is needed to create an impression from cues that provide consistent information (Fiske & Neuberg, 1990). When additional cognitive work is necessary while considering conflicting cues in ambiguous situations, individuals are more likely to simplify the cognitive task by relying on biases and stereotypes to make sense of conflicting information (Bodenhausen & Lichtenstein, 1987).

According to aversive racism theory, relying on explicit measures to study racial attitudes is inadequate because individuals may not report unfavorable attitudes. Implicit measures gauge attitudes that are often not reported due to social desirability or because the individual is unaware of them. Implicit attitudes are measured indirectly usually without the individual knowing the true purpose of the task such as the implicit association test (IAT) used in the current study (Fazio & Olson, 2003; Greenwald & Banaji, 1995; Greenwald, McGhee, & Schwartz, 1998). The current study's IAT measures attitudes toward Blacks relative to Whites to observe implicit racial bias or the internal association of individuals to racial prejudices associated with their group. For example, Black individuals are implicitly associated with being a criminal (Cormier, 2012; Eberhardt, Goff, Purdie, & Davies, 2004; Goff, Eberhardt, Williams, & Jackson, 2008; Hugenberg & Bodenhausen, 2003) being threatening (Mekawi & Bresin, 2015; Correll, Urland, & Ito, 2006; Phelps et al., 2000), and being guilty (Levinson, 2010). Such biases against Blacks pervade college students, members of the public, public defenders, prosecutors, jurors, police officers, and judges (Eberhardt et al., 2004; Mekawi & Bresin, 2015; Rachlinski, 2009). In line with aversive racism theory, having high implicit racial biases predicted more guilty judgments of Black defendants when evidence is ambiguous (Levinson, 2010). When all factors are the same except race, participants in jury simulations often convict Black defendants more often than White defendants (Ingriselli, 2015; Jones & Kaplan, 2003; Ugwuegbu, 1979). Despite this evidence demonstrating that racial biases influence interpretation of evidence, no studies to date have analyzed the influence of implicit racial attitudes on interpretation of video evidence (Ingriselli, 2015).

Although the effects of implicit racial bias on video evidence have not been studied, evidence suggests that biases and attitudes influence interpretation of video (Sherwin, Feigenson, & Spiesel, 2006). For example, after football fans from rival schools watched video of the same football game, each team believed that the referees had unfairly favored the other team (Hastorf & Cantrill, 1954). Another study found that interpreting protest-

ers in a video as obstructing, intimidating, and threatening depended on observers' prior cultural attitudes (Kahan, Hoffman, Braman, Evans, & Rachlinski, 2012). Prior attitudes also influence interpretation of videotaped police encounters (Granot, Balcetis, Schneider, & Tyler, 2014; Sommers, 2016). While watching the same video, participants with prior positive identification with the police punished the officer less for using force than participants with a low identification with police (Granot et al., 2014). Participants with a positive perception of police also interpreted more facts and made more judgments in an officer's favor than participants with more negative perception of police (Sommers, 2016). This research about the susceptibility of video interpretation to viewers' attitudes suggests that other types of attitudes like racial attitudes that have already been shown to influence other types of evidence may also influence video evidence.

Camera Perspective Bias

In addition to personal biases and attitudes, the camera perspective also impacts perceptions of suspects and police officers. In a series of experiments examining camera perspective in artificial and authentic confession tapes, Lassiter and Irvine (1986) discovered that camera angle altered perception of a suspect. When video focused exclusively on the suspect, participants rated the suspect as more guilty and punished the suspect more than when video either focused on the interrogator only or equally between the suspect and the integrator (Lassiter & Irvine, 1986; Lassiter, Ware, Ratcliff, & Irvine, 2009). Over a dozen studies have failed to eliminate the camera perspective bias in confession videos (Lassiter, Munhall, Berger, Weiland, Handley, & Geers 2005), suggesting that the camera perspective bias is robust and necessitates more research to determine whether the bias extends to other videos, including body camera videos of police encounters.

Illusory causation, or the tendency to attribute causality to the most salient stimulus, explains camera perspective bias, because participants rate the suspect as most guilty in the camera angle when the suspect is most salient (Lassiter, 2002; Lassiter, Geers, Munhall, Ploutz-Snyder, & Breitenbecher, 2002; McArthur, 1980). Illusory causation was identified when participants attributed greater causality to whichever person they focused on during a conversation (Taylor & Fiske, 1975). In contrast with videos from police dashboard cameras or cell phone video that display a more equal focus of the police and the suspect in an encounter, police body cameras focus primarily on the suspect in an encounter. The angle provided by police body cameras displays the suspect as most salient similar to the suspect only condition in studies of camera perspective bias. Thus, observers of police body camera videos may attribute greater causality and guilt to the salient suspect than if the video focused equally on the police officer and suspect. A Canadian study manipulated the camera angle of an artificial police encounter in which a police officer uses lethal force on a person having a mental health crisis, finding that only those with police experience differed in their perception of the intervention (Boivin, Gendron, Faubert, & Poulin, 2017). More research is necessary to determine whether the camera perspective bias extends to police encounter footage with different levels of force and to observers without police experience in the United States, where there has been considerably more tension between the police and the public.

The current study

As the implementation of police body cameras continues, video will increase in court cases, strengthening the need to identify potential biases of video viewers. Therefore, the current study examines whether camera perspective bias and racial bias influence the interpretation of a video depicting an ambiguous police encounter in which a White police officer uses force to arrest a Black suspect. Racial bias may influence the interpretation of video evidence because initial research demonstrates that video interpretation of police encounters is subject to viewers' prior attitudes toward police (Granot et al., 2014; Sommers, 2016). According to aversive racism theory, it is expected that viewers of ambiguous video evidence of an interracial police encounter will likely devolve to relying on their racial biases to help them decipher a confusing or uncertain situation. The IAT will be used to measure racial bias in the current study. Specifically, viewers who are biased against Black individuals according to the IAT will rate a Black suspect more negatively (Hypothesis 1) and a White police officer more favorably (Hypothesis 2). Despite the abundance of research supporting implicit racial biases influencing interpretation of evidence, no studies to date have analyzed the influence of implicit racial attitudes on interpretation of video evidence (Ingriselli, 2015).

In addition to racial bias, camera perspective bias may also influence the perception of a filmed police encounter. The camera perspective bias was found in confession tapes filmed from an angle including only the suspect, which resemble how footage from police body cameras primarily focuses on the suspect (Lassiter et al., 2009; Lassiter et al., 2004). Despite the pervasiveness of camera perspective bias on ratings of guilt in confession videos, only one study to date has examined whether the camera perspective bias generalizes to videos of police encounters (Boivin et al., 2017). Therefore, whether an observer focuses on the police officer or the suspect in an encounter may influence the interpretation of the encounter. The effects of camera perspective bias are tested in this study by comparing responses from participants who focused on the police officer, the citizen, or both the police officer and the citizen during an authentic video of an interracial police encounter involving ambiguous force. Like in previous research studying camera perspective bias in confession videos, it is expected that those focusing on the citizen in the video will rate the citizen more negatively (Hypothesis 3) and the police officer more positively (Hypothesis 4).

If both racial bias and camera perspective bias influence interpretation of a filmed video encounter, there may be interactions between the biases. When the focus is primarily on a minority suspect like in a police body camera video, camera perspective bias suggests that the suspect may be rated more guilty than in a more equal perspective that shows both the officer and the citizen. Therefore, if someone who has a strong racial bias against Black individuals focuses on a Black suspect in a filmed police encounter, they may perceive the suspect the most negatively (Hypothesis 5) compared to those viewing an encounter from another angle with low bias. For the police officer, if a viewer of a body camera video can only see the actions of a Black suspect, a viewer may unknowingly "fill in the blanks" about a White officer's behavior using their racial biases. Therefore, it is expected that those who focus on the citizen in the video with stronger racial biases favoring White

individuals over Black individuals on the IAT will perceive the White police officer most positively (Hypothesis 6) compared to those viewing an encounter from another angle with low bias.

Like other research examining the perception of filmed police encounters (Granot et al., 2014; Sommers, 2016), the extent to which these biases influence interpretation of a filmed police encounter is examined by four types of viewer judgments. These different types of judgments reflect the types of decisions that jury members must make during a trial. The easiest type of judgment for viewers to make are factual judgments, because they ask viewers to simply evaluate the facts and actions of what occurred in the encounter (ex: Did the officer use a weapon?). More difficult judgments are those that are subjective or judgments that require evaluation (ex: Was the officer's use of force reasonable?). As described in a meta-analysis by Devine and Caughlin (2014), individual characteristics of the defendant can also interfere with juror decision-making (Devine & Caughlin, 2014; Korva, Porter, O'Connor, Shaw, & Brinke, 2013). Thus, the current study also examines whether implicit racial bias or camera perspective bias influences perception of the police officer or citizen's character. Ultimately, these smaller judgments will help jurors make the most important decision of whether the accused is guilty or innocent. These dependent variables will be used to examine the effects of camera perspective and racial attitudes on perception of a White police officer and a Black citizen in a video depicting an ambiguous police encounter involving force. It is hypothesized that

1. Those with stronger racial attitudes favoring White individuals on the IAT will rate the Black citizen less favorably than those with weaker implicit racial attitudes.

2. Those with stronger racial attitudes favoring White individuals on the IAT will rate the White police officer more favorably than those with weaker implicit racial attitudes.

3. Participants focusing on the citizen only will rate the citizen more negatively than participants focusing on the police officer or both individuals.

4. Participants focusing on the citizen only will rate police officer more positively than participants focusing on the police officer or both individuals.

5. There will be a significant interaction between video focus and implicit racial attitudes on ratings of the citizen. Specifically, those with strong implicit racial attitudes favoring White individuals who focus on the Black citizen will rate the citizen most negatively.

6. There will be a significant interaction between video focus and implicit racial attitudes on ratings of the police officer. Specifically, those with strong implicit racial attitudes favoring White individuals who focus on the Black citizen will rate the White officer most positively.

METHOD

Participants

To determine the number of participants, a moderate effect size (f = .24) from a meta-analysis about implicit racial bias was used for the power analysis (Greenwald, Poehlman, Uhlmann, & Banaji, 2009). A power analysis using G*Power software for an omnibus multiple regression with five predictors indicated that 89 participants were needed to detect a moderate effect size when power = .95 (Faul, Erdfelder, Buchner, & Lang, 2009). There were 167 participants recruited for the study and 103 were included in the analyses for reasons explained in the video focus section below. The present study included 103 undergraduate students (M age = 22.29; SD = 6.57) from a southeastern university in the United States who identified as mostly female (n = 78, 75.7%), White (n = 47, 45.6 %), and Democrat (n = 65, 63.1%).

Procedure

Participants completed this Qualtrics-based study in an on-campus computer lab in early 2017. After providing informed consent, participants identified their demographics and read instructions assigning them to watch the citizen, police officer, or both individuals while watching a video of a police encounter. After watching the video, the order of whether participants answered questions about the police officer or citizen first was randomized. Questions about the citizen included their factual judgments, subjective judgments, and character. The questions about the officer included these questions and additional questions about the officer's guilt. The last questions about the video asked who the participant focused on during the video and if they had watched the video before the study. After answering these questions, the participants completed the IAT and underwent debriefing.

Materials

Video

According to aversive racism theory, racial bias is primarily activated in ambiguous situations (Aberson & Ettlin, 2004; Levinson, 2010; Richardson & Goff, 2013; Ugwuegbu, 1979); therefore, a video displaying an interracial police encounter under ambiguous circumstances was selected. Participants watched a muted 35-s video depicting a police–civilian physical altercation, where the justifiability of the officer's actions was rated as ambiguous in a prior study (Granot et al., 2014). As described in Granot's 2014 study, the video presents a White male police officer speaking to a Black male citizen in a subway stairwell. The Black citizen makes an ambiguous movement toward the officer and a White police officer wrestles him to the ground.

Factual and Subjective Judgments

The questions assessing participants' judgments about the content of the video were modified from Sommers (2016). The participants rated their agreement with factual statements about the police officer and the citizen from the video. The scale ranged from 1 (strongly disagree) to 7 (strongly agree). Some items were reverse coded, so that higher numbers indicated more positive views toward police and the citizen. Some example statements included "The officer hit the citizen" and "The citizen initiated physical contact."

Participants also provided their subjective judgments about the police officer and citizen's actions using modified questions from Sommers (2016). Using the same response options as the factual judgments, participants rated their agreement with statements like "The citizen was being arrested for a severe crime" and "The officer violated the law." The items were summed together to create a summary score for the citizen factual judgments (n = 7), citizen subjective judgments (n = 11), police factual judgments (n = 6), and police subjective judgments (n = 7). The scales had fair (α = .71) to good (α = .89) internal consistency in adult samples in other studies (Sommers, 2016). In the present study, the factual judgments about the citizen (α = .78) and police (α = .76) along with the subjective judgments about the citizen (α = .88) and the police (α = .92) were reliable (see Appendix for complete list of questions).

Character

Participants rated the character of the officer and the citizen on a 13-item semantic differential scale created by the authors. For example, "The citizen was…." (1-Rude to 5-Courteous), (1-Mean to 5-Compassionate), (1-Uncooperative to 5-Cooperative). A higher summary score indicated a positive character perception of the police officer/citizen. Questions about the citizen's character (α = .91) and the police officer's character (α = .93) were reliable.

Guilt

To assess whether racial bias and camera perspective bias could influence jury members' decisions of guilt, the participants rated the likelihood they would require the officer in the video to be punished (1-Extremely unlikely to 7-Extremely likely) and the likelihood they would convict the officer of using excessive force as a jury member (1-Extremely unlikely to 7-Extremely likely). These items were summed together to create a summary score for officer guilt with higher numbers reflecting a greater endorsement of guilt. These questions evaluating guilt were adapted from Granot et al., (2014), where participants were tasked with assigning legal punishment to a police officer after watching a video of an altercation between a police officer and a civilian.

Video Focus

Prior to viewing the video, participants read instructions randomly assigning them to focus on the citizen (n = 55), police officer (n = 55), or the interaction between the police officer and the citizen (n = 57). After watching the video, participants were asked who they focused on the most during the video. Most participants reported focusing on the interaction between the police officer and the citizen (n = 111, 66.5%), followed by the citizen (n = 29, 17.4%), and the police officer (n = 24, 14.4%). Many participants (n = 80; 47.9%) did not report focusing on the individual(s) they were assigned to focus on. Out of the 57 participants who were randomly assigned to focus on both individuals, seven (12.3%) did not report focusing on both individuals. These seven participants were removed from the analyses, leaving 50 participants in the analysis who were randomly assigned to the both condition and reported focusing on both individuals. Out of the 110 participants that were assigned to focus on the officer or citizen, only 16 participants in the officer condition (29.1%) and 21 participants in the citizen condition (38.2%) identified that they focused

on the person they were assigned to focus on. Due to potential problems with power given the low number of participants in the police and citizen conditions, other participants who were not randomly assigned to the officer or citizen condition but reported focusing on the citizen (n = 8) or the officer (n = 8) were added to the citizen (n = 29) and officer (n = 24) groups for the analyses. Therefore, only a small majority of participants were randomly assigned to the citizen (72.4%) or police officer (66.7%) groups, which is a limitation addressed in the discussion section. These new groups were used to determine if there were differences in judgments of the officer and citizen between those who focused on the citizen (n = 29), officer (n = 24), or both people (n = 50).

IAT

A Qualtrics-based IAT adapted from Jordan LaBouff (2013) assessed implicit racial attitudes. Participants read instructions describing the task and completed an unscored practice block, where they associated positive words with flowers and negative words with insects. The race IAT was the test of interest that was scored. Like the standard IAT, participants completed two blocks (Greenwald et al., 1998). The congruent block asked participants to match positive words with Whites and negative words with Blacks, while the incongruent block asked participants to match negative words with Whites and positive words with Blacks. Some examples of the negative words included evil and hatred, while some of the positive words included love and joy. The scoring of the Qualtrics IAT compared the number of correct responses with incorrect responses. If a participant did not answer an item, it was counted as an incorrect response (Lemm, Lane, Sattler, Khan, & Nosek, 2008). Higher numbers reflected greater preference for Whites over Blacks.

The Qualtrics IAT has similar psychometric properties as the typical IAT: for undergraduate samples, both IATs have similar test retest reliability, mean effects, and both load onto a single latent factor, suggesting that they both measure the same construct (Greenwald et al., 2009; Lemm et al., 2008; Vargas, Sekaquaptewa, & von Hippel, 2006). Consistent with previous research with the standard IAT on mixed race samples (Nosek et al., 2007), about 70% of participants showed an implicit preference for White individuals over Black individuals (M = 1.30; SD = 6.69). As expected, White participants showed the greatest preference for Whites (M = 3.94; SD = 6.33).

RESULTS

Statistical Analyses

Seven two-step hierarchical multiple regressions were used to test the main effects of and interactions between implicit racial attitudes and video focus for the outcomes of factual, subjective, character, and guilt judgments for both the citizen and police officer. Preliminary analyses found no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity (Pallant, 2013). In all regressions, Step 1 tested for the main effects of video focus and IAT. After controlling for the main effects in Step 1, Step 2 tested for the interaction between the IAT and reported video focus. Step 2 was only interpreted when the interaction significantly increased the amount of variance accounted for in the model.

Following Aiken, West, and Reno's (1991) guidelines for categorical variables in multiple regression, the video focus categorical variable with three levels (citizen, police, and both) was recoded into separate, dichotomous variables. The citizen and police dichotomous variables were entered into the model with the both focus used as the constant. To test for the interaction, the IAT was mean-centered and multiplied by each dichotomous focus condition (Aiken et al., 1991). Descriptive statistics for the three focus conditions for each measure are reported in Table 1. All dependent variables were significantly correlated: citizen factual judgments, subjective judgments, character, and police guilt were positively correlated with each other and negatively correlated with measures rating police factual judgments, subjective judgments, and character (Table 2).

Table 1: Descriptive Statistics

	Overall		Citizen focus		Police focus		Both focus	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Citizen factual	40.10	6.17	37.93	5.21	42.35	5.69	40.26	6.57
Citizen subjective	49.91	12.29	46.48	10.65	50.79	13.91	51.61	12.20
Citizen character	35.44	7.26	34.45	7.52	36.27	8.86	35.67	6.35
Police factual	22.15	7.44	24.10	5.97	20.13	5.16	21.98	8.92
Police subjective	25.13	11.53	29.11	9.92	20.50	9.48	25.13	12.63
Police character	35.18	9.32	38.14	8.95	32.42	8.77	34.77	9.49
Police guilt	8.43	3.94	7.21	3.53	9.46	3.33	8.65	4.31

Note: The overall sample (N = 103) includes the citizen focus (n = 29), the police focus (n = 24), and the both focus (n = 50).

Table 2: Pearson Correlation Matrix among Predictors

Variable	1	2	3	4	5	6	7
1. Citizen factual judgments		.74*	.58*	-.60*	-.66*	-.67*	.62*
2. Citizen subjective judgments			.79*	-.54*	-.63*	-.72*	.67*
3. Citizen character				-.49*	-.53*	-.65*	.58*
4. Police factual judgments					.76*	.70*	-.64*
5. Police subjective judgments						.82*	-.84*
6. Police character							-.82*
7. Police guilt							

Note: *p < .01

Hypothesis 1: IAT Influences Citizen Perception

Hypothesis 1 proposes that participants with stronger implicit racial attitudes favoring White individuals will rate the Black citizen less favorably on measures of factual judgments (Table 3), subjective judgments (Table 4), and character (Table 5) compared to those with weaker implicit racial attitudes. The IAT significantly predicted factual judg-

ments (B = -1.26, p = .05, sr^2 = .04), subjective judgments (B = -3.28, p = .01, sr^2 = .07), and character judgments (B = -1.61, p = .04, sr^2 = .05) for the citizen. These findings reveal that those with implicit prejudice toward Black individuals were less likely to endorse facts in the video in favor of the Black citizen, made negative subjective assumptions about the Black citizen's actions, and identified the citizen as having less positive character traits. In support of Hypothesis 1, the IAT significantly influenced perception of the citizen in the video as measured by factual judgments, subjective judgments, and character.

Table 3: Predictors of Factual Judgments of the Citizen

		B	*β*	*sr²*
Step 1				
	Constant	40.87		
	Citizen focus	-3.29*	-.25	.05
	Police focus	1.44	.10	.01
	IAT	-1.26*	-.20	.04
	R^2	.11*		
Step 2				
	Constant	40.92		
	Citizen focus	-3.34	-.25	.05
	Police focus	1.42	.10	.01
	IAT	-1.70	-.27	.03
	Citizen focus x IAT	.43	.04	.00
	Police focus x IAT	1.20	.10	.01
	R^2	.11		
	ΔR^2	.01		

Note: *p < .05.

Table 4: Predictors of Subjective Judgments of the Citizen

		B	*β*	*sr²*
Step 1				
	Constant	52.82		
	Citizen focus	-6.87*	-.26	.06
	Police focus	-2.05	-.07	.00
	IAT	-3.28*	-.27	.07
	R^2	.12*		
Step 2				
	Constant	52.76		
	Citizen focus	-6.01	-.26	.06
	Police focus	-1.99	-.07	.00
	IAT	-2.55	-.21	.02
	Citizen focus x IAT	-1.31	-.06	.00
	Police focus x IAT	-1.35	-.05	.00
	R^2	.12		
	ΔR^2	.00		

Note: *p < .05.

Table 5: Predictors of Character Judgments of the Citizen

		B	*β*	*sr²*
Step 1				
	Constant	36.03		
	Citizen focus	-1.85	-.12	.01
	Police focus	.06	.00	.00
	IAT	-1.61*	-.22	.05
	R^2	.06		
Step 2				
	Constant	35.88		
	Citizen focus	-1.81	-.11	.01
	Police focus	.05	.00	.00
	IAT	-.56	-.08	.00
	Citizen focus x IAT	-1.76	-.13	.01
	Police focus x IAT	-2.48	-.15	.02
	R^2	.06		
	ΔR^2	.02		

Note: *p < .05.

Hypothesis 2: IAT Influences Police Perception

Hypothesis 2 predicts that those with higher IAT scores favoring White individuals over Black individuals will rate the White police officer more favorably on measures of factual (Table 6), subjective (Table 7), character (Table 8), and guilt (Table 9) judgments compared to those with lower IAT scores. As hypothesized, the IAT significantly predicted factual judgments (B = 1.89, p = .01, sr^2 = .07), subjective judgments (B = 3.02, p = .01, sr^2 = .07), character judgments (B = 2.49, p = .01, sr^2 = .07), and ratings of whether the officer was guilty of using excessive force (B = -1.26, p = .01, sr^2 = .04). These results demonstrate that those favoring White individuals over Black individuals on the IAT were more likely to endorse facts in the video in favor of the police officer, interpret the officer's behaviors as appropriate and reasonable, consider the police officer to have positive character traits, and determine that the police officer was not guilty of using excessive force. Hypothesis 2 was supported for all judgment types.

Table 6: Predictors of Factual Judgments of the Police Officer

		B	*β*	*sr²*
Step 1				
	Constant	21.33		
	Citizen focus	3.08	.19	.03
	Police focus	-1.19	-.67	.00
	IAT	1.89*	2.62	.07
	R^2	.11*		
Step 2				
	Constant	21.18		
	Citizen focus	3.15	1.85	.03
	Police focus	-1.06	-.59	.00
	IAT	2.86	2.70	.07
	Citizen focus x IAT	-1.45	-.87	.01
	Police focus x IAT	-2.31	-1.26	.02
	R^2	.11		
	ΔR^2	.02		

Note: *p < .05.

Table 7: Predictors of Subjective Judgments of the Police Officer

		B	*β*	*sr²*
Step 1				
	Constant	24.14		
	Citizen focus	5.50*	.22	.04
	Police focus	-3.62	-.14	.02
	IAT	3.02*	.27	.07
	R^2	.15*		
Step 2				
	Constant	24.04		
	Citizen focus	5.57	.22	.04
	Police focus	-3.53	-.13	.03
	IAT	3.75	.33	.05
	Citizen focus x IAT	-.89	-.04	.00
	Police focus x IAT	-1.97	-.08	.00
	R^2	.15		
	ΔR^2	.00		

Note: *p < .05.

Table 8: Predictors of Character Judgments of the Police Officer

		B	*β*	*sr²*
Step 1				
	Constant	34.03		
	Citizen focus	4.51*	.22	.05
	Police focus	-1.60	-.07	.00
	IAT	2.49*	.27	.07
	R^2	.13*		
Step 2				
	Constant	33.94		
	Citizen focus	4.55	.22	.05
	Police focus	-1.52	-.07	.00
	IAT	3.19	.34	.05
	Citizen focus x IAT	-1.01	-.06	.00
	Police focus x IAT	-1.73	-.09	.01
	R^2	.13		
	ΔR^2	.01		

Note: *p < .05.

Table 9: Predictors of Guilt Judgments of the Police Officer

		B	*β*	*sr²*
Step 1				
	Constant	40.87		
	Citizen focus	-3.29*	-.25	.05
	Police focus	1.44	.10	.01
	IAT	-1.26*	-20	.04
	R^2	.11*		
Step 2				
	Constant	40.92		
	Citizen focus	-3.34	-.25	.05
	Police focus	1.42	.10	.01
	IAT	-1.70	-.27	.03
	Citizen focus x IAT	.43	.04	.00
	Police focus x IAT	1.20	.10	.01
	R^2	.11		
	ΔR^2	.01		

Note: *p < .05.

Hypothesis 3: Video Focus Influences Citizen Perception

Hypothesis 3 purports that participants focusing on the citizen only during the filmed police encounter will rate the citizen more negatively than participants focusing on the officer only or both individuals. Citizen focus was a significant predictor of factual judgments (B = -3.29, p = .03, sr^2 = .05) (Table 3) and subjective judgments (B = -6.87, p = .02, sr^2 = .06) of the citizen (Table 4). Compared to those in the police or both condition, those who focused on the citizen made more negative evaluations about the citizen's actions. Citizen focus was not statistically significant for character judgments of the citizen (B = -1.85, p = .29, sr^2 = .01), meaning that participants who focused on the citizen, police, or both people while viewing the video similarly judged the citizen's character (Table 5). Hypothesis 3 was supported for factual and subjective judgments of the citizen.

Hypothesis 4: Video Focus Influences Police Perception

Hypothesis 4 predicts that participants focusing on the citizen only during the video will make more favorable factual (Table 6), subjective (Table 7), character (Table 8), and guilt (Table 9) judgements of the police officer than participants focusing on the officer only or both individuals. Citizen focus was a significant predictor of subjective judgments about whether the police officer's actions were appropriate (B = 5.50, p = .04, sr^2 = .04), the officer's character (B = 4.51, p = .04, sr^2 = .05), and judgments of whether the officer was guilty of using excessive force (B = -3.29, p = .03, sr^2 = .04). Citizen focus was not a significant predictor of factual judgments of the police officer's actions (B = 3.08, p = .07, sr^2 = .03), demonstrating that video focus influenced the more difficult subjective judgments of the police officer's actions in the video, but the perspective did not influence judgments

of whether certain actions were present or absent in the video. Hypothesis 4 was supported for subjective, character, and guilt judgments of the police officer.

Hypothesis 5: Citizen Perception Interaction

Hypothesis 5 proposes a significant interaction between video focus and IAT scores: those with strong implicit racial attitudes favoring White individuals on the IAT who focus on the Black citizen will rate the citizen most negatively on measures of factual, subjective, and character judgments. There were no significant interactions between IAT and video focus for any measure, demonstrating that IAT scores are similar within each focus for judgments about the citizen. Because there were no significant differences between those with higher IAT scores in the citizen focus for judgments of the citizen, Hypothesis 5 was not supported.

Hypothesis 6: Police Perception Interaction

Hypothesis 6 predicts a significant interaction between IAT and video focus on judgments of the police officer. Specifically, individuals with strong racial attitudes favoring White individuals on the IAT who focus on the Black citizen will rate the officer most negatively. There were no statistically significant interactions between the IAT and video focus on any police judgment measure, suggesting that IAT scores are similar within each focus for judgments about the police officer. Because there were no statistically significant differences between those with higher IAT scores in the citizen focus on judgments of the police officer, Hypothesis 6 was not supported.

DISCUSSION

The results demonstrate that seemingly objective video of a police encounter is susceptible to biased interpretation. While watching the same video, different conclusions were drawn about what transpired, who was culpable, the character of the individuals involved, and the level of force used based on observers' focus and their racial attitudes. Compared to those with low implicit racial attitudes on the IAT, individuals with stronger racial attitudes favoring Whites over Blacks rated the Black citizen more negatively (Hypothesis 1) and the White police officer more positively (Hypothesis 2) across all measures. As predicted by aversive racism theory, this finding exemplifies the influence of implicit racial attitudes on perceptions of seemingly objective video. This finding extends previous literature on the pervasiveness of racial bias by adding that racial attitudes can bias interpretation of video evidence. Therefore, the interpretation of video evidence in trials may be subject to the jurors' implicit racial attitudes that include linking Black individuals with many negatives characteristics such as being threatening, criminal, and guilty (Cormier, 2012; Correll et al., 2006; Levinson, 2010; Mekawi & Bresin, 2015). As previously supported in jury research, this result implicates that de-biasing instructions should be given to jury members prior to trial to reduce the effects of racial attitudes that may bias perception of evidence (Ingriselli, 2015).

Hypothesis 3 and Hypothesis 4 examined whether participants focusing on the citizen, officer, or both people influenced interpretation of the police encounter footage.

Hypothesis 3 predicted that participants who focused on the citizen would rate the citizen more negatively than those who focused on the police officer or both. Citizen focus was a significant predictor for citizen factual and subjective judgments but not for character judgments. Participants in the citizen focus rated the citizen's character similarly to participants in the police and both focuses. Participants who focused on the citizen rated the citizen's actions more negatively than those in the police or both focus conditions. This result aligns with the camera perspective bias, which maintains that a video angle focusing on a suspect often increases negative perceptions of the suspect (Lassiter et al., 2009). As described in the limitations section, having participants focus on the individuals instead of testing various camera angles produced by police body cameras, cell phones, and surveillance cameras reduced the role of illusory causation that underlies the camera perspective bias in filmed confession tapes (Lassiter et al., 2009). Therefore, before accepting impact of camera perspective bias for police body camera video, further evidence using footage from different angles is needed.

As predicted in Hypothesis 4, participants who reported focusing on the citizen rated the police officer more positively in their subjective judgments of the officer, the officer's character, and the officer's guilt than those who reported focusing on the police officer or both individuals. Since the citizen focus best represented the angle in police body camera videos, this result suggests that police body cameras may not help to indict and convict police officers for excessive force, particularly when the video evidence is ambiguous. However, this effect was not found for factual judgments favoring the police. These findings taken together suggest that individuals make similar basic judgments when little interpretation about the police officer's actions is needed, regardless of their focus during the encounter. When subjective judgements are made, focus away from the officer or focusing on the entire encounter results in more positive views of the officer. Having similar factual judgments and different subjective judgments suggests that observers from different angles can similarly recognize clear actions in the video but become biased in their interpretation when forced to make judgments about unclear actions. Therefore, police body camera footage may help prevent parties from blatantly lying about what transpired in the encounter, but video evidence will still be susceptible to biased interpretation when more difficult, subjective judgments must be made about whether behavior was appropriate, excessively violent, or culpable. As described in more detail in the limitations section below, further evidence using random assignment, police body camera video, eye-tracking, and a representative sample is needed before accepting these possible implications of video focus on interpretation of video evidence.

Contrary to the hypotheses, there was no significant interaction between racial attitudes and video focus for perception of the citizen (Hypothesis 5) or the police officer (Hypothesis 6) for any measure of judgment. Those with high implicit racial attitudes favoring Whites over Blacks on the IAT rated the White police officer more positively and the Black citizen more negatively regardless of the participants' focus for all measures. As seen with other forms of evidence, unchecked implicit racial biases will influence jury

members to negatively interpret video evidence against minority defendants compared to White defendants for similar crimes (Ingriselli, 2015; Jones, 2003; Ugwuegbu, 1979).

Limitations and Directions for Future Research

Some limitations and directions for future research should be considered when interpreting the results including the video focus measurement, the sample, and the artificiality of the experimental setting. Participants did not report focusing on the person they were assigned to focus on, which lead to a disproportionately small number of participants in the citizen (n = 29) and police condition (n = 24) compared to the both condition (n = 50). Due to problems with power, significant or non-significant results associated with the focus condition should be interpreted with caution. Further, because focus was determined partially by self-report instead of fully by random assignment, there may be inherent differences in people who watched the police officer, citizen, or both individuals that may have caused the differences between groups. Additionally, participants may not have reliably remembered who they focused on the most during the video. To account for these limitations, future research could assign participants to watch an individual and check whether participants know who they are assigned to focus on before watching the video instead of afterward. Using eye tracking equipment will provide a more accurate method to check who the participants view in the encounter.

Another limitation was assigning participants' focus in a video depicting the officer and citizen as similarly salient from a neutral angle rather than manipulating the video angle. Using a video with a neutral angle could not account for the potential role of illusory causation in police body camera footage when the citizen is more salient. Therefore, filming an artificial police encounter from the angle of a police body camera and from the angle that includes both the officer and the suspect may be necessary to test the effects of camera perspective bias as demonstrated in Boivin et al., (2017). Lastly, the study sample included a mostly female, student population, which limits the generalizability of the results to other populations. Although more research is needed to study people from other demographics, these biases may influence a young female's legal decision making as a potential jury member. Compared to younger adults, older adults tend to have more difficulty in inhibiting their automatic prejudices (Radvansky, Copeland, & von Hippel, 2010; Stewart, von Hippel, & Radvansky, 2009), suggesting that an older jury member may also be susceptible to racial bias when making legal decisions about a case with a filmed interracial police encounter.

Future research must also use different videos to determine whether the effects of implicit racial attitudes and camera perspective bias generalize across different police encounters that include various types of environments, crimes, suspects, and police officers that may induce different biases. As more police body camera footage becomes more readily available, such investigations can establish the extent the camera perspective bias manifests in police body camera video. Another avenue for future research is to add more aspects of being on a jury. For example, the current study did not include a combination of the video footage with other types of evidence, an actual defendant, and deliberation with other jury members. These differences from actual criminal trials may limit the generalizability

of the results to authentic trials but can be addressed in future investigations. However, these concerns are somewhat diminished by previous studies that have demonstrated the pervasiveness of implicit racial bias and camera perspective bias in experimental as well as authentic settings (Ingriselli, 2015; Lassiter, et al., 2009; Pager, 2003).

CONCLUSION

In the legal system, citizens are called upon to make objective decisions based on the evidence provided. Despite the perception that video evidence is objective and more credible than other types of evidence, interpretation of video evidence may be subject to observers' own racial biases. The effects of viewers' implicit racial attitudes paired with police body camera video obscuring the police officer may reduce the likelihood that jury members can make objective, unbiased decisions about the actions of the police officer and citizen in ambiguous encounters.

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APPENDIX

Measures Rating the Citizen and Officer

Citizen Factual Judgments

The citizen displayed or used weapons (Reverse)

The citizen hit the officer (Reverse)

The citizen attacked the officer (Reverse)

The citizen made the first aggressive move (Reverse)

The citizen initiated physical contact (Reverse)

The citizen injured the officer (Reverse)

The citizen tried to hide something from the officer (Reverse)

Citizen Subjective Judgments

The citizen complied with the officer's requests

The citizen was actively resisting or attempting to evade arrest (Reverse)

The citizen posed an immediate threat to the safety of the officer (Reverse)

The citizen posed an immediate threat to the safety of others (Reverse)

The citizen was being arrested for a severe crime (Reverse)

There is a high likelihood that the citizen was armed during the encounter (Reverse)

The citizen attempted to defuse the situation

The citizen behaved appropriately toward the officer

It would be appropriate for the citizen to sue the police

The citizen violated the law (Reverse)

The citizen should be punished in some way (Reverse)

Citizen Character

COWARDLY	1	2	3	4	5	COURAGEOUS
UNETHICAL	1	2	3	4	5	ETHICAL
IRRATIONAL	1	2	3	4	5	RATIONAL
RUDE	1	2	3	4	5	COURTEOUS
DECEITFUL	1	2	3	4	5	TRUSTWORTHY
POOR	1	2	3	4	5	RICH
UNINTELLIGENT	1	2	3	4	5	INTELLIGENT
CONCEITED	1	2	3	4	5	HUMBLE

IMPULSIVE	1	2	3	4	5	CONTROLLED
MEAN	1	2	3	4	5	COMPASSIONATE
UNCOOPERATIVE	1	2	3	4	5	COOPERATIVE
A BAD PERSON	1	2	3	4	5	A GOOD PERSON

Police Factual Judgments

The officer displayed or used weapons (Reverse)

The officer hit the citizen (Reverse)

The officer attacked the citizen (Reverse)

The officer made the first aggressive move (Reverse)

The officer initiated physical contact (Reverse)

The officer injured the citizen (Reverse)

Police Subjective Judgments

The officer tried to limit the amount of force he used

The officer attempted to defuse the situation

The officer behaved appropriately toward the citizen

The officer violated the law (Reverse)

The officer should be punished in some way (Reverse)

The officer's use of force was excessively violent (Reverse)

The officer's use of force was reasonable

Police Character

COWARDLY	1	2	3	4	5	COURAGEOUS
UNETHICAL	1	2	3	4	5	ETHICAL
IRRATIONAL	1	2	3	4	5	RATIONAL
RACIST	1	2	3	4	5	UNBIASED
RUDE	1	2	3	4	5	COURTEOUS
DECEITFUL	1	2	3	4	5	TRUSTWORTHY
POOR	1	2	3	4	5	RICH
UNINTELLIGENT	1	2	3	4	5	INTELLIGENT
CONCEITED	1	2	3	4	5	HUMBLE
IMPULSIVE	1	2	3	4	5	CONTROLLED

MEAN	1	2	3	4	5	COMPASSIONATE
UNCOOPERATIVE	1	2	3	4	5	COOPERATIVE
A BAD PERSON	1	2	3	4	5	A GOOD PERSON

Guilt

As a juror in a court case, indicate the likelihood you would…

convict the police officer of using excessive force

require the police officer to be punished